

The Narragansett Electric Company  
d/b/a Rhode Island Energy

**Rhode Island Energy  
Petition for Acceleration  
Due to DG Project**

**Weaver Hill Projects**

Pre-Filed Joint Testimony of:

Erica Russell Salk &  
Stephanie A. Briggs,

**REDACTED**

October 17, 2023

Submitted to:  
Rhode Island Public Utilities Commission

RIPUC Docket No. 23-38-EL

Submitted by:



**Rhode Island Energy™**

a PPL company

Andrew S. Marcaccio, Counsel  
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280 Melrose Street  
Providence, RI 02907  
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October 17, 2023

**VIA ELECTRONIC MAIL**

Luly E. Massaro, Commission Clerk  
Rhode Island Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, RI 02888

**RE: Docket No. 23-38-EL – The Narragansett Electric Company d/b/a  
Rhode Island Energy’s Petition for Acceleration of a System Modification  
Due to Distributed Generation Project  
Weaver Hill Project**

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”), enclosed, please find the Company’s Petition for Acceleration of a System Modification Due to a Distributed Generation Project in connection with the Weaver Hill Projects (“Petition”). In support of the Petition, the Company is submitting joint pre-filed testimony of Erica J. Russell Salk and Stephanie A. Briggs. The Petition is being filed in accordance with R.I. Gen. Laws § 39-26.3-4.1.

Please be advised that Schedule EJRS-7 attached to the Joint Pre-Filed Direct Testimony of Erica J. Russell Salk and Stephanie A. Briggs contains confidential and privileged information. Pursuant to 810-RICR-00-00-1.3(H)(3) and R.I. Gen. Laws § 38-2-2(4)(B), the Company respectfully requests that the Public Utilities Commission (“PUC”) treat the information as confidential. In support of this request, the Company has enclosed a Motion for Protective Treatment of Confidential Information. In accordance with 810-RICR00-00-1.3(H)(2), the Company also respectfully requests that the PUC make a preliminary finding that the information redacted is exempt from the mandatory public disclosure requirements of the Rhode Island Access to Public Records Act (“APRA”).

Thank you for your attention to this filing. If you have any questions, please contact me at 401-784-4263.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andrew S. Marcaccio".

Andrew S. Marcaccio

Enclosures

STATE OF RHODE ISLAND  
PUBLIC UTILITIES COMMISSION

THE NARRAGANSETT ELECTRIC COMPANY )	
d/b/a RHODE ISLAND ENERGY PETITION FOR )	
ACCELERATION OF A SYSTEM MODIFICATION )	DOCKET NO. 23-38-EL
DUE TO DISTRIBUTED GENERATION PROJECTS )	
WEAVER HILL PROJECTS )	
)	

**MOTION OF THE NARRAGANSETT ELECTRIC COMPANY D/B/A**  
**RHODE ISLAND ENERGY FOR PROTECTIVE TREATMENT OF**  
**CONFIDENTIAL INFORMATION**

The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) hereby respectfully requests that the Public Utilities Commission (“PUC”) grant protection from public disclosure certain confidential information submitted by the Company in the above referenced docket. The reasons for the protective treatment are set forth herein. The Company also requests that, pending entry of that finding, the PUC preliminarily grant the Company’s request for confidential treatment pursuant to 810-RICR-00-00-1.3(H)(2).

The record that is the subject of this Motion that requires protective treatment from public disclosure is the Company’s confidential version of the Central Rhode Island West Area Study (the “Confidential Attachment”). The Confidential Attachment is referenced as Schedule EJRS-7 attached to the Joint Pre-Filed Direct Testimony of Erica J. Russell Salk and Stephanie A. Briggs that was submitted in support of the Company’s Petition for Acceleration of a System Modification Due to a Distributed Generation Project in connection with the Weaver Hill Projects (“Weaver Hill Petition”). The Company requests protective treatment of the Confidential Attachment in accordance with 810-RICR-00-00-1.3(H) and R.I. Gen. Laws § 38-2-2-(4)(B).

## **I. LEGAL STANDARD**

For matters before the PUC, a claim for protective treatment of information is governed by the policy underlying the Access to Public Records Act (“APRA”), R.I. Gen. Laws § 38-2-1 et seq. See 810-RICR-00-00-1.3(H)(1). Under APRA, any record received or maintained by a state or local governmental agency in connection with the transaction of official business is considered public unless such record falls into one of the exemptions specifically identified by APRA. See R.I. Gen. Laws §§ 38-2-3(a) and 38-2-2(4). Therefore, if a record provided to the PUC falls within one of the designated APRA exemptions, the PUC is authorized to deem such record confidential and withhold it from public disclosure.

## **II. BASIS FOR CONFIDENTIALITY**

The Confidential Attachment, which is the subject of this Motion, is exempt from public disclosure pursuant to R.I. Gen. Laws § 38-2-2(4)(B) as “[t]rade secrets and commercial or financial information obtained from a person, firm, or corporation that is of a privileged or confidential nature.” The Rhode Island Supreme Court has held that this confidential information exemption applies where the disclosure of information is likely either (1) to impair the government’s ability to obtain necessary information in the future; or (2) to cause substantial harm to the competitive position of the person from whom the information was obtained. *Providence Journal v. Convention Center Authority*, 774 A.2d 40 (R.I. 2001). The first prong of the test is satisfied when information is provided to the governmental agency and that information is of a kind that would customarily not be released to the public by the person from whom it was obtained. *Providence Journal*, 774 A.2d at 47.

The Confidential Attachment consists of financial and commercial information and Critical Energy Infrastructure Information (“CEII”). The Company would customarily not release this

information to the public.

Public disclosure of the information identified as CEII in the Confidential Attachment would negatively impact the Company's ability to effectively operate and provide safe and reliable service to its customers. CEII is a system or asset of the bulk-power system, whether physical or virtual, the incapacity or destruction of which would negatively affect national security, economic security, public health or safety, or any combination of such matters. As such, the Company would not release this information to the public. Therefore, this information satisfies the exception found in R.I. Gen. Laws § 38-2-2(4)(B).

### III. CONCLUSION

For the foregoing reasons, the Company respectfully requests that the PUC grant this motion for protective treatment of the Confidential Attachment.

Respectfully submitted,

THE NARRAGANSETT ELECTRIC COMPANY  
d/b/a RHODE ISLAND ENERGY  
By its attorney,



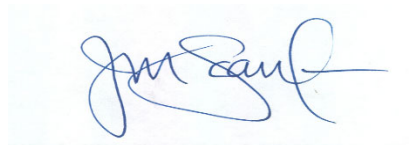
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Andrew S. Marcaccio (#8168)  
Rhode Island Energy  
280 Melrose Street  
Providence, RI 02907  
(401) 784-4263

Dated: October 17, 2023

**CERTIFICATE OF SERVICE**

I hereby certify that on October 17, 2023, I delivered a true copy of the foregoing Motion via electronic mail to the parties on the Service List for Docket No. 23-38-EL.



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Joanne M. Scanlon

**STATE OF RHODE ISLAND  
PUBLIC UTILITIES COMMISSION**

THE NARRAGANSETT ELECTRIC COMPANY	)	
d/b/a RHODE ISLAND ENERGY PETITION FOR	)	
ACCELERATION OF A SYSTEM MODIFICATION	)	DOCKET NO. 23-38-EL
DUE TO DISTRIBUTED GENERATION PROJECTS	)	
	)	
<b>WEAVER HILL PROJECTS</b>	)	
	)	

**PETITION OF THE NARRAGANSETT ELECTRIC COMPANY  
FOR ACCELERATION OF A SYSTEM MODIFICATION  
DUE TO INTERCONNECTION REQUESTS**

1. Pursuant to 810-RICR-00-00-1.11(A),<sup>1</sup> The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) hereby respectfully submits this petition (this “Petition”) to the Public Utilities Commission (“PUC”).
  
2. The PUC possesses the authority to grant the relief sought through this Petition pursuant to R.I. Gen. Laws § 39-26.3-4.1 (the “Interconnection Statute”) and Section 5.4 of RIPUC No. 2258 entitled The Narragansett Electric Company Standards for Connecting Distributed Generation (“Interconnection Tariff”).

**Recitals**

The Company submits this Petition in consideration of the following recitals:

WHEREAS, on July 22, 2020, the Company and Green Development, LLC (“Green Development”) entered into an Interconnection Services Agreement (“Green ISA”) for purposes of interconnecting Green Development’s 20,000 kW photovoltaic systems located at 899 Nooseneck Hill Road, West Greenwich, RI 02817 (“Nooseneck Projects”) to the Company’s electric power system (“EPS”), which was amended by the Company and Green Development on December 9, 2021, and December 16, 2022;

WHEREAS, on May 16, 2022, the Company and Revity Energy LLC (“Revity”) entered into an Interconnection Services Agreement (“Revity ISA”) for purposes of interconnecting Revity’s 40.7 MW photovoltaic systems located at 18 Weaver Hill Road, West Greenwich, RI 02817 (“Robin Hollow Project”) to the Company’s EPS, which was amended by the Company and Revity on July 29, 2022, and April 26, 2023;

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<sup>1</sup> The Public Utilities Commission’s Rules of Practice and Procedure are codified as 810-RICR-00-00-1.

WHEREAS, on April 14, 2023, the Company issued an Interconnection Service Agreement to Energy Development Partners (“EDP”) (“EDP ISA”) for purposes of interconnecting EDPs 9.2 MW Studley Solar Project located at 189 Weaver Hill Road, West Greenwich, RI 02817 (“Studley Solar Project”) to the Company’s EPS;

WHEREAS, the Company’s 5-year capital investment plan includes system investments in the West Greenwich area through calendar year (“CY”) 2027;

WHEREAS, the interconnection of the Nooseneck Projects, and the potential interconnection of the Robin Hollow Project and Studley Solar Project have accelerated the need for system investments in the West Greenwich area;

WHEREAS, the specific system investments that require acceleration due to the Nooseneck Projects are the installation of approximately 17,000 feet of a manhole and duct bank system along Division Street and Nooseneck Hill Road, West Greenwich and the installation of approximately 17,000 feet of three conductor 1000 kcmil EPR insulated Cu cable to extend the 3310 line (“Green Development System Improvements”);

WHEREAS, the specific system investments that require acceleration due to the future interconnection of the Robin Hollow Project and Studley Solar Project are the installation of just under one mile of a manhole and duct bank system and three conductor 500 kcmil EPR insulated CU cable to extend the 3310 line along Weaver Hill Road (the “Robin Hollow and Studley Solar System Improvements”) (collectively, the Green Development System Improvements and the Robin Hollow and Studley Solar System Improvements are referred to as the “System Improvements”);

WHEREAS, absent the interconnection of the Nooseneck Projects and the potential interconnection of the Robin Hollow Project and the Studley Solar Project, the Company anticipated making the System Improvements by 2027;

WHEREAS, in 2017, the General Assembly passed legislation, codified as R.I. Gen. Laws § 39-26.3-4.1, governing instances where a specific system modification benefiting other customers has been accelerated due to an interconnection request;

WHEREAS, the Interconnection Tariff also includes provisions governing the allocation of costs between distribution companies and distributed generation developers associated with system improvements;



WHEREAS, the Nooseneck Projects and the potential interconnection of the Robin Hollow and Studley Solar Projects have accelerated the need for the installation of the System Improvements; and

WHEREAS, to effectuate the provisions of R.I. Gen. Laws § 39-26.3-4.1, the Company is seeking certain determinations from the PUC related to the acceleration of the System Improvements stemming from the Weaver Hill Projects, the Robin Hollow Project and the Studley Solar Project.

### **Additional Support**

3. In conjunction with the filing of this Petition, the Company is submitting pre-filed joint direct testimony of Erica J. Russell Salk, PE, Rhode Island Energy, Manager, Customer Energy Integration, and Stephanie A. Briggs, Rhode Island Energy, Senior Manager, Revenue and Rates, in support of this Petition.

### **Relief Sought**

4. Through this Petition, the Company is respectfully requesting the following findings and approvals from the PUC:
  - (a) That the installation of the “Green Development System Improvements” (as defined in the Recitals) were accelerated due to the interconnection of the Nooseneck Projects;
  - (b) That the future installation of the Robin Hollow and Studley Solar System Improvements (as defined in the Recitals) will be accelerated due to the anticipated interconnection of the Robin Hollow Projects and Studley Solar Project;
  - (c) That the Company may apply each of the provisions of Section 5.4 of the Interconnection Tariff to derive the methodology to collect costs from Green Development, Revity, and EDP (“Interconnecting Customers”) for System Improvements associated with the interconnection of the Nooseneck, Robin Hollow, and Studley Solar Projects and then reimburse the depreciated value of such System Improvements to the Interconnecting Customers, as appropriate;
  - (d) That the System Improvements required to interconnect the Nooseneck, Robin Hollow, and Studley Solar Projects will benefit both the Interconnecting Customers and the Company’s distribution customers;

- (e) That the System Improvements have been accelerated from the time they would otherwise be required to serve the Company’s distribution customers;
  - (f) That such acceleration is due to Green Development’s interconnection request for the Nooseneck Projects, and EDP’s interconnection request for the Studley Solar Project;
  - (g) That the Interconnecting Customers shall fund the System Improvements subject to repayment of the depreciated value of the System Improvement, such depreciated value calculated as of the time the System Improvement would have been necessary; and
  - (h) That the costs of the depreciated value of the System Improvements shall be recovered from distribution customers through the Company’s Infrastructure, Safety and Reliability (“ISR”) Provision, RIPUC No. 2199 (“ISR Tariff”).
5. In terms of timing, the Company is respectfully requesting the following approvals from the PUC:
- (a) That the costs of the depreciated value of the System Improvements shall be recovered from distribution customers beginning April 1, 2024, through the ISR Factors, subject to the project being placed in service, the third party audit and verification being complete, and the project being fully reconciled during the Fiscal Year 2025 ISR Plan Year.
  - (b) That the Company shall issue repayment of the depreciated value of the System Improvements to the Interconnection Customer during the Fiscal Year 2025 ISR Plan Year once the project is placed in service, the third party audit and verification is complete, and the project is fully reconciled.

[Signature page follows]

Respectfully submitted,

**The Narragansett Electric Company**  
**d/b/a Rhode Island Energy**  
By its attorney,



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Andrew S. Marcaccio (#8168)  
The Narragansett Electric Company  
d/b/a Rhode Island Energy  
280 Melrose Street  
Providence, RI 02907  
(401) 784-4263  
Dated: October 17, 2023

The Narragansett Electric Company  
d/b/a Rhode Island Energy  
RIPUC Docket No. 23-38-EL  
Petition for Acceleration Due to DG Project – Weaver Hill Projects  
Witnesses: Russell Salk and Briggs

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**PRE-FILED JOINT DIRECT TESTIMONY OF**

**ERICA J. RUSSELL SALK**

**AND**

**STEPHANIE A. BRIGGS**

**October 17, 2023**

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1 **I. Introduction**

2 **Erica J. Russell Salk**

3 **Q. Could you please state your full name and business address?**

4 A. My name is Erica J. Russell Salk, and my business address is 280 Melrose Street,  
5 Providence, Rhode Island, 02907.

6  
7 **Q. By whom are you employed and in what capacity?**

8 A. I am Manager of Customer Energy Integration (“CEI”) for the Narragansett Electric  
9 Company d/b/a Rhode Island Energy (“Rhode Island Energy or the “Company), an  
10 indirect wholly owned subsidiary of PPL Corporation (“PPL”).

11  
12 **Q. What are your principal responsibilities in that position?**

13 A. As Manager of CEI, I provide oversight to the team responsible for all distributed  
14 generation (“DG”) interconnection applications. This includes all simple, expedited, and  
15 standard applications. As a customer facing team, we work with the DG developers  
16 focusing on implementation to shepherd their projects through the process from  
17 application to interconnection.

18  
19 **Q. Could you please describe your educational background and professional  
20 experience?**

21 A. In 2011, I graduated from Trinity College with a Bachelor of Science Degree in Electrical

1           Engineering. In 2013, I received a Master of Science in Electrical Engineering from  
2           Brown University. In 2015, I earned a Graduate Level Certificate in Power Systems  
3           Engineering from Worcester Polytechnic Institute. I am also a licensed Professional  
4           Engineer in the State of Rhode Island. I worked at National Grid Service Company  
5           (“NGSC”) from 2013-2022. At NGSC, I primarily worked in Protection Engineering as  
6           a Senior Engineer and additionally held the roles of Technical Advisor to the Senior Vice  
7           President of Electric Process & Engineering, and Engineering Manager of IEC-61850 &  
8           Protection Policy and Support. In June 2022, I joined Rhode Island Energy in my current  
9           position.

10  
11   **Q.    Have you previously testified before the Rhode Island Public Utilities Commission**  
12   **(“PUC”) or any other regulatory commission?**

13   A.    Yes. I testified on February 8, 2023, at the hearing for the 2023 Renewable Energy  
14   Growth Program in Docket No. 22-39-REG and on October 5, 2023 at the hearing for the  
15   Company’s Proposal for Administration of Excess Net Metering Credits in Docket No.  
16   23-05-EL. Additionally, for the Company’s Proposal for Administration of Excess Net  
17   Metering Credits in Docket No. 23-01-EL, I submitted joint pre-filed direct testimony,  
18   participated in a Technical Session, and submitted joint rebuttal testimony. I have also  
19   participated in meetings facilitated by PUC staff in Docket Nos. 5205 and 5206 related to  
20   the administration of DG interconnections.

1           **Stephanie A. Briggs**

2   **Q.     Could you please state your full name and business address?**

3   A.     My name is Stephanie A. Briggs, and my business address is 280 Melrose Street,  
4           Providence, Rhode Island, 02907.

5

6   **Q.     By whom are you employed and in what capacity?**

7   A.     I am employed by PPL as a Senior Manager Revenue and Rates.

8

9   **Q.     What are your principal responsibilities in that position?**

10  A.     My current duties include revenue requirement and rates responsibilities for PPL’s Rhode  
11           Island distribution operations including for the Company.

12

13  **Q.     Could you please describe your educational background and professional  
14           experience?**

15  A.     In 2000, I received a Bachelor of Arts degree in Accounting from Bryant College. In  
16           2004, I was hired by NGSC as a Senior Analyst in the Accounting Department. In this  
17           position, I was responsible for supporting the books and records of Niagara Mohawk  
18           Power Corporation d/b/a National Grid. In 2009, I was promoted to Senior Analyst in the  
19           Regulatory Accounting Group. In this capacity, I supported the accounting of regulatory  
20           assets and deferrals in accordance with National Grid’s rate plans and agreements. In  
21           2011, I was promoted to Lead Specialist for Revenue Requirements responsible for



1 supporting New York revenue requirements. In 2017, I was promoted to Director of  
2 Revenue Requirements for New York. In July 2020, I became Director of Revenue  
3 Requirements for New England. On May 25, 2022, PPL Rhode Island Holdings, LLC, a  
4 wholly owned indirect subsidiary of PPL, acquired 100 percent of the outstanding shares  
5 of common stock of the Company from National Grid (the “Acquisition”), at which time  
6 I assumed my current position.

7  
8 **Q. Have you previously testified before the PUC or any other regulatory commission?**

9 A. Yes. I provided pre-filed direct testimony in numerous dockets including the Company’s  
10 2022 Annual Retail Rate Filing, Docket No. 5234, the Company’s 2021 Performance  
11 Incentive Mechanism Factor Filing, as part of Docket No. 4770, the Fiscal Year 2022  
12 Electric Infrastructure, Safety and Reliability Plan Annual Reconciliation Filing, Docket  
13 No. 5098, the Company’s 2022 Distribution Adjustment Charge Filing, Docket No. 22-  
14 13-NG, the Company’s Advanced Metering Functionality Business Case, Docket No. 22-  
15 49-EL, the Company’s Fiscal Year 2024 Electric Infrastructure, Safety, and Reliability  
16 Plan, Docket No. 22-53-EL, Fiscal Year 2024 Gas Infrastructure, Safety, and Reliability  
17 Plan, Docket No. 22-54-NG, the Company’s 2023 Electric Revenue Decoupling  
18 Mechanism Reconciliation Filing, Docket No. 23-16-EL, the Company’s 2023  
19 Residential Assistance Recovery filing, Docket No. 23-17-EL, and most recently in the  
20 Company’s 2023 Distribution Adjustment Charge Filing, Docket No. 22-23-23-NG. I  
21 also have testified before the Massachusetts Department of Public Utilities and New York

1 Public Service Commission on behalf of National Grid’s affiliates as a revenue  
2 requirement witness in various proceedings.

3  
4 **II. Purpose**

5 **Q. What is the purpose of this testimony?**

6 A. The purpose of our testimony is to support the Petition of The Narragansett Electric  
7 Company for Acceleration of a System Modification Due to an Interconnection Request  
8 dated October 17, 2023 (the “Petition”). The interconnection requests that are the  
9 subject of the Petition were made by (1) Green Development, LLC (“Green” or “Green  
10 Development”) in connection with 20,000 kW photovoltaic systems located at 899  
11 Nooseneck Hill Road, West Greenwich, RI 02817 (“Nooseneck Projects”); (2) Revity  
12 Energy, LLC (“Revity”) in connection with 40.7 MW photovoltaic systems located at 18  
13 Weaver Hill Road, West Greenwich, RI 02817 (“Robin Hollow Project”); and (3)  
14 Energy Development Partners (“EDP”) in connection with 9.2 MW Studley Solar Project  
15 located at 189 Weaver Hill Road, West Greenwich, RI 02817 (“Studley Solar Project”).  
16 Collectively, Green Development, Revity, and EDP are referred to herein as the  
17 “Interconnecting Customers”.

18  
19 **Q. Are there any schedules provided in support of your testimony?**

20 A. Yes. Erica J. Russell Salk is sponsoring the following supporting schedules:

- 21
- Exhibit EJRS-1 – Nooseneck Impact Study

- 1           • Exhibit EJRS-2 – Robin Hollow Impact Study
- 2           • Exhibit EJRS-3 – Studley Solar Impact Study
- 3           • Exhibit EJRS-4 – Nooseneck Interconnection Services Agreement with Green
- 4           • Exhibit EJRS-5 – Robin Hollow Interconnection Services Agreement with Revity
- 5           • Exhibit EJRS-6 – Studley Solar Interconnection Services Agreement with EDP
- 6           • Exhibit EJRS-7 – Area Study
- 7           • Exhibit EJRS-8 – Audit

8

9           Stephanie A. Briggs is sponsoring the following supporting schedules:

- 10           • Schedule SAB-1 – Illustrative Depreciated Value

11

12   **III. Background**

13   **Q.    Could you summarize the estimated impact that this Petition will have on**  
14       **distribution customers?**

15   A.    This Petition will impact rate payers in two beneficial ways; one is the benefit of the  
16       accelerated solution, and the other is that the cost to the ratepayers will be a discounted  
17       amount from what they otherwise would have had to pay given the depreciation or  
18       “acceleration” fee that is borne by the DG customers.

19

1 **Q. What is the basis for filing the Petition?**

2 A. The Company is filing the Petition in accordance with R.I. Gen. Laws § 39-26.3-4.1  
3 entitled Interconnection Standards (the “Interconnection Statute”) and Section 5.4 of  
4 RIPUC No. 2258 entitled The Narragansett Electric Company Standards for Connecting  
5 Distributed Generation (the “Interconnection Tariff”).

6  
7 **Q. Based on your understanding, which provisions of the Interconnection Statute are**  
8 **applicable?**

9 A. The following provisions of the Interconnection Statute are applicable:

10 (a) The electric distribution company may only charge an interconnecting, renewable  
11 energy customer for any system modifications<sup>1</sup> to its electric power system  
12 specifically necessary for and directly related to the interconnection.

13 (b) If the public utilities commission determines that a specific system modification  
14 benefiting other customers has been accelerated due to an interconnection request,  
15 it may order the interconnecting customer to fund the modification subject to  
16 repayment of the depreciated value of the modification as of the time the  
17 modification would have been necessary as determined by the public utilities  
18 commission. Any system modifications<sup>2</sup> benefiting other customers shall be

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<sup>1</sup> The Interconnection Tariff defines a “System Modification” as “Modifications or additions to Company facilities that are integrated with the Company’s [Electric Distribution System] for the benefit of the Interconnecting Customer.”

<sup>2</sup> As noted herein, the Company interprets this language, and similar language in Section 5.4(c) of the Company’s Interconnection Tariff to apply to “System Improvements” as defined in the Company’s Interconnection Tariff.

1 included in rates as determined by the public utilities commission.

- 2 (c) If an interconnecting, renewable energy customer is required to pay for system  
3 modifications and a subsequent renewable energy or commercial customer relies  
4 on those modifications to connect to the distribution system within ten (10) years  
5 of the earlier interconnecting, renewable energy customer's payment, the  
6 subsequent customer will make a prorated contribution toward the cost of the  
7 system modifications that will be credited to the earlier interconnecting,  
8 renewable energy customer as determined by the public utilities commission.

9  
10 **Q. Based on your understanding, is Section 5.2 of the Interconnection Tariff**  
11 **applicable?**

12 A. Yes. Section 5.2 states:

13 The Interconnecting Customer shall be responsible for all costs associated with  
14 the installation and construction of the Facility and associated interconnection  
15 equipment on the Interconnecting Customer's side of the PCC, less any System  
16 Improvements.

17  
18 **Q. Based on your understanding, is Section 5.4 of the Interconnection Tariff**  
19 **applicable?**

20 A. Yes. Section 5.4 states:

- 21 (a) The Company may combine the installation of System Modifications with System

1 Improvements to the Company’s EDS to serve the Interconnecting Customer or  
2 other customers, but shall not include the costs of such System Improvements in the  
3 amounts billed to the Interconnecting Customer for the System Modifications  
4 required pursuant to this Interconnection Tariff. Interconnecting Customers shall be  
5 directly responsible to any Affected System operator for the costs of any System  
6 Modifications necessary to the Affected Systems.

7  
8 (b) Effective for Renewable Interconnecting Customer Applications filed on or after  
9 July 1, 2017, in the event that the Commission determines that a specific System  
10 Modification of the electric distribution system benefits other customers and has  
11 been accelerated due to an interconnection request and orders the Renewable  
12 Interconnecting Customer to fund the modification, the Renewable Interconnecting  
13 Customer will be entitled to repayment of the depreciated value of the modification  
14 as of the time the modification would have been necessary as determined by the  
15 Commission. Subsequent Renewable Interconnecting Customers will be responsible  
16 for prorated payments within ten (10) years of the earlier Renewable  
17 Interconnecting Customer’s payment toward System Modifications.

18 (c) The Company will consider a system modification to be an accelerated modification  
19 if such modification is otherwise identified in the Company’s work plan as a  
20 necessary capital investment to be installed within a five-year period as of the date  
21 the Company begins the impact study of the proposed distributed generation (DG)

1 project (defined as an Accelerated Modification). The Company will identify the  
2 Accelerated Modification and the cost thereof in the impact study. The Renewable  
3 Interconnecting Customer will be responsible for the identified Accelerated  
4 Modification costs less the depreciated value (Modified Costs), which Modified  
5 Costs will be estimated in the interconnection service agreement (ISA). Upon  
6 reconciliation, final labor, material and depreciation values will be provided based  
7 on the actual date of asset installation in the same price categories as originally  
8 proposed in the ISA to the customer so that a comparison can be made. The  
9 Company will file with the Commission all executed ISAs for Renewable  
10 Interconnecting Customer DG projects with an identified Accelerated Modification  
11 by July 1 of each year.

12  
13 **Q. Has the PUC ruled on the acceleration of a system modification due to an**  
14 **interconnection request since the enactment of R.I. Gen. Laws § 39-26.3-4.1?**

15 A. No. This Petition and the Tiverton Petition will be the first two requests for approval of  
16 potential accelerations of a “system modification”.

17

1 **Q. Does the Company interpret the Interconnection Statute and Interconnection Tariff**  
2 **as allowing the Company to collect costs from an Interconnecting Customer for a**  
3 **System Modification that benefits both an Interconnecting Customer and**  
4 **distribution customers and then reimburse that Interconnecting Customer for such**  
5 **costs?**

6 A. Yes. As noted above, the Interconnection Tariff states that any “system modifications”  
7 benefiting other customers shall be included in rates as determined by the PUC. The  
8 Interconnection Tariff provides additional detail regarding separation of costs by  
9 separately defining:

10 (a) “System Modifications” as “Modifications or additions to Company facilities that  
11 are integrated with the Company’s [Electric Distribution System] for the benefit  
12 of the Interconnecting Customer; and

13 (b) “System Improvements” as “Economically justified upgrades determined by the  
14 Company in the Facility study phase for capital investments associated with  
15 improving the capacity or reliability of the [Electric Distribution System] that  
16 may be used along with System Modifications to serve an Interconnection  
17 Customer.”

18 The Interconnection Tariff also implements the principle of separation of costs in  
19 Section 5.2 by requiring, the Interconnecting Customer to be responsible for all costs  
20 associated with the installation and construction of its Facility and associated

21



1 interconnection equipment on the Interconnecting Customer’s side of the Point of  
2 Common Coupling, less any System Improvements.

3  
4 **Q. Does the Interconnection Tariff clearly define the process by which the Company**  
5 **should determine whether a “System Improvement” has been accelerated?**

6 A. The Interconnection Tariff does not precisely address this process. As noted above,  
7 Sections 5.4(b) and (c) of the Interconnection Tariff describe a process for accelerated  
8 “System Modifications” but does not use the term “System Improvements”. As  
9 described herein, in this instance, the System Improvements that have been accelerated  
10 by the Green Development’s Weaver Hill Projects are System Modifications that also  
11 benefit Revery, and EDP. As such, among other findings, the Company seeks PUC  
12 approval to apply the provisions of Section 5.4(b) and (c) of the Interconnection Tariff  
13 that address “System Modifications” to the “System Improvements” described herein.

14  
15 **Q. What specific findings are the Company seeking with this Petition?**

16 A. The Company is seeking the following findings:

- 17 (a) That the installation of approximately 17,000 feet of a manhole and duct bank  
18 system along Division Street and Nooseneck Hill Road, West Greenwich and the  
19 installation of approximately 17,000 feet of three conductor 1000 kcmil EPR  
20 insulated Cu cable to extend the 3310 line (the “Green Development System  
21

1 Improvements”) were accelerated due to the interconnection of the Nooseneck  
2 Projects;

3 (b) That the future the installation of just under one mile of a manhole and duct bank  
4 system and three conductor 500 kcmil EPR insulated CU cable to extend the 3310  
5 line along Weaver Hill Road (the “Robin Hollow and Studley Solar System  
6 Improvements”) will be accelerated to do the future interconnection of the Robin  
7 Hollow Projects and Studley Solar Project (collectively, with the Green  
8 Development System Improvements, the “System Improvements”);

9 (c) That the Company may apply each of the provisions of Section 5.4 of the  
10 Interconnection Tariff to derive the methodology to collect costs from the  
11 Interconnecting Customers for System Improvements associated with the  
12 interconnection of the Nooseneck, Robin Hollow, and Studley Solar Projects and  
13 then reimburse the depreciated value of such System Improvements to the  
14 Interconnecting Customers, as appropriate;

15 (d) That the System Improvements described in our testimony required to  
16 interconnect the Nooseneck, Robin Hollow, and Studley Solar Projects will  
17 benefit both the DG Projects and the Company’s distribution customers;

18 (e) That such System Improvements have been accelerated from the time they would  
19 otherwise be required to serve the Company’s distribution customers;

20

- 1 (f) That such acceleration is due to Green Development’s interconnection request for  
2 the Nooseneck Projects, Revity’s interconnection request for the Robin Hollow  
3 Projects, and EDP’s interconnection request for the Studley Solar Project;
- 4 (g) That Green Development, Revity, and EDP shall fund the System Improvements  
5 subject to repayment of the depreciated value of the System Improvement as of  
6 the time the System Improvement would have been necessary; and
- 7 (h) That the costs of the depreciated value of the System Improvement shall be  
8 recovered from distribution customers through the Company’s Infrastructure,  
9 Safety and Reliability Provision, RIPUC No. 2199 (“ISR Tariff”).

10

11 **IV. DG Projects**

12 **Q. Please describe Green Development’s Nooseneck Projects.**

13 A. Green Development’s Nooseneck Projects include two adjacent 10MW sites,  
14 constructed as standalone solar arrays participating in the Net Metering incentive. The  
15 projects interconnected in December of 2022 and are fed off the 3310 circuit.

16

17 **Q. Please describe Revity’s Robin Hollow Project.**

18 A. Revity’s Robin Hollow Project includes 7 sites totaling 40.7MW, to be constructed with  
19 an estimated connection timeframe of end of calendar year 2023. Site E, 5.25MW will be  
20 fed off the 3310 circuit, and 35.25MW will be fed off the 3309 circuit.

21

1 **Q. Please describe EDP’s Studley Solar Project.**

2 A. EDP’s Studley Solar Project consists of one 9.2MW site to be fed off the 3310 circuit.

3 The Company issued an ISA to EDP on April 14, 2023 which has not yet been executed.

4

5 **Q. When did the Nooseneck Projects enter the interconnection queue?**

6 A. On February 12, 2019.

7

8 **Q. When did the Revity Robin Hollow Projects enter the interconnection queue?**

9 A. On October 18, 2019.

10

11 **Q. When did the EDP Studley Solar Project enter the interconnection queue?**

12 A. On May 10, 2019.

13

14 **Q. When did the Company begin the Impact Study of the Nooseneck Projects?**

15 A. The Company began the Impact Study of the Nooseneck Projects on April 1, 2019. The

16 Weaver Hill Impact Study attached hereto as Exhibit EJRS-1.

17

18 **Q. When did the Company begin the Impact Study of the Robin Hollow Projects?**

19 A. The Company began the Impact Study of the Robin Hollow Projects on January 6, 2020.

20 The Robin Hollow Impact Study attached hereto as Exhibit EJRS-2.

21

1 **Q. When did the Company begin the Impact Study of the Studley Solar Projects?**

2 A. The Company began the Impact Study of the Studley Solar Project on August 7, 2019.  
3 The Studley Solar Impact Study attached hereto as Exhibit EJRS-3.

4  
5 **Q. Has an interconnection service agreement been executed for each project?**

6 A. Yes. On July 22, 2020, the Company entered into an Interconnection Services  
7 Agreement (“ISA”) with Green Development (the “Green ISA”). The Company and  
8 Green Development have also entered into amendments to the ISA on December 9, 2021,  
9 and December 16, 2022. The Green ISA and amendments are attached hereto as Exhibit  
10 EJRS-4.

11  
12 On May 16, 2022, the Company entered into an ISA with Revity (the “Revity ISA”). The  
13 Company and Revity have also entered into amendments to the ISA on July 29, 2022,  
14 and a second amendment was issued to Revity on April 26, 2023. The Revity ISA and  
15 amendments are attached hereto as Exhibit EJRS-5.

16  
17 The Company issued an ISA to EDP on April 14, 2023 (the “EDP ISA”). The EDP ISA  
18 is attached hereto as Exhibit EJRS-6.

19

1 **Q. What is the estimated total cost of the Nooseneck Projects System Modifications?**

2 A. As noted in the second amendment to the Green ISA, the total cost of the Projects’  
3 System Modifications, excluding the civil manhole and duct system constructed by Green  
4 Development, was estimated at \$4,883,571. Following construction, the costs associated  
5 with the civil manhole and duct system were reviewed through a detailed third-party cost  
6 verification and audit to confirm the total cost of \$12,023,525. The final costs still need to  
7 be reconciled for the electrical component performed by the Company.

8  
9 **Q. What is the estimated total cost of the Robin Hollow Projects System Modifications?**

10 A. As noted in the second amendment to the Revity ISA, the total cost of the Projects’  
11 System Modifications, excluding the civil manhole and duct system and electrical  
12 component to be constructed by Revity is estimated at \$3,494,272.

13  
14 **Q. What is the estimated total cost of the Studley Solar Projects System Modifications?**

15 A. As noted in the EDP ISA, the total cost of the Projects’ System Modifications, excluding  
16 the civil manhole and duct system to be constructed by EDP, was estimated at  
17 \$8,437,085.

18  
19 **Q. Do the entirety of these System Modifications only benefit the Nooseneck, Revity,  
20 and EDP Projects?**

21 A. No. The System Modifications include the installation of a manhole and duct system and

1 extension of the 3310, a portion of which will provide benefits to the Company’s  
2 distribution customers. The portion of the manhole and duct system that will benefit the  
3 Company’s distribution customers meets the definition of a “System Improvement”  
4 provided in the Company’s Interconnection Tariff. The Company’s Petition seeks  
5 findings relating to the up-front payment of costs by Green Development, Revity, and  
6 EDP for the System Improvement, and the repayment to Green Development, Revity, and  
7 EDP by the Company of such costs, subject to the terms of the Interconnection Statute  
8 and Interconnection Tariff.

9  
10 **V. Benefits to Revity and EDP from Green Development Construction**

11 **Q. What benefits will Revity and EDP receive from Green Development’s construction**  
12 **of System Modifications to interconnect the Nooseneck Projects?**

13 A. Yes. Regarding the Nooseneck Projects, Revity has a 40.7MW project in construction  
14 now and EDP has a 9.2MW project in the interconnection queue that would benefit from  
15 a portion of the manhole and duct system and a share of the 3310 cable constructed by  
16 Green Development.

17  
18 For the Robin Hollow Projects, Revity is self-performing the work for a manhole and  
19 duct system and a portion of the electrical work. EDP’s 9.2 MW Study Solar Project will  
20 subsequently benefit from the work performed by Revity, in addition to the Company  
21 through acceleration.

1 **Q. Please describe these projects.**

2 A. Green Development constructed a 28,568 foot manhole and duct system which cost  
3 \$12,023,525. The common path to Green Development, Revity, EDP, and the Company  
4 is 15,006 ft, or 52% of the total length from manhole 21a to manhole 44 and cost  
5 \$5,951,270. The Kent County 3310 cable was extended from the corner of Hopkins Hill  
6 Road and Division Street to the POI on Green Development's property. A portion of that  
7 cable is part of the common path between Green Development, Revity, EDP, and the  
8 Company. Once the project is fully reconciled, the total costs incurred would be  
9 evaluated for cost sharing between Green, Revity, and EDP based on a MW pro rata  
10 share. Six of the seven Revity sites will interconnect to the 3309 line which are not  
11 subject to cost sharing with any other Developer or the Company. One site will  
12 interconnect to the 3310. EDP's interconnection will be on the 3310.

13

14 **Q. Will these projects share in the costs of the System Modifications?**

15 A. Absent the acceleration, these projects would otherwise share in the costs of the System  
16 Modifications. The Company is progressing under that premise and has included cost  
17 sharing estimates in each Developer's ISA. Pending the outcome of the Petition, the  
18 Company would reimburse Green Development, Revity, and EDP, as appropriate.

19



1 **Q. How will this cost sharing affect the cost that may be borne by distribution**  
2 **customers, if the PUC approves the Company’s petition?**

3 A. As described above, the Company is working with the Developers to facilitate cost  
4 sharing once the work is completed, and the costs are verified through a third-party audit.  
5 That has been completed for the Nooseneck manhole and duct system. The Company  
6 presented an ISA to EDP on April 14, 2023 which includes the cost share payment  
7 amount, to be paid upon execution. The Company presented an amended ISA to Revity  
8 on April 26, 2023, to update the cost share payment, to be paid upon execution. Pending  
9 the outcome of the Petition, the Company will reimburse Green, Revity, and EDP as  
10 appropriate. Depending on timing, if the outcome of the Petition is known prior to Revity  
11 and EDP paying Green, the Company will reimburse only Green. Otherwise, the  
12 Company would reimburse each Green, Revity, and EDP based on the allocations they  
13 paid.

14  
15 **VI. System Improvements**

16 **Q. Please describe in detail the manhole and duct system which the Company has**  
17 **determined meets the definition of a “System Improvement” provided in the**  
18 **Company’s Interconnection Tariff?**

19 A. A portion of the manhole and duct system that was constructed by Green Development  
20 has been identified as a System Improvement. This portion is just over three miles, from  
21 the intersection of Hopkins Hill Road and Division Street to the intersection of

1 Nooseneck Hill Road and Weaver Hill Road in West Greenwich. This stretch consists  
2 of 25 manholes of varying type, depending on the engineering design (e.g. 2-way, 3-way,  
3 etc.) and three phase conductor 1000 kcmil EPR insulated CU cable. Both the Robin  
4 Hollow project presently in construction, and then the Studley Solar EDP project, will  
5 extend this manhole and duct system and 3310 cable down Weaver Hill Road by just  
6 under a mile. The Robin Hollow Projects will also benefit EDP and distribution  
7 customers, and the EDP project would also benefit distribution customers.

8  
9 **Q. How will the System Improvement for the Nooseneck, Revity, and EDP Projects**  
10 **benefit distribution customers?**

11 A. As identified in the Central RI West Area Study, which is attached hereto as Exhibit  
12 EJRS-7, the least cost option proposed to address thermal loading issues in the area is to  
13 build a new substation on Weaver Hill Road by extending the sub transmission facilities  
14 that are installed for the Nooseneck, Robin Hollow, and Studley Solar Projects.

15  
16 **Q. Are the System Improvements identified in the Company’s Electric Infrastructure,**  
17 **Safety and Reliability Plan (“ISR”)?**

18 A. Yes. The installation of a new modular substation at Weaver Hill Road is in the FY2023  
19 Proposal, Docket No. 5209, filed on December 20, 2021. The Central RI West Area  
20 Study evaluated the issues and proposed solutions.

1 **Q. How does interconnecting the Nooseneck, Robin Hollow, and Studley Solar Projects**  
2 **accelerate the installation of System Improvements identified by the Company?**

3 The Area Study identified a forecasted overload of 104% summer normal loading in 2035

4 A. on the Hopkins Hill 63F6 feeder. The Coventry 54F1 also shows a high loading of 94% of  
5 summer normal in 2035. The least cost option to address these thermal loading issues is  
6 the installation of a modular substation at Weaver Hill. This installation would utilize the  
7 manhole and duct system and 3310 cable as an alternate supply, a portion of which was  
8 constructed to interconnect the Nooseneck Projects and will be constructed to  
9 interconnect Robin Hollow and Studley Solar Projects.

10  
11  
12 **VII. Costs to be Paid and Reimbursed**

13 **Q. What is the total cost of the System Improvement (the part that benefits distribution**  
14 **customers) that will be charged to Green Development, Revity and EDP?**

15 A. This can be broken down into several components: the civil component that was  
16 constructed by Green Development plus the electrical component built by the Company;  
17 the civil & electrical portion built by Revity and the electrical portion built by the  
18 Company; the civil portion to be built by EDP and the electrical portion to be built by the  
19 Company. The cost share portion of what Green Development constructed is \$5,951,270.  
20 The actual cost to the Company for the electrical component will not be determined until  
21 all work orders are closed and the project is fully reconciled. As seen in the Nooseneck

1 System Impact Study, the full portion of the 3310 work was estimated at \$4,267,200. It is  
2 estimated that about 62.5% of that total (based on distance) would be subject to cost share  
3 at \$2,667,000. As seen in the Studley Solar Impact Study, the estimated cost of the full  
4 portion of the 3310 electrical work is \$6,243,617.

5  
6 **Q. How does the Company propose to calculate the dollar amount to reimburse?**

7 A. The third-party audit confirmed a total of cost \$12,023,525 to build the duct bank, of  
8 which \$5,951,270 are subject to 100% cost share with the Company based on  
9 acceleration. The customer self-performed the civil underground construction of the  
10 Company's design for the duct bank to interconnect to the 3310 circuit. Based on the  
11 area study, the least cost option proposed to address thermal loading issues in the area is  
12 to build a new substation on Weaver Hill Road by extending the sub transmission that is  
13 installed for the DG projects. The Company is proposing cost sharing for 100% of the  
14 electrical work on the common path associated with the 3310 circuit with a four-year  
15 depreciation and 100% of the common path portion of the underground civil duct bank  
16 with a four-year depreciation. A copy of the audit is attached hereto as Exhibit EJRS-8.

17  
18 **Q. Did the third-party audit also analyze the accuracy and validity of the costs for  
19 potential reimbursement to Green?**

20 A. Yes.

21

1 **Q. Is the Company proposing a methodology to pay the developers and recover costs**  
2 **from distribution customers?**

3 A. Yes, the Company is providing a recommendation as explained below and is also  
4 providing an alternative option for the PUC to consider in this Petition.  
5  
6

7 **Q. Please describe the Company’s recommended approach to recovering costs from**  
8 **distribution customers and reimbursing the developer.**

9 A. The recommended approach would be that the Company would pay the developers for  
10 the specific system improvements that benefitted distribution customers, less the  
11 estimated depreciated value, at the time that the project is placed in service, the third  
12 party audit and verification is complete, and the project is fully reconciled. The  
13 Company is estimating that the work will be completed and placed in service during FY  
14 2025, but would have been completed and placed in service in FY 2027 without the DG  
15 project. Since the Company would be paying the developers at the time the investment  
16 was placed in service in FY 2025, the Company proposes that it would begin recovering  
17 depreciation and return from distribution customers in FY 2025 through the ISR plan  
18 revenue requirement.  
19

1 **Q. Under the recommended approach, what is the amount that the Company estimates**  
2 **will be paid to the developers in FY 2025?**

3 A. Please see Schedule SAB-1 for the estimated depreciated value from FY 2025 through  
4 FY 2026 that would be paid to the developers in FY 2025 of \$12,926,368. The final cost  
5 of the system improvement would be determined after the project is placed in service, the  
6 third party audit and verification is complete, and the project is fully reconciled. For  
7 illustrative purposes in this recommended approach, the Company estimates that the total  
8 cost of the project related to system improvements that benefit distribution customers  
9 would be \$13,569,565 million and that the project will be placed in service during FY  
10 2025 and would have not been necessary until FY 2027 if not for this DG project. For  
11 purposes of calculating an illustrative annual depreciation amount, the Company applied  
12 the annual depreciation rate from the Company's most recent FY 2024 ISR Plan. The  
13 final depreciated value that would be paid to the developers would be based on actual  
14 depreciated value at the time which could differ from the illustrated amount on Schedule  
15 SAB-1 due to changes in depreciation rates that could occur before the payout. In  
16 addition, the actual dates of in-service and payout would be used to calculate the  
17 depreciated value, but for purposes of this petition, the Company used FY 2025 and FY  
18 2027 as estimated dates, respectively.

19

1 **Q. Under this recommended approach, how will the costs of the System Improvements**  
2 **be recovered from distribution customers?**

3 A. The Company is seeking approval with this Petition to ultimately include any System  
4 Improvement costs at the depreciated value in its ISR factors, subject to approval by the  
5  
6 PUC. In this proposal, the Company would include the depreciated value through FY  
7 2026 in the FY 2025 ISR revenue requirement at which time it would begin being  
8 recovered from distribution customers.

9  
10 **Q. Why is the Company recommending to pay developers when the investment is**  
11 **placed in service?**

12 A. The Company is recommending this approach for several reasons. From a public policy  
13 standpoint, the Company believes paying the developers sooner rather than later  
14 promotes the purposes of the Distributed Generation Interconnection Act, R.I. Gen. Laws  
15 § 39-26.3-1 et seq. Once developers receive payment, they will be able to reinvest that  
16 capital and install additional distributed generation in the State. From an administrative  
17 standpoint, waiting to pay the developers may create challenges. Any time payment is  
18 delayed, for potentially years, there is risk ownership is transferred or legal statuses  
19 change making payment more complicated.

20

1 **Q. Please describe the alternative approach.**

2 A. The alternative approach would be that the Company would pay the developers for the  
3 specific system improvements that benefitted distribution customers, less the depreciated  
4 value, at the time that improvements would have been necessary had it not been for the  
5 DG project. In this instance, the Company is estimating that the work will be completed  
6 and placed in service during FY 2025, but would have been completed and placed in  
7 service in FY 2027 without the DG project. As such, in this proposal the Company  
8 would pay the developers in FY 2027 the final cost of the system modification less the  
9 depreciation of the asset from FY 2025 through FY 2026, in other words the depreciated  
10 value.

11

12 **Q. Under the alternative approach, what is the amount that the Company estimates**  
13 **will be the depreciated value paid to the developers in FY 2027?**

14 A. Please see Schedule SAB-1 for the estimated depreciated value in FY 2027 of  
15 \$12,926,368. The final cost of the system improvement would be determined after the  
16 project is placed in service, the third party audit and verification is complete, and the  
17 project is fully reconciled. For illustrative purposes in this proposal, the Company  
18 estimates that the total cost of the project related to system improvements that benefit  
19 distribution customers would be \$13,569,565 million and that the project will be placed  
20 in service during FY 2025 and would have not been necessary until FY 2027 if not for  
21 this DG project. For purposes of calculating an illustrative annual depreciation amount,



1 the Company applied the annual depreciation rate from the Company’s most recent FY  
2 2024 ISR Plan. The final depreciated value that would be paid to the developers would  
3 be based on actual depreciated value at the time which could differ from the illustrated  
4 amount on Schedule SAB-1 due to changes in depreciation rates that could occur before  
5 the payout. In addition, the actual dates of in-service and payout would be used to  
6 calculate the depreciated value, but for purposes of this petition, the Company used FY  
7 2025 and FY 2027 as estimated dates, respectively.

8  
9 **Q. Under the alternative approach, how will the costs of the System Improvements be**  
10 **recovered from distribution customers?**

11 A. The Company is seeking approval with this Petition to ultimately include any System  
12 Improvement costs at the depreciated value in its ISR factors, subject to approval by the  
13 PUC. In this proposal, the Company would include the depreciated value in the FY 2027  
14 ISR revenue requirement at which time it would begin being recovered from distribution  
15 customers.

16  
17 **VIII. Assessment on Act on Climate**

18 **Q. What are the potential impacts of the proposed Petition in relation to the Act on**  
19 **Climate’s requirements?**

20 A. The 2021 Act on Climate, R.I. Gen. Laws §42-6.2-1 et seq., mandates a statewide,  
21 economy-wide 45% reduction in greenhouse gas emissions by 2030 relative to 1990

1 emissions levels, 80% by 2040, and shall be net-zero emissions by 2050. The Company  
2 has assessed that approval of this Petition positively influences the Act on Climate  
3 mandates by reasonably charging Interconnection Customers only for incurred costs  
4 solely due to their project, and incentivizing continued development of distributed  
5 generation connections.

6

7 **IV. Conclusion**

8 **Q. Does this complete your testimony?**

9 A. Yes, it does.

<b>nationalgrid</b>	<b>DISTRIBUTION PLANNING DOCUMENT</b>	Doc. RI-27825278 Case #00206311
	<b>Interconnection Study</b>	Page 1 of 38
	<b>Complex Generating Facility - R.I.P.U.C. 2180</b>	Version 1.0 6/29/2020
	<b>Green Development, LLC 20,000 kW/ kVA of Inverter-Based Photovoltaic 899 Nooseneck Hill Road, West Greenwich RI</b>	<b>FINAL</b>

## System Impact Study for Distributed Generation Interconnection to National Grid’s 34.5 kV System

<b>DG WR:</b>	RI-27825278	RI-27888883
<b>DG Case#:</b>	00206311	00206313
<b>Applicant:</b>	Green Development, LLC	Green Development, LLC
<b>Address:</b>	899 Nooseneck Hill Rd (Southern Array)	899 Nooseneck Hill Rd (Northern Array)
<b>City:</b>	West Greenwich, RI	West Greenwich, RI
<b>DG kW/kVA:</b>	10,000 kW / kVA	10,000 kW / kVA
<b>DG Type:</b>	Inverter-Based Photovoltaic	Inverter-Based Photovoltaic
<b>Feeder:</b>	Kent Count 3310	Kent County 3310

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<b>nationalgrid</b>	<b>DISTRIBUTION PLANNING DOCUMENT</b>	Doc. RI-27825278 Case #00206311
	<b>Interconnection Study</b>	Page 2 of 38
	<b>Complex Generating Facility - R.I.P.U.C. 2180</b>	Version 1.0 6/29/2020
	<b>Green Development, LLC 20,000 kW/ kVA of Inverter-Based Photovoltaic 899 Nooseneck Hill Road, West Greenwich RI</b>	<b>FINAL</b>

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## Definitions

The following is a list of acronyms/synonyms used in this Interconnection Study:

ESS – Energy Storage System

Company – National Grid

Customer – The interconnecting customer of this project

DG – Distributed Generation

DER – Distributed Energy Resources

DTT – Direct Transfer Trip

EPS – Electrical Power System

ESB – National Grid’s Electrical Service Bulletin

Facility – The distributed generating facility for this project, including all related appurtenances and equipment.

IA – Interconnection Application

Interconnecting Circuit – Circuit to which the Facility will connect

ISA – Interconnection Service Agreement

ISO-NE – Independent System Operator of New England

NPCC – Northeast Power Coordinating Council

PCC – Point of Common Coupling (point of demarcation between the Customer and Company facilities)

PF – Power Factor

Project – The interconnection of the Facility to the Company electrical power system

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## Executive Summary

The Company has completed the Impact Study, for the interconnection of Green Development, LLC, (“Customer”) two (2) 10,176 kW / kVA inverter based photovoltaic sites for a total of 20,352 kW / kVA, (“the Facility”), to its 34.5 kV Sub-transmission system, (“the Project”), and presents the conclusions of the study herein.

The interconnection requirements specified are exclusive to this project and are based upon the most recent information submitted by the Customer, which is attached for reference in Appendix C. Any further design changes made by the Customer post IA without the Company’s knowledge, review, and/or approval will render the findings of this report null and void.

## System Modifications

In general, the Project was found to be Feasible with certain modifications to the existing Company System and operating conditions, which are described in detail in the body of this Study. Significant modifications include:

1. Approximately 34,100 circuit foot line extension from Hopkins Hill Road to the Facilities, which includes: (Section 2.2)
  - o ~31,300 circuit feet of 3-1/C 1000 kcmil SCU EPR Cable (The Customer will only be responsible for costs associated with installing 3-1/C 500 kcmil SCU EPR)
  - o All Company owned underground facilities are to be installed in a concrete-encased duct & manhole system built to Company Construction Standards and approved by the Company prior to covering.
  - o ~2,800 circuit feet of overhead 3-477 AL Crossarm
2. Overcurrent Setting change at the Kent County 3310 Breaker (Section 5.4)
3. Add Load encroachment settings to the Kent county T7 Directional Overcurrent Relay (Section 5.4)
4. Install new tap recloser at the start of the Line Extension from Hopkins Hill Road (Section 2.2 & 5.5)
5. Install ~900 circuit feet of 3-477 AAC, a load break switch, a recloser, two disconnect switches and two primary meter at the PCC. (Appendix B-1)

## Cost Estimate

Refer to the Cost Estimate table in Section 9.0 for a listing of major modifications and associated costs. The total estimated planning grade cost of the work associated with the interconnection of the Facility, is \$4,868,376+/-25% and includes Company EPS modifications, Customer interconnection, and taxes. An estimated construction schedule will be provided in the final Interconnection Service Agreement.

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## 1.0 Introduction

The Customer has requested interconnection of a Facility to the Company's existing infrastructure.

The analysis utilized Customer provided documentation to examine the effects on the Company system when the new Facility is connected. The results identify required modifications to the Customer one line diagram(s) and Company infrastructure in order to accommodate the interconnection. As such, the interconnection of the Facility has been evaluated under specific conditions. Should the Customer make any changes to the design, other than those identified in this study, it may require additional time for review, and possibly additional cost.

In accordance with the R.I.P.U.C. 2180 tariff and the Company's ESB series, the Company has completed an Impact Study to determine the scope of the required modifications to its EPS and/or the Facility for providing the requested interconnection service.

Analysis will be performed in accordance with applicable reliability standards and study practices, and in compliance with the applicable codes, standards, and guidelines listed in the Company's Electric System Bulletin No. 756 Appendix D: Distributed Generation Connected to National Grid Distribution Facilities Per The Rhode Island Standards for Interconnecting Distributed Generation ("ESB756D") to determine the incremental impact and any potential adverse impacts associated with the interconnection of the Facility to the EPS.

## 2.0 Project Description

### 2.1 Customer Facility

The Customer proposes to install the following:

#### Case 206311 (Southern Array)

- Three (3) sets of four (4) paralleled Customer owned TMEIC Solarware Ninja PVU-L0880GR 880 kW / 880 kVA Inverters each de-rated to 833.33 kW / kVA for a total of 10,000 kW/kVA of inverter-based DG
- Three (3) Customer owned 3,392 kVA 34.5 kV Delta Primary and 660V Grounded-wye secondary interface transformers with impedances of Z=7.25% and an X/R ratio of 10
- One (1) Customer owned recloser controlled by an SEL-651R relay assembly
- One (1) Customer owned 1200 A 1984X-45F Vector load break switch, accessible to the Utility 24/7

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Case 206313 (Northern Array)

- Three (3) sets of four (4) paralleled Customer owned Solarware Ninja PVU-L0880GR 880 kW / 880 kVA Inverters each de-rated to 833.33 kW / kVA for a total of 10,000 kW/kVA of inverter based DG
- Three (3) Customer owned 3,392 kVA 34.5 kV Delta Primary and 660V Grounded-wye secondary interface transformers with impedances of Z=7.25% and an X/R ratio of 10
- One (1) Customer owned recloser controlled by an SEL-651R relay assembly
- One (1) Customer owned 1200 A 1984X-45F Vector load break switch, accessible to the Utility 24/7

A copy of the Customer one lines are provided in Appendix C, illustrating the Customer’s proposed design and proposed interconnection to the area EPS. The Customer documents are not binding and shall require modifications and/or clarification as identified herein.

The following parameters were assessed as part of the Project evaluation:

1. The voltage and frequency trip settings as shown on the one line (dated 6/12/2020).

Any advanced inverter functionality other than that specifically called out on the Customer documentation and/or outlined herein shall be subject to additional study before being enabled.

**2.1.1 Assumptions**

For certain components, data was not provided by the Customer, or was physically not available at the time of this Study. In order to proceed with the analysis certain assumptions were made based on past experience and engineering judgment. Assumptions are summarized in the following list. Should any of these assumptions be incorrect, the Customer must advise the Company immediately, as reevaluation of the Impact Study results may be required:

1. Case 206311 is the Southern Array and is represented in the one line with file name: “400638-SK-10”
2. Case 206313 is the Northern Array and is represented in the one line with file name: “400638-SK-11”

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## 2.2 Company Area EPS

The area EPS was evaluated, and it was determined that the most viable interconnecting circuit is the 3310, a 34.5 kV unregulated, three-phase, 3 wire, wye, non-effectively-grounded, radial sub transmission circuit that originates out of the Company’s Kent County Substation, in Warwick, RI (the “Interconnecting Circuit”). This circuit is located overhead on Division Street, approximately 33,100 circuit feet from the proposed Facility. This Line Extension will include the following work:

- Installation of a new tap recloser on proposed Pole #25-1 Hopkins Hill Road with Live line reclose blocking capabilities
- Installation of ~31,300 circuit feet of 3-1/C 1000 kcmil SCU EPR underground cable in manhole and duct system
  - All Company owned underground facilities are to be installed in a manhole and duct system built to Company Construction Standards and approved by the Company prior to covering.
- Installation of ~2800 circuit feet of overhead 3-477 Bare AL Crossarm at the bridge crossings
  - ~400 circuit feet at Hopkins Hill Road Tap
  - ~1,400 circuit feet over the Big River Crossing
  - ~1,000 circuit feet at Nooseneck River Crossing

An underground line extension originating from the overhead line on Hopkins Hill Rd will be required to reach the proposed Facilities. There are two rivers that will need to be crossed with overhead conductors alongside the bridges.

The ability to generate is contingent on this Facility being served by the Interconnecting Circuit during normal operating conditions. Therefore, if the Interconnecting Circuit is out of service, or if abnormal operating conditions of the area EPS are in effect, the Company reserves the right to direct the Customer to disengage the Facility.

The Interconnecting Circuit has the following characteristics:

- Refer to Section 3.0 for circuit loading characteristics.
- The existing and in-process generation at the substation and on the interconnecting circuit is summarized in Table 1. Values shown are based on full nameplate DG output:

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Feeder	Generation installed and operating at time of study (kW)	Generation in process at time of study (kW)	Generation proposed for this Project (kW)	<b>TOTAL (kW)</b>
3309	0	0	0	0
3310	0	0	20,000	20,000
3311	0	41,140	0	41,140
3312	0	0	0	0
<b>TOTAL</b>	0	41,140	20,352	<b>61,140</b>

**Table 1: Generation at the Substation and Interconnecting Circuit**

- There is one (1) existing recloser on the circuit, none of which are in between the substation and the facility, which is summarized in Table 2. Refer to Section 5 for further discussion on any required modifications.

Location	Status	Mid-line recloser, or existing DG project PCC recloser	In between Facility and Substation
Pole #18-1, Hopkins Hill Rd	In Service	Mid-line	No

**Table 2: Recloser Locations**

- There is a total of 0 kVAR in existing capacitor banks installed on this circuit. Refer to Section 3 for further discussion on any required modifications.
- There are no existing regulators installed on this circuit. Refer to Section 3 for further discussion on any required modifications.

### 2.3 Interconnection

Refer to the interconnection diagram in Appendix B for approximate PCC location.

Should the Customer elect to move forward with the Project, the Company's Design Personnel will specify the exact location of the Company's facilities and installation details. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements.

The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.

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For this Project, the PCC for these two facilities are defined as the point where the Customer owned conductors terminate to the Company revenue meter. For the Southern Array (Case 206311), the PCC will be located at Pole #9-65 Nooseneck Hill Rd on the southern side of the Customer Access Road. For the Northern Array (Case 206313), the PCC will be located at Pole #9-64 Nooseneck Hill Rd on the Northern side of the Customer Access Road. The access road is located on Nooseneck Hill Road, approximately 450 feet north of Wills Swamp Road. The Customer must install their facilities up to the Company revenue meter. The Customer must provide sufficient conductor to allow the Company to make final connections at the meter location. The Company will provide final connection of the Customer conductors to the Company meter.

If National Grid right of way (R.O.W) is involved, then the Customer shall provide detailed drawings of any planned construction within any National Grid R.O.W., for the Company’s review and subsequent approval, showing elevation grades of all phases of construction within the R. O. W. before any construction may begin. Plans and drawings must be submitted that meet all the Company’s requirements before the interconnection process can move forward. These plans shall be submitted to National Grid’s R.O.W./Real-Estate group and the Transmission R.O.W. Engineering and construction group for review and comment before any construction can be allowed to move forward. There may be additional costs and subsequent delays involved with the review, and, or oversight of any construction in, or adjacent to, the Company’s R.O.W., and if any Company owned facilities need modification as a result of the Customer’s proposed construction. These costs will be in addition to, and outside of the scope of, this SIS. Failure of the Customer to reimburse the Company for these costs may delay or negate the interconnection process.

Drawings shall be stamped by a registered electrical professional engineer, licensed in the project’s state. Drawings shall include accurate plot lines, drawn to scale, and site.

### 3.0 Power Flow Analysis

The power flow analysis was substantially performed using electrical system modeling software. A model of the Interconnecting Circuit, as described in Section 2.2, was developed based on data extracted from the Company’s Geographical Information System (“GIS”). A field review of the feeder was performed on 9/25/2019.

The analysis considered cases at peak load (16,214 kVA @ 98.8 Leading PF) and net minimum load (4,955 kVA @ 99.57% Lagging PF) at time of maximum expected generation (9:00AM – 6:00PM) on the circuit.

Circuit peak and minimum load values have been taken from the Company’s historical load data that has been compiled over the past 12 months, from 1/1/2019 to 1/1/2020.

#### 3.1 Reverse Power Flow at Substation

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The possibility of the Facility causing reverse power flow through the Company’s substation transformer was reviewed.

Analysis shows that the maximum potential generation exceeds the observed minimum load on the Kent County 34.5 kV bus. However, the substation is currently equipped with bi-directional metering which was previously installed for reasons unrelated to DG work. No additional work is required on the substation bulk power metering.

### 3.2 Interconnecting Circuit Load Flow Analysis

The area EPS, with proposed line extensions to the Facilities, was examined with and without the Facility operating at full output. The analysis demonstrated that the addition of the Facility will not create thermal loading problems on the Interconnecting Circuit, or the associated substation.

Specifically, no conductor, transformer, or voltage regulator overloads occur as a result of this interconnection. All Company owned mainline conductor and distribution facilities are thermally large enough to accommodate the proposed generation.

### 3.3 Interconnecting Circuit Voltage Analysis

The Company is obligated to hold distribution voltages at customer service points to defined limits in ANSI Standard C84.1- 2006. Range A of the ANSI standard requires the Company to hold voltage within +/- 5% of nominal at the PCC.

Under emergency conditions, voltage on the system could reach 90% of nominal prior to corrective action being taken. The Customer is advised to consider this in planning their system requirements and equipment settings, however, no warranties or guarantees are implied.

Under normal operating conditions it is expected that the Company will be able to meet its obligations for ANSI C84.1 with the system generation at full power. The Customer must maintain voltage at the PCC at +/- 5% of nominal under normal conditions. Also, the PV interconnection shall not contribute to greater than a 3.0% change in steady state voltage on the EPS under any conditions.

The analysis of this facility determined that when the Facility generation is at full output, the voltage range at the PCC was within acceptable limits.

Customer provided manufacturer’s test reports have been reviewed for 1.4PU pickup values with 1ms or less total clearing time. The proposed design has been found to meet the necessary requirements

The Company will not be held liable for any power quality issues that may develop with the Customer or any other customers as result of the interconnection of this generation.

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### 3.4 Flicker Analysis

The IEEE 1547 standard and IEEE 1453 flicker assessments were used to estimate whether this site would be likely to cause unacceptable voltage flicker on the interconnecting feeder. This method evaluates for both short term and long term voltage flicker against IEEE1547-2018 Table 25 - DER Flicker Emission Limits.

Analysis shows that  $P_{st}$  and  $P_{lt}$  are within acceptable limits and no mitigation for voltage flicker is recommended.

The IEEE Recommended Practice for Measurement and Limits of Voltage Fluctuations and Associated Light Flicker on AC Power Systems, IEEE Std. 1453-2015 was used as a basis for flicker and voltage fluctuation analysis.

This Facility was modeled using the Long Term Dynamics module of CYME<sup>1</sup>. A long term dynamic profile for the Facility was used that simulates the voltage fluctuation of the site over a 6 hour period. Other significant DG existing or in process ahead of this Project were modeled at full output and modeled with the appropriate voltage fluctuation curve to simulate reasonable voltage fluctuations.

The generation profile used is based on live metered data from a PV site that is similar in size to this Project. The data is intended to simulate realistic power output from the site, resulting in a varied output from the PV.

Given the nature of flicker, it is impossible to predict voltage flicker under all conceivable environmental conditions. Therefore, the flicker results are used as a metric to evaluate whether there is a readily apparent concern related to voltage flicker.

The Company will not be held liable for any power quality issues that may develop with the Customer or any other customers as result of the interconnection of this generation.

Analysis shows that the predicted flicker and voltage fluctuations are expected to be acceptable, provided that the following conditions are met:

- The system modifications identified elsewhere in this study are implemented
- The reactive contribution of the PV at the PCC operates between -99 % Power Factor (Importing VARs) and unity power factor

<sup>1</sup> CYME Power Engineering Software, Version 8.1, Revision 01, Build 115, Copyright © 1986-2017, Cooper Industries, Ltd.

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## 4.0 Risk of Islanding

### 4.1 Islanding Analysis (ESB 756D Section 7.6.12)

The project was screened for the potential of islanding risk. Per IEEE 1547 *section 4.4.1 Unintentional Islanding*, for an unintentional island in which the DG energizes a portion of the Area EPS through the PCC, the DG interconnection system shall detect the island and cease to energize the Area EPS within two seconds of the formation of an island.

Based on known in-service and in-progress projects at the time of study, the generation shown in Table 3 was considered on this feeder. Three-phase projects greater than 25kW are listed individually. All other projects below 25kW are listed as a single line item.

Project Size (kW)	Certified / Non-Certified
0	All Projects <25kW Certified
0	All Projects <25kW Non-Certified
20,000	CERTIFIED

**Table 3: Generation Considered for Risk of Islanding Analysis**

Analysis indicates that the overall ability of this Facility to island more than 2.0 seconds is considered likely event. As a result, PCC recloser with reclose blocking will be required. Additionally, reclose blocking must be implemented at the following line reclosers summarized in Table 4.

Location	Status (Existing or New)
Pole #25-1, Hopkins Hill Rd	New

**Table 4: Recloser Locations**

## 5.0 Short Circuit and Protection Analysis Company Facilities

The Company performed a review of the Project relative to the short circuit and protective device impacts on the Interconnecting Circuit. This review identifies EPS enhancements that are necessary to complete the Project and its ability to meet Rhode Island R.I.P.U.C 2180 interconnection tariff and the requirements of the Company's ESB 756D. The Interconnecting Circuit, including all relevant DG was modeled in a software package called ASPEN OneLiner<sup>2</sup>.

<sup>2</sup> ASPEN OneLiner V12.5, Build: 19177 (2015.01.28), Copyright © 1987-2013 ASPEN.

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The model was developed using Company records for feeder characteristics, and Customer provided documentation. Refer to Section 2.1.1 for any assumptions made in the model.

### 5.1 Fault Detection at Substation (ESB 756D Section 6.2.2)

Addition of generation sources to sub-transmission feeders can result in the back-feeding of the substation transformers, effectively turning a station designed for load into a generation step-up transformer. Due to the Kent County T1, T2 and T7 supply transformer configurations, there is a path for zero sequence ground fault current to single line to ground faults on the transmission line. Therefore, the Facility does not pose a significant risk of causing temporary overvoltage to develop on the primary side of the substation transformer. Substation modifications related to  $3V_0$  are not required.

### 5.2 PCC Impedance

The Interconnecting Circuit impedance is shown below in per unit at the PCC for the proposed Facility, using a 100 MVA base. The PCC location is shown in Appendix B. These values take into account existing system conditions, but not the impact of the Customer's new Facility.

#### Pre-Project

#### System Impedances at PCC for Case 206311 & Case 206313

$$Z1 = 0.12 + j0.50 \text{ p.u.}$$

$$Z0 = 0.79 + j1.46 \text{ p.u.}$$

### 5.3 Fault Current Contributions

Table 5 summarizes the Facility's effect on fault current levels at the PCC. These fault currents are within existing equipment ratings and will not upset existing device coordination on the feeder. Mitigation strategies are required to accommodate the proposed Facility, as described in Sections 5.4 and 5.5.

The Customer is responsible for ensuring that their own equipment is rated to withstand the available fault current according to the NEC and National Grid ESB 750, which specifies that the fault current should be no more than 80% of the device interrupting rating.

**PCC values are for both for Case 206311 & Case 206313.** Any assumptions made in calculating the fault current shown in Table 5 are identified in Section 2.1.1.

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PRE PROJECT	SUB BUS (Amps @ 34.5 kV)	PCC (Amps @ 34.5 kV)
3-phase (LLL)	21175	3300
Phase-Ground (LG)	23542	1917

POST PROJECT	SUB BUS (Amps @ 34.5 kV)	PCC (Amps @ 34.5 kV)	DELTA I <sub>fault</sub> @ SUB BUS	DELTA I <sub>fault</sub> @PCC
3-phase (LLL)	21581	3706	1.92%	12.30%
Phase-Ground (LG)	24065	2187	2.22%	14.08%

**Table 5: Fault Duty**

#### 5.4 Substation Protective Device Modifications

The protection coordination review of the area EPS revealed that the following modifications to the existing substation protective devices will be required. Associated costs are identified in Section 9.0 of this Impact Study:

- Add load encroachment settings to the Kent County Transformer #7, 34.5 kV directional overcurrent relay (67)
- Adjust the instantaneous ground overcurrent setting at the 3310 breaker

#### 5.5 Area EPS Protective Device Coordination

The Project will require a Company owned recloser at the PCC. As this is a non-IPP Project, the recloser will require dead-line check to ensure that the recloser cannot close if the DG is generating.

The existing device settings and associated time-current curves were evaluated for protective devices on the Interconnecting Circuit.

The protection coordination review of the area EPS revealed that the following modifications to the existing substation protective devices will be required. Associated costs are identified in Section 9.0 of this Impact Study. Refer to Appendix B for system modification drawings:

- Install a recloser at the tap for the proposed line extension to the facility on Hopkins Hill Rd

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## 6.0 Customer Equipment Requirements

The following Section discusses requirements for Customer owned equipment, which are further outlined in detail in ESB 756D. References to ESB 756D are provided in each sub-section below. It is the Customer's responsibility to comply with all requirements of ESB 756D. Please note that applicable sections of ESB 756D are referenced for information purposes and may not comprise the entirety of applicable sections.

In general, the Customer Facility shall have the capability to withstand voltage and current surges in accordance with the environments defined in IEEE Standard C62.41.2-2002 or IEEE Standard C37.90.1-2002 as applicable.

The Customer has submitted identical drawings for both Cases 206311 & 206313, the following comments address both projects.

### 6.1 Revenue Metering Requirements (ESB 756D Section 7.2.2 and 7.2.3)

For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the National Grid revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or, in locations with suitable wireless service, a wireless meter.

Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of National Grid. If approved, a wireless-enabled meter will be installed, at the customer's expense. If and when National Grid's retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to National Grid's revenue meter is provided.

Refer to *Appendix A Figures A-1 and A-2 - Revenue Meter Phone Line Installation Guide*).

The Customer is advised to contact Generation and Load Administration ([NewGenCoord@iso-ne.com](mailto:NewGenCoord@iso-ne.com)) at ISO New England regarding all metering, communications circuits, remote access gateway (rig), financial assurance, paperwork, database updates, etc. that may be required for this Facility.

### 6.2 Interconnecting Transformer (ESB 756D Section 7.3)

The documentation provided states the interconnecting transformers are 3,392 kVA, 34.5 kV Delta primary and 660 V wye-grounded secondary, with an impedance of Z=7.25% and an X/R ratio of 10. The proposed transformers satisfy the requirements of the ESB.

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**6.3 Effective Grounding (ESB 756D Section 7.3.2.1)**

The Facility is proposing to connect to a non-effectively grounded 34.5 kV circuit, and therefore does not require a means of effective grounding.

**6.4 Manual Generator Disconnecting Means (ESB 756D Section 7.4)**

The Customer provided documents satisfy the requirement of this Section of ESB 756D.

**6.5 Primary Protection (ESB 756D Section 7.6 & 7.8)**

The following section relates to the primary means of protection by the Customer. This includes the inverter relay functionality.

**6.5.1 Primary Protective Relaying (ESB 756D Section 7.6.1, 7.6.2, 7.6.11, & 7.8)**

The Customer provided documents indicate that the generator/inverter will be provided with an internal relay that will trip the generator interrupting device. Proposed settings for the 27, 59, 81O/U functions have been provided for review.

All inverter-based DER projects are required to have voltage and frequency settings and ride-through capability described in ESB 756D Section 7.6.11 and 7.8. This requirement is met

**6.5.2 Primary Frequency Protection (ESB 756D Section 7.6.8, 7.6.11.1, and 7.8)**

Frequency elements trip settings for primary relaying are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.8, 7.6.11, and 7.8.

The R.I.P.U.C No. 2180, requires that, the DER cease to energize the area EPS within 2 seconds, refer to IEEE1547 and UL1741.

The Customer provided documents show acceptable internal relay settings in accordance with the afore-mentioned requirements.

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**6.5.3 Primary Voltage Relay Elements (ESB 756D Section 7.6.7, 7.6.11.1, and 7.8)**

The Customer provided documents show undervoltage (27) and overvoltage (59) elements that satisfy the requirements of this Section of ESB 756D.

Voltage relay elements trip settings are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.11 and 7.8. This requirement is met.

**6.6 Secondary Protection**

The following section relates to the secondary means of protection, also referred to as redundant relaying.

**6.6.1 Generator Interrupting Device (ESB 756D Section 7.5)**

A Company owned recloser is required at the PCC, which will contain utility facing protective elements (27, 59, 81O/U). A Generator Interrupting Device shall be installed for site protection, with overcurrent functionality. The Customer design shows a recloser for site protection.

The Customer provided documents indicate an interrupting device on the high side (Customer 34.5 kV side) of the interconnecting transformer, which satisfies the requirements of ESB 756D.

The Customer can choose to use fuses in lieu of a relay controlled interrupting device, If the Customer wishes to do this, the comments in the rest of the subsections of Section 6.6 do not apply and the Customer is to provide revised documentation to show adequately sized fuses.

**6.6.2 Secondary Overcurrent Relay Elements (ESB 756D Section 7.6.10)**

The Customer provided documents do not show a ground overcurrent (51G) relay element and associated settings because they are not required. This is acceptable.

**6.6.3 Secondary Protective Relaying (ESB 756D Section 7.6.3)**

The Customer provided documents indicate that a redundant utility grade relay is provided that will trip the generator interrupting device. Relay make/model is included on the Customer single line.

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**6.6.4 Secondary Frequency Protection (ESB 756D Section 7.6.8,  
7.6.11.1, and 7.8)**

Frequency elements trip settings for primary relaying are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.8, 7.6.11, and 7.8.

The R.I.P.U.C. No. 2180, requires that, the DER cease to energize the area EPS within 2 seconds, refer to IEEE1547 and UL1741.

The Customer provided documents show relay settings in accordance with the afore-mentioned requirements.

**6.6.5 Secondary Voltage Relay Elements (ESB 756D Section 7.6.7,  
7.6.11.1, and 7.8)**

The Customer provided documents show undervoltage (27) and overvoltage (59) elements that satisfy the requirements of this Section of ESB 756D.

Voltage relay elements trip settings are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.11 and 7.8. This requirement is met

**6.6.6 Current Transformers (“CT”) (ESB 756D Section 7.6.4.1)**

The Customer provided documents satisfy this Section of ESB 756D..

**6.6.7 Voltage Transformers (“VT”) and Connections (ESB 756D  
Sections 7.6.4.2)**

The Customer provided documents show LEA Voltage sensors and show the ratio, which satisfies this Section of ESB 756D.

**6.6.8 Protective Relay Hard-Wiring (ESB 756D Section 7.6.5)**

The Customer provided documents call for hardwiring of the redundant relaying trip circuits, therefore satisfies the requirements of this section of ESB 756D.

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**6.6.9 Protective Relay Supply (ESB 756D Section 7.6.5 and 7.6.6)**

The Customer provided documents indicate a power supply for the redundant relay that satisfies the requirements of this section of ESB 756D.

**6.6.10 Utility Restoration Detection (ESB 756A Section 4.5.2.7 & 756C**

**Section 7.8.3)**

The DER shall not connect or return to service following a trip (including any ground fault current sources) until detecting a minimum 5 minutes of healthy utility voltage and frequency. “Healthy Utility Voltage and Frequency” is defined by ESB 756D Table 7.8.3-1. The five minute time interval is required to restart if the utility voltage or frequency falls outside of this window.

All the devices associated with five minute timing must meet IEEE C37.90 standard and be capable of withstanding voltage and current surges.

The Customer shall provide settings and timing device information for review by the Company. However, as stated in Section 6.6.1, if the Customer uses fuses in lieu of a relay the Customer is not required to have Utility Restoration Detection settings.

**6.6.11 Relay Failure Protection (ESB 756D Section 7.6.3)**

For all required tripping functions, either redundant relaying or relay failure protection, where a hardware or power supply failure for the redundant relay automatically trips and blocks close of the associated breaker, is required.

The Customer’s one line diagram shows devices and settings to satisfy this requirement.

**6.7 Customer Cabling**

The Customer must provide a means for primary protection between the Generator disconnect switch and Customer owned transformer to protect the Customer cable. The Company is not responsible for the protection of the Customer cable and primary protection for the Customer cable must be provided at the change of ownership.

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## 7.0 Telemetry and Telecommunications

The Customer is advised to communicate with ISO-New England for any telemetry requirement as ISO-NE may require real-time monitoring between ISO-NE EMS and the DG site. The Customer shall refer to the ISO-NE website and ISO-NE customer service help desk for details.

This project is considered an independent power producer (IPP), an RTU for telecommunication will not be required by the Company.

## 8.0 Inspection, Compliance Verification, Customer Testing, and Energization Requirements

### 8.1 Inspections and Compliance Verification

A municipal electrical inspection approval certificate from the local authority having jurisdiction is required of the Customer's Facilities (i.e. primary service entrance conduit, primary switchgear, wiring, and generation equipment). The Company must receive the Customer's Draft set of Project documentation and test plan for the functional verification tests at least four (4) weeks before the Company's field audit. Documentation from the customer must include, but not be limited to:

- Equipment cut sheets and shop drawings for all major equipment
- Inverter manufacturer cut sheet including method of island detection and UL certification
- Inverter protective relay settings
- Settings for any other Customer relay related to the Project
- The most recent version of the single line diagram and site plan, reflecting all modifications required in this Impact Study
- Single line diagram of the Facility
- Site diagram of the Facility
- A 3-line diagram and DC schematic illustrating the protection and control scheme
- The proposed testing procedure
- The proposed energization plan

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- All provided Customer drawings shall be stamped and signed by an Electrical Professional Engineer that is licenses in the state where the Facility is located.

The DG Customer shall adhere to all other Company related verification and compliance requirements as set forth in the applicable ESB 750 series documents. These and documented acceptance testing requirements of these facilities will be specified during the Draft design review of the Project prior to the Company’s field audit and energization.

## 8.2 Testing and Commissioning

The Customer shall submit initial relay settings to the Company no later than twenty-one (21) calendar days following the Company’s acceptance of the Facility’s service connection’s Draft MA state licensed professional engineer sealed design. If changes/updates are necessary, the Company will notify the Customer three (3) business days after the initial relay settings were received, and the Customer shall submit the revised settings within seven (7) calendar days from such notification. Within three (3) business days of receipt of the proposed Draft relay settings, the Company shall provide comments on and/or acceptance of the settings. If the process must continue beyond the above identified time frames due to errors in the relay settings, the Company retains the right to extend the Testing and Commissioning process, as needed, to ensure the Draft relay settings are correct.

Assuming no major issues occurring with the relay settings, the Customer shall submit a Testing and Commissioning Plan (TCP) to the Company for review and acceptance, no later than forty-five (45) calendar days following the Company’s acceptance of the Facilities Draft design. The TCP must be drafted, including Company acceptance, no later than six (6) weeks prior to functional testing. The Company requires a minimum of 5 business days for review of any submitted documentation.

## 8.3 Energization and Synchronization

The “Generator Disconnect Switch” at the interconnection point shall remain “open” until successful completion of the Company’s field audit and witness testing.

Prior to the start of construction, the DG Customer shall designate an Energization Coordinator (EC), and prepare and submit an Energization Plan (EP) to the Company for review and comment. The energization schedule shall be submitted to the Company and communicated with the Company’s local Regional Control Center at least two (2) weeks in advance of proposed energization. Further details of the EP

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and synchronization requirements will be specified during the Draft design review of the Project.

The Customer shall submit as-built design drawings to the Company 90 days following commercial operation of their DG Facility.

## 9.0 Cost Estimate

The non-binding good faith cost planning grade estimate for the Company’s work associated with the interconnection of this Facility to the EPS, as identified in this report, is shown below in Table 6:

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National Grid System Modification	Feasibility Study Grade Cost Estimate (-50 % to +200 %) not including Tax Liability)				Associated Tax Liability Applied to Capital	Total Customer Costs includes Tax Liability on Capital Portion
	Pre-Tax Total	Capital	O&M	Removal		
<b>Narragansett Electric Company Civil Work</b>					11.08%	Total
Approximate donated property tax. <sup>[1]</sup>	\$0.00	\$0.00	\$0.00	\$0.00	\$125,000.00	\$125,000.00
National Grid Supervision and Design Support for Customer Underground Civil Construction. <sup>[2]</sup>	\$165,000.00	\$165,000.00	\$0.00	\$0.00	\$18,282.00	\$183,282.00
<b>SUBTOTAL</b>	<b>\$165,000.00</b>	<b>\$165,000.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$143,282.00</b>	<b>\$308,282.00</b>
<b>Narragansett Electric Company Line Work, Customer Property</b>					11.08%	Total
Equipment at Point of Common Coupling, 3310 Circuit <sup>[3]</sup>	\$239,602.00	\$239,602.00	\$0.00	\$0.00	\$26,547.90	\$266,149.90
<b>SUBTOTAL</b>	<b>\$239,602.00</b>	<b>\$239,602.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$26,547.90</b>	<b>\$266,149.90</b>
<b>National Electric Company Line Work, Mainline</b>					11.08%	Total
Distribution Line Work, 3310 Circuit <sup>[4]</sup>	\$3,843,123.00	\$3,827,412.00	\$10,548.00	\$5,163.00	\$424,077.25	\$4,267,200.25
<b>SUBTOTAL</b>	<b>\$3,843,123.00</b>	<b>\$3,827,412.00</b>	<b>\$10,548.00</b>	<b>\$5,163.00</b>	<b>\$424,077.25</b>	<b>\$4,267,200.25</b>
<b>NECO - Substation Work (Distribution Level)</b>					9.90%	Total
Overcurrent Setting Change at the Kent County 3310 Station Breaker	\$1,600.00	\$1,600.00	\$0.00	\$0.00	\$158.40	\$1,758.40
Add Load Encroachment to the Kent County T7 Directional Overcurrent Relay (Cost Sharing may be applicable)	\$16,000.00	\$15,000.00	\$1,000.00	\$0.00	\$1,485.00	\$17,485.00
<b>SUBTOTAL</b>	<b>\$17,600.00</b>	<b>\$16,600.00</b>	<b>\$1,000.00</b>	<b>\$0.00</b>	<b>\$1,643.40</b>	<b>\$19,243.40</b>
<b>Witness Testing &amp; EMS</b>					NA	Total
Witness Testing. <sup>[5]</sup>	\$2,500.00	\$0.00	\$2,500.00	\$0.00	\$0.00	\$2,500.00
EMS integration. <sup>[6]</sup>	\$5,000.00	\$0.00	\$5,000.00	\$0.00	\$0.00	\$5,000.00
<b>SUBTOTAL</b>	<b>\$7,500.00</b>	<b>\$0.00</b>	<b>\$7,500.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$7,500.00</b>
					Tax	Total
<b>Totals</b>	<b>\$4,272,825.00</b>	<b>\$4,248,614.00</b>	<b>\$19,048.00</b>	<b>\$5,163.00</b>	<b>\$595,550.55</b>	<b>\$4,868,375.55</b>

**Notes**

1. Approximate donated property tax for Customer installation of (6) - 3 way manholes, (40) - 2 way manholes, (900 feet) – 2 way, 6" PVC-DB concrete encased duct bank, (26,500 feet) – 4 way, 6" PVC-DB concrete encased duct bank, (700 feet) – 9 way, 6" PVC-DB concrete encased duct bank, and associated equipment. Customer is responsible for performing, any and all, temporary and permanent restoration.
2. National Grid supervision and design support for underground civil construction performed by the Customer. This cost includes: preparation of design package (Scope, Construction Specifications, Construction Standards/Drawings, Vendor Information, etc...), review and approval of civil design drawings, and review and approval of civil construction by full-time National Grid inspector.
3. Installation of pole-mounted equipment including (1) - gang-operated load break switch, (1) - pole top recloser, (2) - sets of disconnect switches, and (2) - primary metering assemblies. Installation of (2) - 50'-0" class H1 poles, (9) - 50'-0" class 1 poles, approximately (900 feet) - 3-1/c-477 Al Bare conductor, and associated equipment.
4. Extend the Kent County 3310, 34.5 kV circuit underground from proposed pole 25-1 Hopkins Hill Road, West Greenwich, RI to the 3310 PCC-POI located at 899 Nooseneck Hill Road, West Greenwich, RI (approximately 5.3 miles). Estimate included in table above assumes installation of 3-1/c-500 komil Cu EPR 35 kV cable. Costs include two (2) bridge crossings with risers to 477 Al Bare conductor.
5. Witness Testing including review of witness test documentation and manpower for attending witness test.
6. Integration of DG and EPS modifications into Company's Energy Management System (EMS).

**Table 6: Cost Estimates**

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	<b>Interconnection Study</b>	Page 25 of 38
	<b>Complex Generating Facility - R.I.P.U.C. 2180</b>	Version 1.0 6/29/2020
	<b>Green Development, LLC 20,000 kW/ kVA of Inverter-Based Photovoltaic 899 Nooseneck Hill Road, West Greenwich RI</b>	<b>FINAL</b>

The planning grade estimate provided herein is based on information provided by the Interconnecting Customer for the study, and is prepared using historical cost data from similar projects. The associated tax effect liability included is the result of an IRS rule, which states that all costs for construction collected by the Company, as well as the value of donated property, are considered taxable income.<sup>3</sup> This estimate is valid for ninety (90) calendar days from the issuance of this report, after which time it becomes void. If the Interconnection Customer elects to proceed with this project after the ninety (90) calendar days, a revised estimate may be required.

The estimated duration for the Company to complete construction of the System Modifications will be identified in the final Interconnection Service Agreement.

The project schedule may be impacted by the ability to have planned outages to allow work to take place on the distribution system. Outages will be contingent on the ability to support the load normally supplied by affected circuits. The schedule can also be impacted by unknown factors over which the Company has no control. The interconnection schedule is contingent on the Interconnecting Customer's successful compliance with the requirements outlined in this report and timely completion of its obligations as defined in *ESB756D, Exhibit 2: Company Requirements for Projects Not Eligible for the Simplified Process*. The schedule for the Company's work shall be addressed during the development, or after the execution, of the Interconnection Agreement

## 10.0 Conclusion

The project was found to be feasible. It will be allowed to interconnect with certain system modifications and additions to the local Company EPS. Associated costs are provided in Section 9.0.

The Customer must submit revised documentation as identified herein, to the Company for review and approval before an ISA can move forward.

A milestone schedule shall be included in the final ISA and shall be reflective of the tasks identified in ESB756D, Exhibit 2. Upon execution of the final ISA, and prior to advancing the project, the Customer shall provide a detailed project schedule, inclusive of the Exhibit 2 tasks referenced above. After completion of final design and all associated applications, fees, permitting and easement requirements are satisfied, System Modifications for this Project will be placed in queue for construction.

If a Customer fails to meet the R.I.P.U.C. No. 2180, Section 3.4 Time Frames and does not provide the necessary information required by the Company within the longer of 15 days or half the time allotted to the Company to perform a given step, or as extended by mutual agreement, then the Company may terminate the application and the Customer must re-apply.

<sup>3</sup> Actual charges shall include the tax rate in effect at the time the charges are incurred.

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***Note: Authorization for parallel operation will not be issued without a fully executed Interconnection Agreement, receipt of the necessary insurance documentation, and successful completion of the Company approved witness testing. Such authorization shall be provided in writing.***

## 11.0 Revision History

<u>Version</u>	<u>Date</u>	<u>Description of Revision</u>
1.0	6/29/2020	Issue to Customer

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## Appendix A Revenue Metering Phone Line Requirements

An analog phone line to National Grid’s revenue meter shall be provided by the Customer. The analog phone line must be capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc. The phone line can be a phone (extension) off the customers PBX phone system, or it may be a separate dedicated phone line as provided by the Telephone Company. The following is to be used as a guide, please contact the Company if additional information is required. The most common installations are outlined below, [Wall mounted Meter Installation](#), [Outdoor Padmount Transformer Meter Installation](#), and [Outdoor Pole Mounted Meter Installation](#).

### 1) WALL MOUNTED METER INSTALLATION

If the meter is wall mounted indoor or outdoor the customer shall provide a telephone line within 12" of the meter socket and additional equipment as described and shown below in figures 1A & 1B. National Grid will connect the meter to the customer provided phone line.

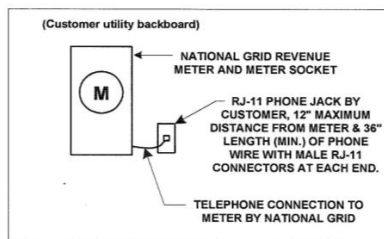


Figure 1A – Indoor Meter Installation  
not to scale

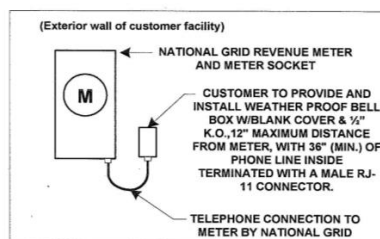


Figure 1B – Outdoor Meter Installation  
not to scale

### 2) OUTDOOR PADMOUNT TRANSFORMER METER INSTALLATION

If the meter is mounted outside on the secondary compartment of the padmount transformer as shown below the conduit shall stub up and roughly line up with the bottom or side knock out of the meter socket and terminate into a weatherproof box or fitting. A liquid tight flexible conduit whip with end bushing and locknut of sufficient length to reach and terminate at the knockout location of the meter socket with three feet of telephone wire coiled (and terminated with a male RJ-11 connector) at its end shall be connected to the weatherproof box or fitting. National Grid will connect the conduit whip to the meter socket and terminate the telephone wire to the meter (see figure 2 below).

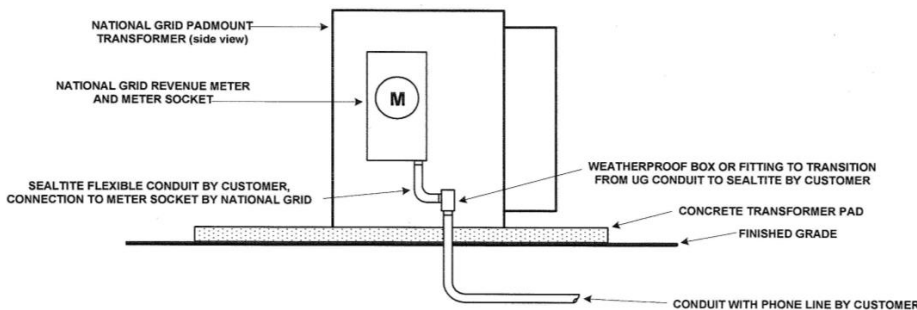


Figure A- 1: Revenue Meter Phone Line Installation Guide

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3) OUTDOOR POLE MOUNTED METER INSTALLATION

If the meter is located outdoor on a Company owned utility pole as part of a primary metering installation the Customer will install and connect a phone line from the Telephone Company provided termination interface box, the line shall be terminated with a RJ-11 male connector and be of sufficient length to reach the meter socket and create a drip loop, as well as additional line for final connection to the meter. The customer is responsible for the Telephone Company phone line installation. (see figure 3 below).

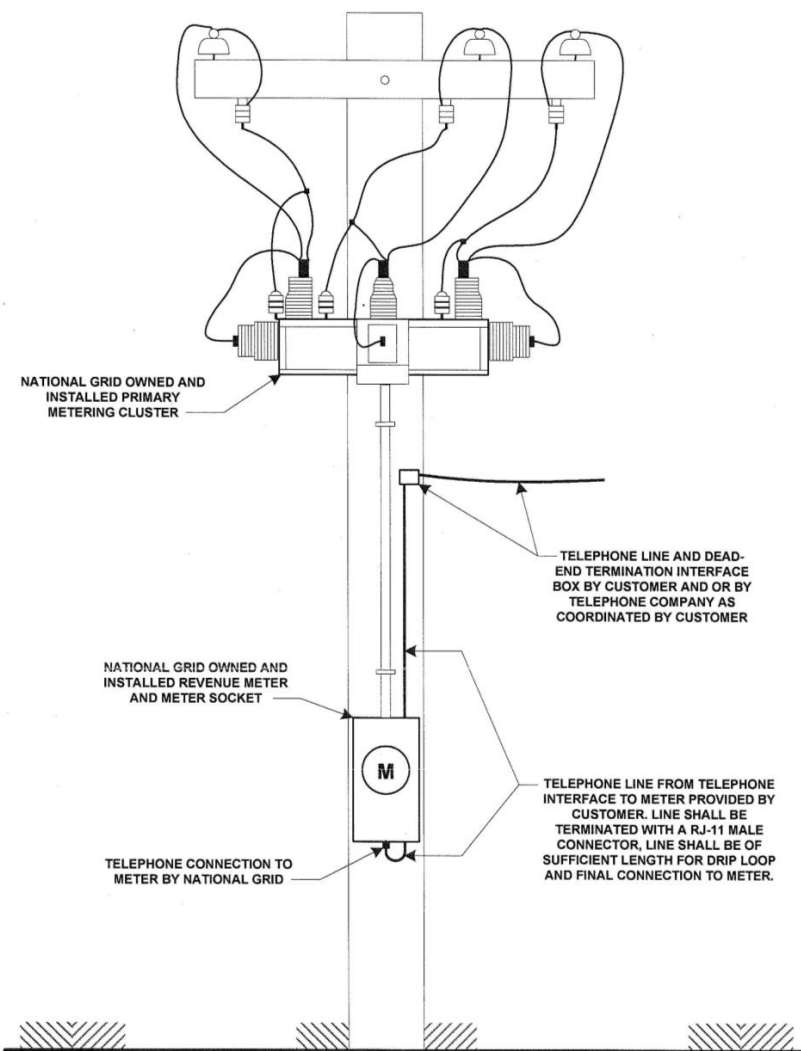


Figure A- 2: Revenue Meter Phone Line Installation Guide

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### Appendix B System Modification Diagrams

*Note: Company EPS modification diagrams provided in this Appendix are intended as a diagrammatic reference of work required to be completed before this Facility may interconnect. The Company will be performing a detailed design following this Impact Study, should the Customer elect to move forward with the interconnection process. At that time, the Company will determine exact locations and requirements for system modification designs. Refer to the body of this Impact Study for further discussion regarding specific EPS modifications that are required for the interconnection of this Facility.*

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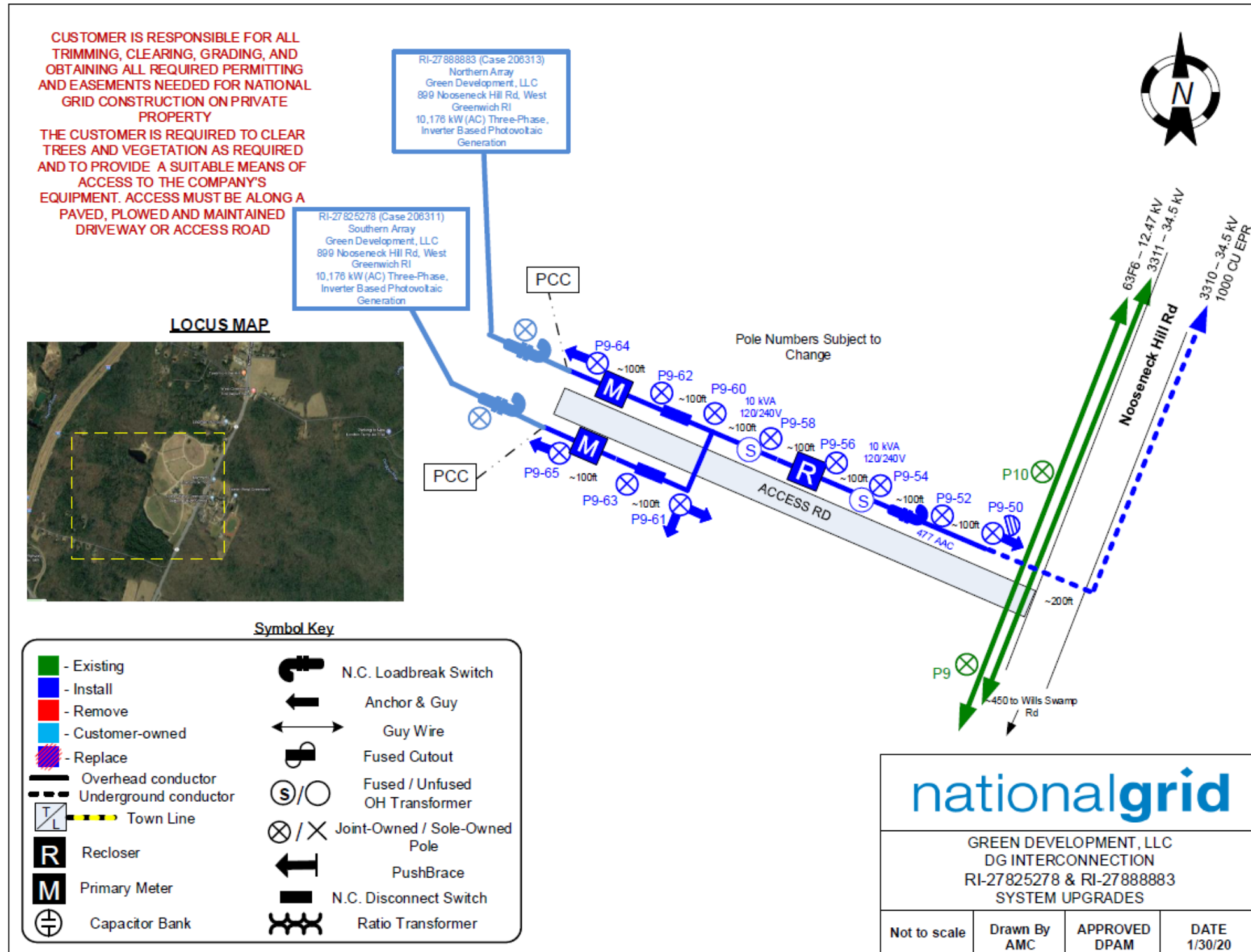
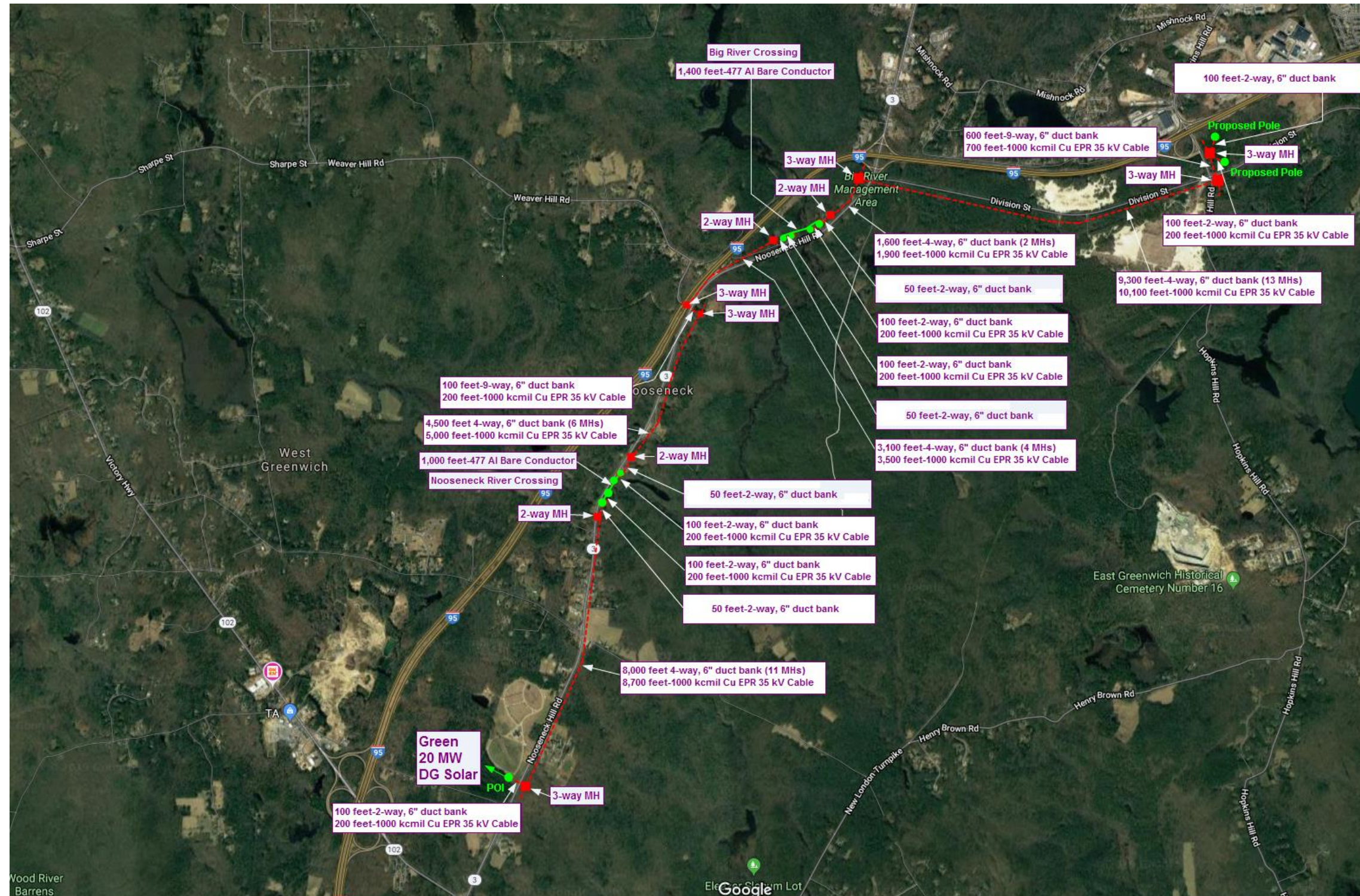


Figure B- 1: PCC Configuration

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**Figure B- 2: Line Extension to Facility**

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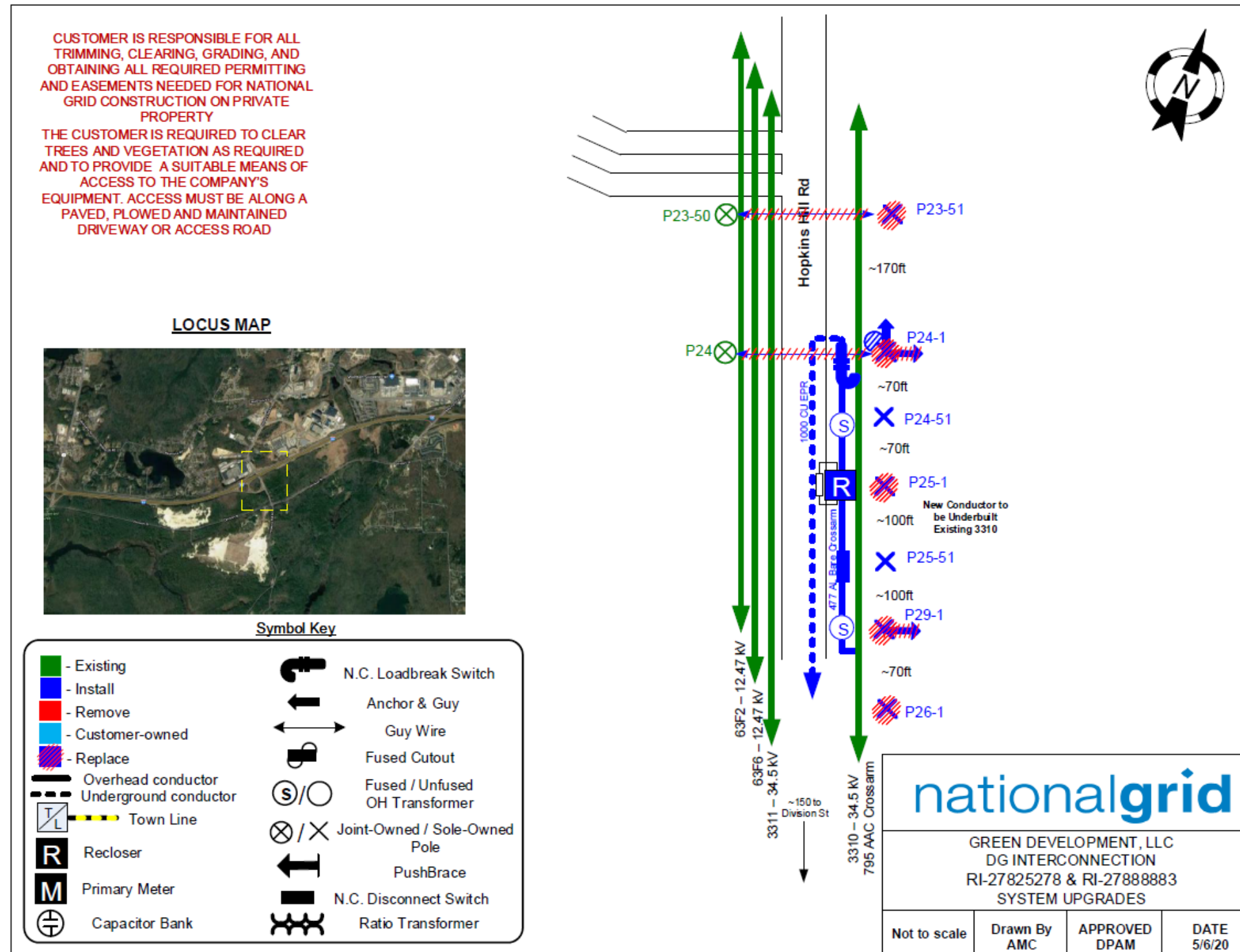


Figure B- 3: Installation of Tap Recloser on Hopkins Hill Road

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### Appendix C Customer Site and Single Line Diagram

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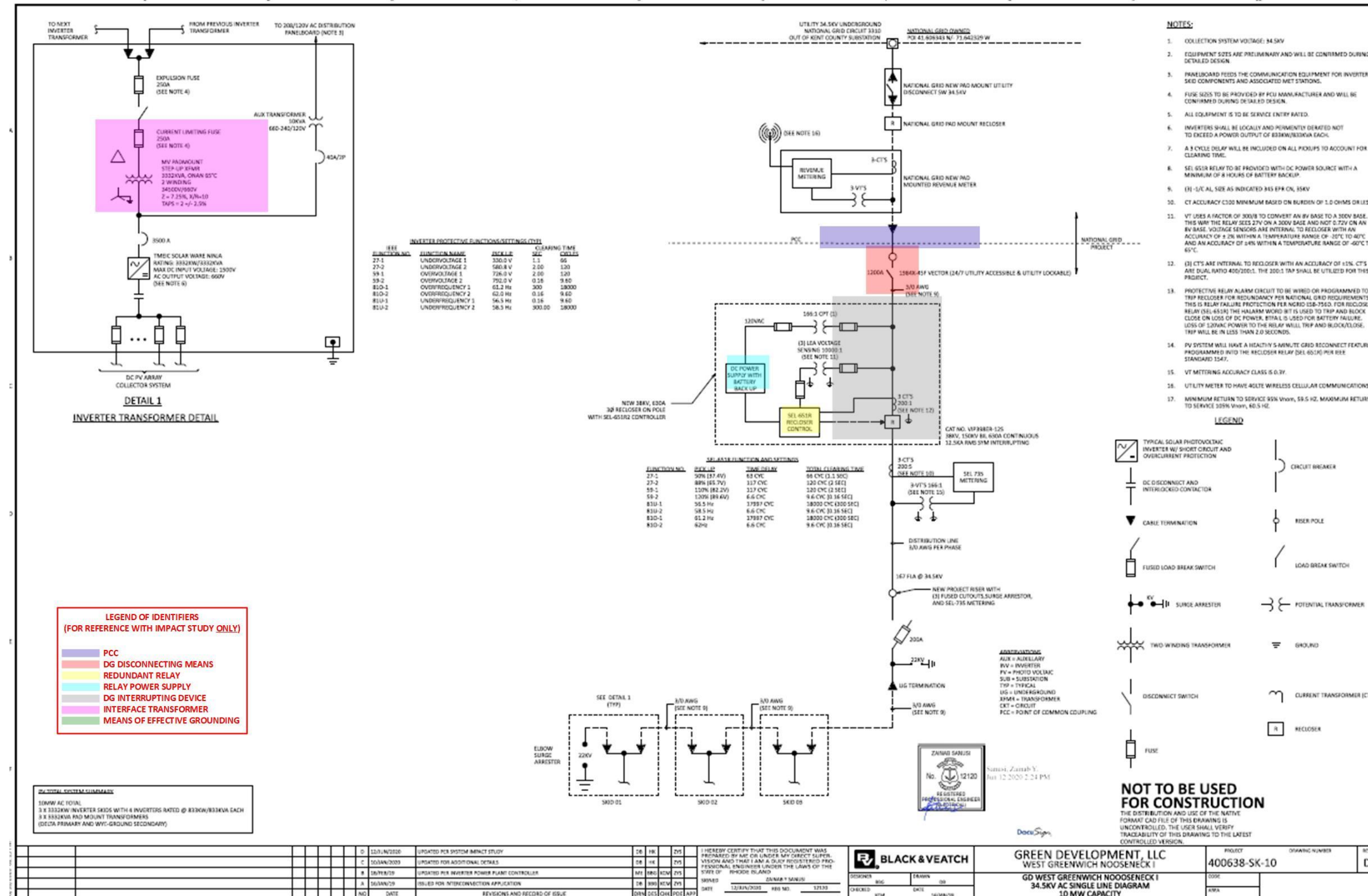


Figure C- 1: Project One-Line (Case 206311)  
(Refer to body of Impact Study for specific discussion on equipment and requirements. Highlighting of equipment in this Figure does not necessarily denote acceptance)

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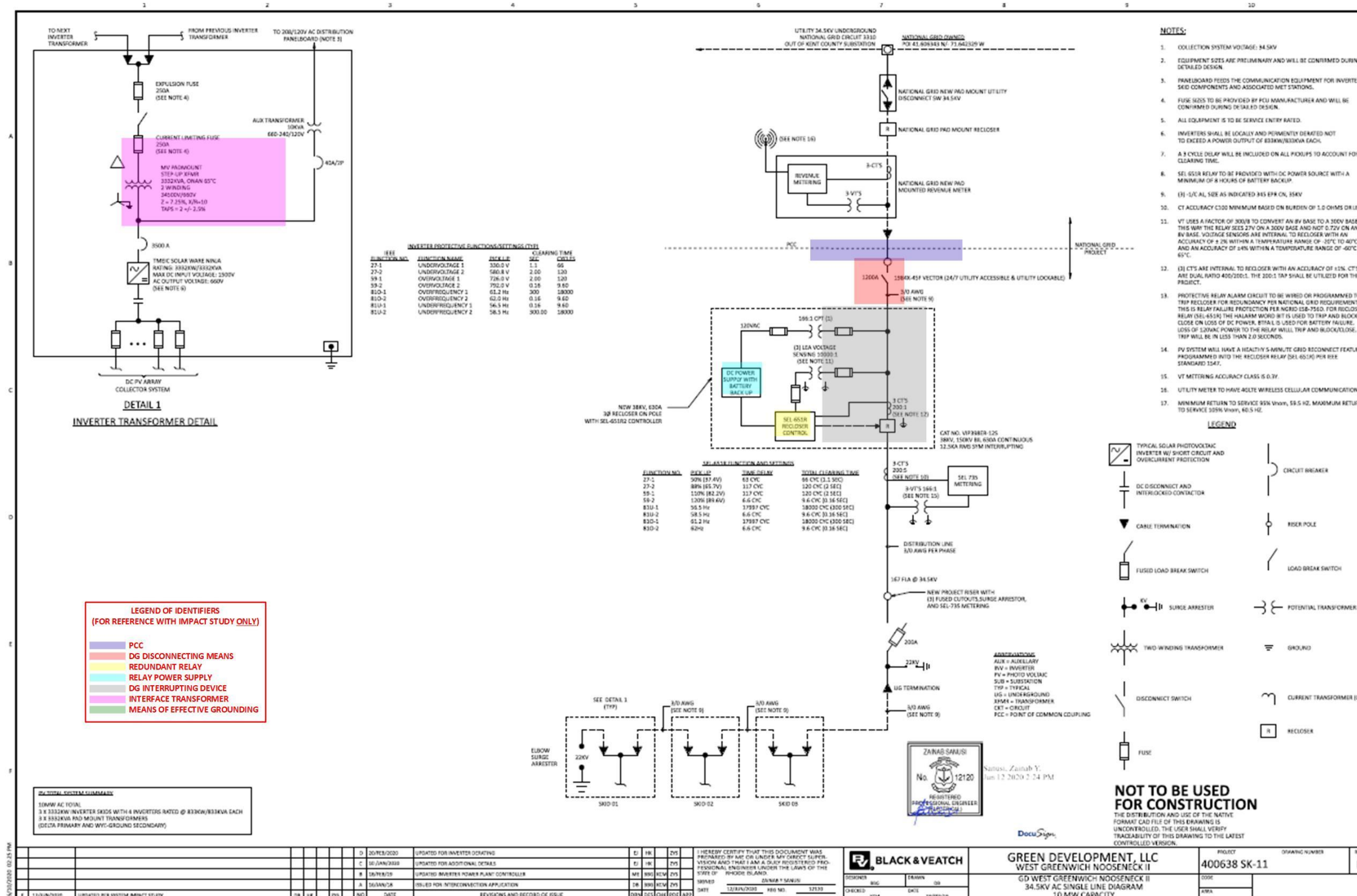


Figure C- 2: Project One-Line (Case 206313)  
(Refer to body of Impact Study for specific discussion on equipment and requirements. Highlighting of equipment in this Figure does not necessarily denote acceptance)

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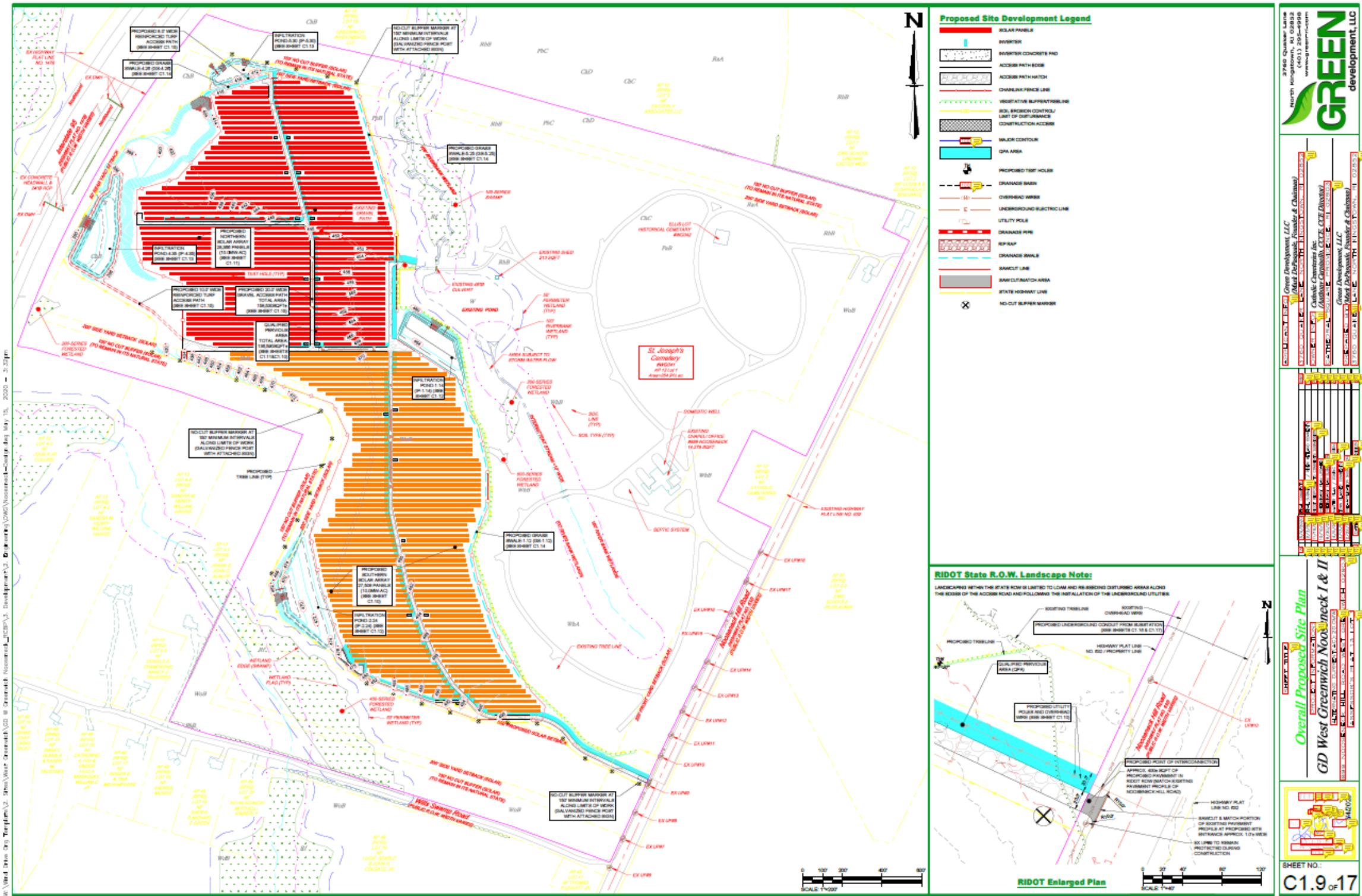


Figure C- 3: Project Site Plan (1)

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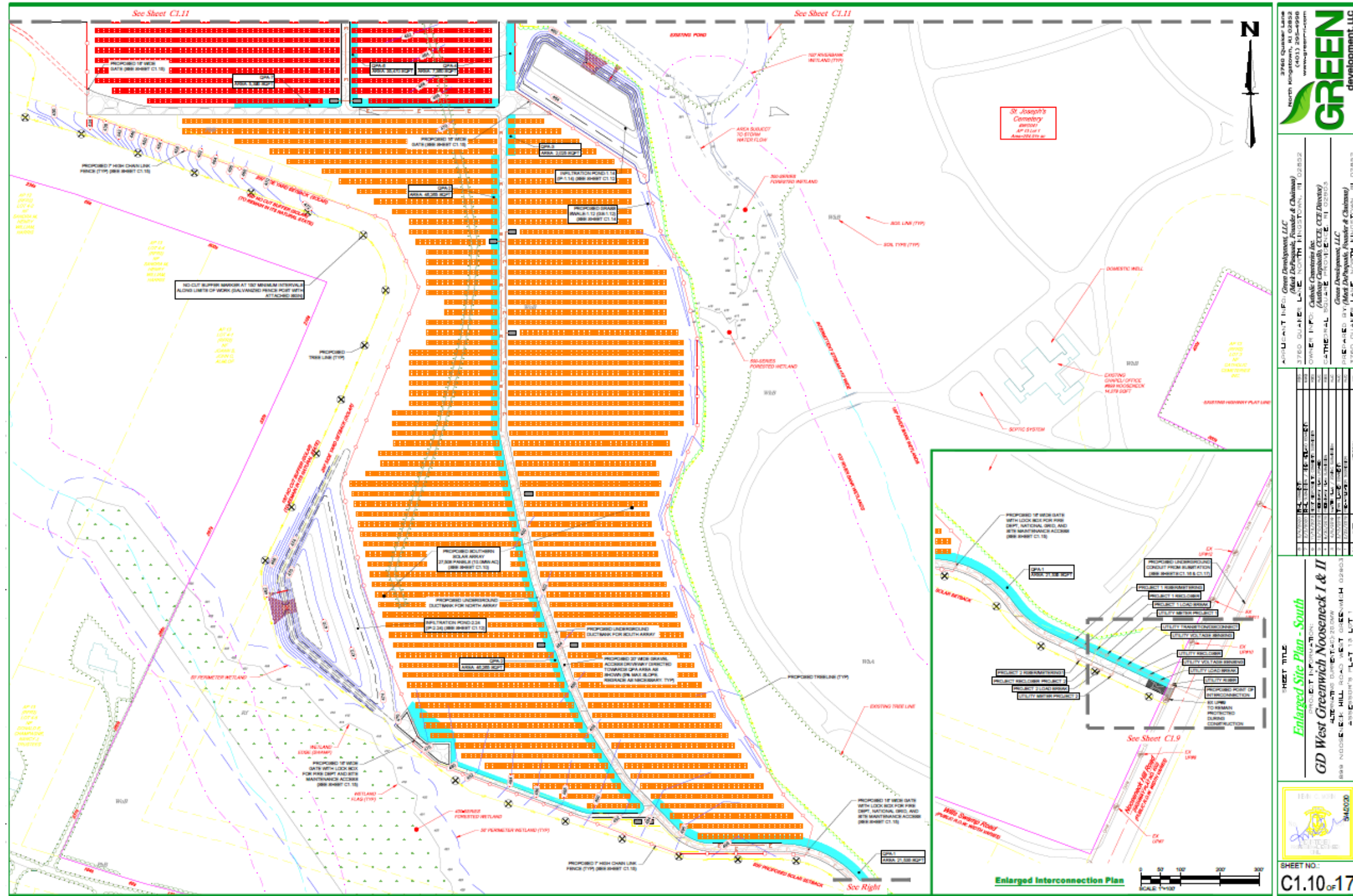
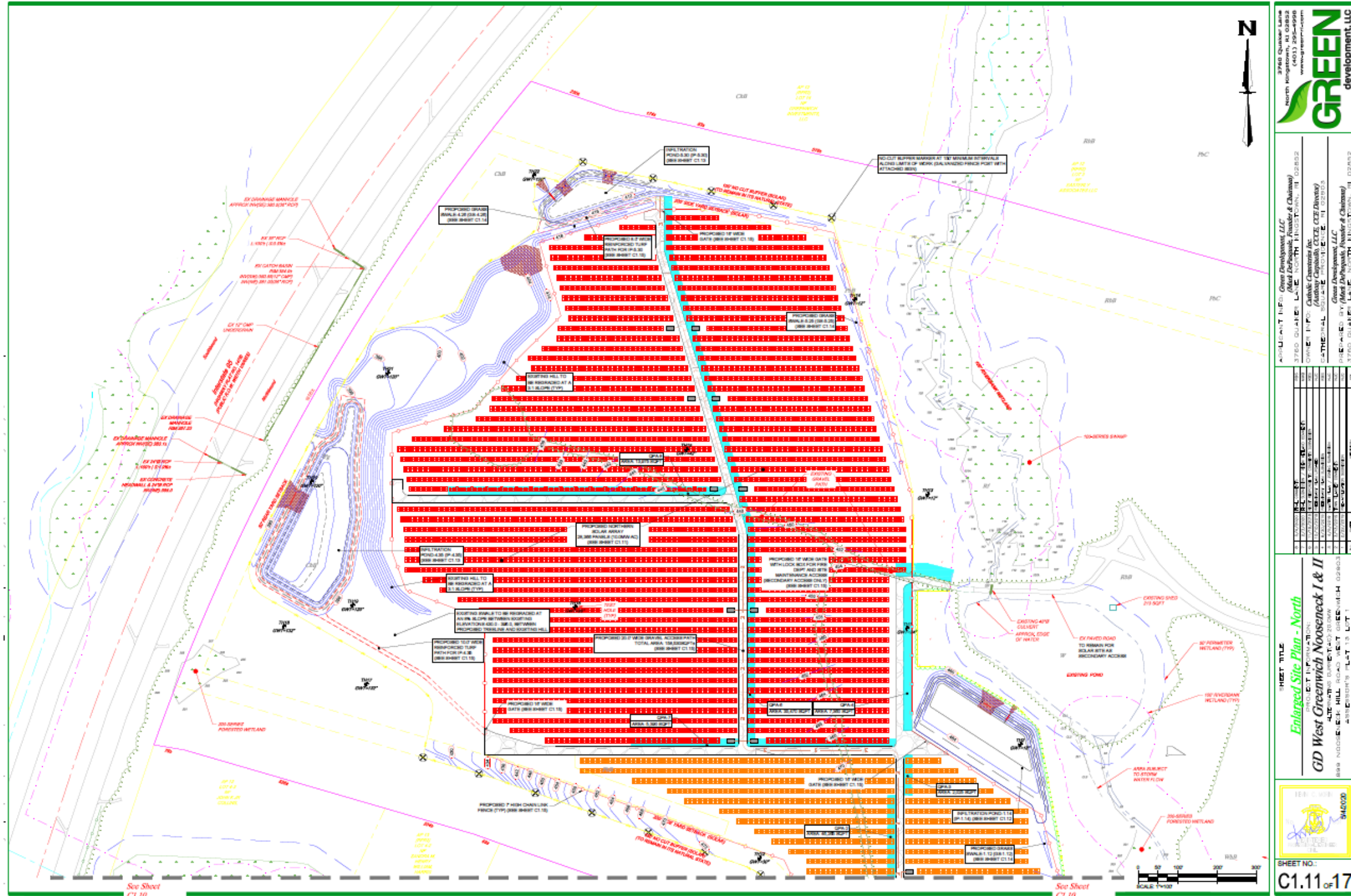


Figure C- 4: Project Site Plan (2)

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3740 Quaker Lane  
North Kingstown, RI 02882  
www.green-dev.com

**GREEN**  
development, LLC

APPLICANT: Green Development, LLC  
(Matt Zebrowski, President & Chairman)  
3740 QUAKER LANE, NORTH KINGSTOWN, RI 02882

OWNER: Green Development, LLC  
(Carlisle Chastain, Inc.)  
3740 QUAKER LANE, NORTH KINGSTOWN, RI 02882

DESIGNER: Green Development, LLC  
(John J. Green, P.E.)  
3740 QUAKER LANE, NORTH KINGSTOWN, RI 02882

DATE: 06/29/2020

**Enlarged Site Plan - North**  
**GD West Greenwich Noosneck I & II**  
ALTERNATE DURET 4-03-2020  
3740 QUAKER LANE, NORTH KINGSTOWN, RI 02882

SHEET NO.: **C1.11** OF **17**

Figure C- 5: Project Site Plan (3)

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	<b>Revy Energy 40,700 kW/kVA rating, Inverter Based Photovoltaic 18 Weaver Hill Road, West Greenwich, RI</b>	<b>FINAL</b>

## Combined System Impact Study for Distributed Generation Interconnection to National Grid’s 34.5 kV System

<b>DG WR:</b>	RI-29048593	RI-29048574	RI-29599253	RI-29048568	RI-29048531	RI-29048497	RI-29048488
<b>DG Case#:</b>	00246606	00246609	00281561	00246610	00246614	00246616	00246617
<b>Applicant:</b>	Revy Energy	Revy Energy	Revy Energy	Revy Energy	Revy Energy	Revy Energy	Revy Energy
<b>Address:</b>	18 Weaver Hill Road	18 Weaver Hill Road	18 Weaver Hill Road	18 Weaver Hill Road	18 Weaver Hill Road	18 Weaver Hill Road	18 Weaver Hill Road
<b>City:</b>	West Greenwich	West Greenwich	West Greenwich	West Greenwich	West Greenwich	West Greenwich	West Greenwich
<b>DG kW/kVA:</b>	7,500 kW/kVA	8,750 kW/kVA	200 kW/kVA	8,500 kW/kVA	5,250 kW/kVA	9,750 kW/kVA	750 kW/kVA
<b>DG Type:</b>	Inverter Based PV	Inverter Based PV	Inverter Based PV	Inverter Based PV	Inverter Based PV	Inverter Based PV	Inverter Based PV
<b>Feeder:</b>	3309, Kent County	3309, Kent County	3309, Kent County	3309, Kent County	3310, Kent County	3309, Kent County	3309, Kent County

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## Definitions

The following is a list of acronyms/synonyms used in this Interconnection Study:

BESS – Battery Energy Storage System

Company – National Grid

Customer – The interconnecting customer of this project

DG – Distributed Generation

DER – Distributed Energy Resources

DTT – Direct Transfer Trip

EPS – Electrical Power System

ESB – National Grid’s Electrical Service Bulletin

Facility – The distributed generating facility for this project, including all related appurtenances and equipment.

IA – Interconnection Application

Interconnecting Circuit – Circuit to which the Facility will connect.

ISA – Interconnection Service Agreement

ISO-NE – Independent System Operator of New England

MH – Manhole

NPCC – Northeast Power Coordinating Council

PCC – Point of Common Coupling (point of demarcation between the Customer and Company facilities)

PF – Power Factor

$P_{it}$  – Long term flicker emission limit

Project – The interconnection of the Facility to the Company electrical power system.

$P_{st}$  – Short Term flicker emission limit

P.U – Per Unit

PV - Photovoltaic

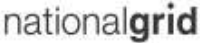
RTU – Remote Terminal Unit

“Site A” - RI-29048593, Case #00246606 (7,500 kW / kVA)

“Site B” - RI-29048574, Case #00246609 (8,750 kW / kVA)

“Site C” - RI-29599253, Case #00281561 (200 kW / kVA)

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“Site D” - RI-29048568, Case #00246610 (8,500 kW / kVA)


“Site E” - RI-29048531, Case #00246614 (5,250 kW / kVA)

“Site F” - RI-29048497, Case #00246616 (9,750 kW / kVA)

“Site G” - RI-29048488, Case #00246617 (750 kW / kVA)

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## Executive Summary

The Company has completed the Combined Impact Study, for the interconnection of Revity Energy, (“Customer”) 40,700 kW/kVA combined inverter based photovoltaic, (“the Facility”), to its 34.5 kV distribution system, (“the Project”), and presents the conclusions of the study herein. Site designations are provided in the Definitions section above.

The interconnection requirements specified are exclusive to this project and are based upon the most recent information submitted by the Customer, which is attached for reference in Appendix C. Any further design changes made by the Customer post IA without the Company’s knowledge, review, and/or approval will render the findings of this report null and void.


## System Modifications

In general, the Project was found to be feasible with certain modifications to the existing Company System and operating conditions, which are described in detail in the body of this Study. Significant modifications include:

### Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309

- Approximately 22,600 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following distribution line work: (Section 2.2 & Appendix B)
  - Install ~20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
  - Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI).
  - Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revity Energy POI) to a 2-way MH on Customer property.
  - Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed riser pole on Customer property.
  - Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
- Approximately 22,600 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following civil work: (Section 2.2 & Appendix B)
  - Install MH and duct system (~3000 feet) from proposed riser pole on Hopkins Hill Road to 3-way MH on Hopkins Hill Road (to be self-built by Customer).

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- Install MH and duct system (~14,700 feet) from 3-way MH on Hopkins Hill Road to 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road.
  - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
  - Corresponding MH and duct system is being designed and constructed by a third party. If this MH and duct system does not get completed, significant schedule delays are anticipated.
- Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road (Revity Energy POI).
  - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Revity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer).
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self-built by Customer).
- Implement live line reclose blocking on the existing recloser at Pole #10, Hopkins Hill Road, Coventry, RI. (Section 4.1)
- Add Load encroachment settings to the Kent county T7 Directional Overcurrent Relay. (Section 5.4)
- Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry. (Section 2.2, 5.5 & Appendix B)
- Change settings of the recloser at Pole #10, Hopkins Hill Road, Coventry, RI. (Section 2.2 & 5.5)
- Install ~1,100 circuit feet of 3-477 AAC, one (1) 35 kV load break switch, one (1) 35 kV recloser, two disconnect switches and six (6) primary meters along with six (6) disconnect switches at the PCC. (Appendix B)

**Site E: Kent County 3310**

**Note: These system modifications are subject to less costly alternatives involving reduced scope and cost sharing. Applicability of these alternative modifications are dependent on the timely progression of this project and alignment of material procurement with an associated project which is also dependent on this UG system installation. The alternative would include the installation of 1000 kcmil CU EPR 35 kV Cable upfront and eliminate the need to remove the 500 kcmil CU EPR 35 kV Cable.**

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**Alternative #1**

**Note: Due to other ongoing projects, this option is available to the Customer if the ISA is executed by a date to be specified in the ISA.**

1. Approximately ~19,200 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following distribution line work: (Section 2.2 & Appendix B)
  - Install ~16,800 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
    - Subject to cost sharing with previous projects. If cable work is not performed under previous projects, then the Customer will be responsible for the full cost.
  - Install ~700 circuit feet of 3-500 kcmil CU EPR 35 kV cable from 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI).
    - Subject to cost sharing with previous projects. If cable work is not performed under previous projects, then the Customer will be responsible for the full cost.
  - Install ~200 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revity Energy POI) to a 2-way MH on Customer property
  - Install ~100 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the 2-way MH on Customer property to proposed riser pole on Customer property
  - Install ~1400 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road
    - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.
2. Approximately ~19,200 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following civil work: (Section 2.2 & Appendix B)
  - Install MH and duct system (~14,900 feet) from proposed riser on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
    - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
    - Corresponding MH and duct system is being designed and constructed by a third party. If this MH and duct system does not get completed, significant schedule delays are anticipated.
  - Install MH and duct system (~600 feet) from 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI).
    - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.

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- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Revity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer).
  - Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self-built by Customer).
3. Add Load encroachment settings to the Kent county T7 Directional Overcurrent Relay (Section 5.4)
  4. Change the settings of the 3310 breaker at Kent County Substation. (Section 5.4)
  5. Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry. (Section 2.2, 5.5 & Appendix B)
    - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.
  6. Install ~250 feet of 3-1/c-477 AL Bare conductor, one (1) 35 kV load break switch, one (1) 35 kV recloser, two (2) single-phase transformers and one (1) primary meter at the PCC.

**Alternative #2**

**Note: Due to other ongoing projects, this option will be required if the ISA is not executed by a date to be specified in the ISA.**


1. Approximately 19,200 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following distribution line work: (Section 2.2 & Appendix B)
  - Remove ~16,800 circuit feet of 3-500 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
  - Install ~16,800 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
  - Install ~700 circuit feet of 3-500 kcmil CU EPR 35 kV cable from 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI).
    - Subject to cost sharing with previous projects. If cable work is not performed under previous projects, then the Customer will be responsible for the full cost.
  - Install ~200 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revity Energy POI) to a 2-way MH on Customer property.
  - Install ~100 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the 2-way MH on Customer property to proposed riser pole on Customer property.

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- Install ~1400 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
  - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.
- 2. Approximately 19,200 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following civil work: (Section 2.2 & Appendix B)
  - Install MH and duct system (~14,900 feet) from proposed riser on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
    - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
    - Corresponding MH and duct system is being designed and constructed by a third party. If this MH and duct system does not get completed, significant schedule delays are anticipated.
  - Install MH and duct system (~600 feet) from 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revy Energy POI).
    - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
  - Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Revy Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer).
  - Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self-built by Customer).
- 3. Add Load encroachment settings to the Kent county T7 Directional Overcurrent Relay (Section 5.4)
- 4. Change the settings of the 3310 breaker at Kent County Substation. (Section 5.4)
- 5. Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry. (Section 2.2, 5.5 & Appendix B)
  - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.
- 6. Install ~250 feet of 3-1/c-477 AL Bare conductor, one (1) 35 kV load break switch, one (1) 35 kV recloser, two (2) single-phase transformers and one (1) primary meter at the PCC.

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**Special Operating Requirements**

The Customer is required to comply with the following special operating requirements in order to interconnect to the Company EPS:

**Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309**

1. The reactive contribution of the PV at the PCC operates at unity PF. Analysis has determined that this can be achieved if inverters are set to operate at 99.8% power factor, exporting Vars onto the EPS. (Section 3.2)

**Site E: Kent County 3310**

1. The reactive contribution of the PV at the PCC operates at Unity PF. (Section 3.4)

**Cost Estimate**

**Alternative #1:**

Refer to the Cost Estimate table in Section 9.0 for a listing of major modifications and associated costs. The total estimated planning grade cost of the work associated with the interconnection of the Facility, is \$ 32,280,782 +/-25% and includes Company EPS modifications, Customer interconnection, and taxes. An estimated construction schedule will be provided in the final Interconnection Service Agreement.

**Alternative #2:**

Refer to the Cost Estimate table in Section 9.0 for a listing of major modifications and associated costs. The total estimated planning grade cost of the work associated with the interconnection of the Facility, is \$ 32,725,171 +/-25% and includes Company EPS modifications, Customer interconnection, and taxes. An estimated construction schedule will be provided in the final Interconnection Service Agreement.

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## 1.0 Introduction

The Customer has requested interconnection of a Facility to the Company's existing infrastructure.

The analysis utilized Customer provided documentation to examine the effects on the Company system when the new Facility is connected. The results identify required modifications to the Customer one line diagram(s) and Company infrastructure in order to accommodate the interconnection. As such, the interconnection of the Facility has been evaluated under specific conditions. Should the Customer make any changes to the design, other than those identified in this study, it may require additional time for review, and possibly additional cost.

In accordance with the R.I.P.U.C. 2180 tariff and the Company's ESB series, the Company has completed an Impact Study to determine the scope of the required modifications to its EPS and/or the Facility for providing the requested interconnection service.

Analysis will be performed in accordance with applicable reliability standards and study practices, and in compliance with the applicable codes, standards, and guidelines listed in the Company's *Electric System Bulletin No. 756 Appendix D: Distributed Generation Connected to National Grid Distribution Facilities Per The Rhode Island Standards for Interconnecting Distributed Generation ("ESB756D")* to determine the incremental impact and any potential adverse impacts associated with the interconnection of the Facility to the EPS.

## 2.0 Project Description

### 2.1 Customer Facility

The Customer proposes to install the following:

#### Site A:

- Thirty (30) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 7,500 kW / kVA of inverter-based PV.
- Three (3) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 7.1.
- One (1) Customer owned padmounted switchgear VFI 38kV, 600A, 12.5KA-ISC, Cooper Nova recloser with SEL-751 relay assembly.
- One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- One (1) Customer owned three phase 125E, 38kV cutout fused.

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**Site B:**

- Thirty-five (35) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 8,750 kW / kVA of inverter-based PV.
- Three (3) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 7.1.
- One (1) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.3.
- One (1) Customer owned padmounted switchgear VFI 38kV, 600A, 12.5KA-ISC, Cooper Nova recloser with SEL-751 relay assembly.
- One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- One (1) Customer owned three phase 150E, 38kV cutout fused.

**Site C:**

- One (1) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters derated to 200 kW / kVA for a total of 200 kW / kVA of inverter-based PV.
- One (1) Customer owned 250 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 3.5.
- One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- One (1) Customer owned three phase 5E, 38kV cutout fused.

**Site D:**

- Thirty-four (34) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 8,500 kW / kVA of inverter-based PV.
- Two (2) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 7.1.
- One (1) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.3.

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- One (1) Customer owned 2,000 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.8.
- One (1) Customer owned padmounted switchgear VFI 38kV, 600A, 12.5KA-ISC, Cooper Nova recloser with SEL-751 relay assembly.
- One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- One (1) Customer owned three phase 150E, 38kV cutout fused.

**Site E:**

- Twenty-one (21) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 5,250 kW / kVA of inverter-based PV.
- Two (2) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.3.
- One (1) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.8.
- One (1) Customer owned padmounted switchgear VFI 38kV, 600A, 12.5KA-ISC, Cooper Nova recloser with SEL-751 relay assembly.
- One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- One (1) Customer owned three phase 100E, 38kV cutout fused.

**Site F:**

- Thirty-nine (39) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 9,750 kW / kVA of inverter-based PV.
- Three (3) Customer owned 2,000 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.8.
- Three (3) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.3.
- One (1) Customer owned padmounted switchgear 38kV, 630A, Cooper Nova recloser with SEL-651R relay assembly.
- One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.

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- One (1) Customer owned three phase 150E, 38kV cutout fused.

**Site G:**

- Three (3) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 750 kW / kVA of inverter-based PV.
- One (1) Customer owned 750 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 5.2.
- One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- One (1) Customer owned three phase 15E, 38kV cutout fused.

A copy of the Customer one lines are provided in Appendix C, illustrating the Customer’s proposed design and proposed interconnection to the area EPS. The Customer documents are not binding and shall require modifications and/or clarification as identified herein.

The following parameters were assessed as part of the Project evaluation:

1. The voltage and frequency trip settings as shown on the one line (dated 04/09/2021).

Any advanced inverter functionality other than that specifically called out on the Customer documentation and/or outlined herein shall be subject to additional study before being enabled.

**2.2 Company Area EPS**

**2.2.1 Kent County 3309**

The area EPS was evaluated, and it was determined that the most viable interconnecting circuit for Site A, Site B, Site C, Site D, Site F, Site G is the 3309, a 34.5 kV unregulated, three-phase, 3-wire, wye, ungrounded, radial, sub-transmission circuit that originates out of the Company’s Kent County Substation, in West Greenwich, RI (the “Interconnecting Circuit #1”). This circuit is located overhead on Division Street, approximately 3.63 miles from the proposed Facility. This line extension will include the following work:

- Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry.

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- Approximately 22,600 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following distribution line work:
  - Install ~20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
  - Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI).
  - Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revity Energy POI) to a 2-way MH on Customer property.
  - Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed riser pole on Customer property.
  - Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
- Approximately 22,600 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following civil work: (Section 2.2 & Appendix B)
  - Install MH and duct system (~3000 feet) from proposed riser pole on Hopkins Hill Road to 3-way MH on Hopkins Hill Road (to be self-built by Customer).
  - Install MH and duct system (~14,700 feet) from 3-way MH on Hopkins Hill Road to 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road.
    - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
    - Corresponding MH and duct system is being designed and constructed by a third party. If this MH and duct system does not get completed, significant schedule delays are anticipated.
  - Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road (Revity Energy POI).
    - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.

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- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Revity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer).
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self-built by Customer).

An underground line extension originating from the overhead line on Hopkins Hill Rd will be required to reach the proposed Facility. There is one river that will need to be crossed with overhead conductors. The Big River Bridge was not constructed to allow for installation of concrete encased ducts.

Civil work from the proposed riser pole on Hopkins Hill Road to the 2-way Manhole on Hopkins Hill Road to be self-built by the Customer.

Civil work from the proposed 3-way MH on Weaver Hill Road (Revity Energy POI) to the proposed riser pole on Customer property to be self-built by Customer.

Civil work from the proposed 3-way Manhole on Hopkins Hill Road to the 3-way Manhole at the intersection of Nooseneck Hill Road and Weaver Hill Road to be performed by others. National Grid to perform civil work from the 3-way Manhole at the intersection of Nooseneck Hill Road and Weaver Hill Road, to the first 3-way MH on Weaver Hill Road (Revity Energy POI).

Civil work scope performed by the Customer will require Company review and acceptance of the proposed plans, as well as Company review and acceptance of the ductbank before covering.

The ability to generate is contingent on this Facility being served by the Interconnecting Circuit during normal operating conditions. Therefore, if the Interconnecting Circuit is out of service, or if abnormal operating conditions of the area EPS are in effect, the Company reserves the right to direct the Customer to disengage the Facility.

The Interconnecting Circuit has the following characteristics:

- Refer to Section 3.0 for circuit loading characteristics.
- The existing and in-process generation at the substation and on the interconnecting circuit is summarized in Table 1. Values shown are based on full nameplate DG output:

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Feeder	Generation installed and operating at time of study (kW)	Generation in process at time of study (kW)	Generation proposed for this Project (kW)	TOTAL (kW)
3309	165	6	35,450	35,621
3310	434	34,254	5,250	39,938
3311	30,209	27,814	0	58,023
3312	2,735	4,057	0	6,792
<b>TOTAL</b>	<b>33,543</b>	<b>66,131</b>	<b>40,700</b>	<b>140,374</b>

**Table 1: Generation at the Substation and Interconnecting Circuit**

- There are two (2) existing reclosers on the circuit, one of which are downstream of the facility. Refer to Section 5 for further discussion on any required modifications.

Location	Status	Mid-line recloser, or existing DG project PCC recloser	In between Facility and Substation
Pole #10, Hopkins Hill Road, Coventry, RI	In Service	Mid-line	Yes
Pole #96, Tiogue Ave, Coventry, RI	In Service	Mid-line	No

**Table 2: Recloser Locations**

- There are no existing capacitor banks installed on this circuit. Refer to Section 3 for further discussion on any required modifications.
- There are no existing regulators installed on this circuit. Refer to Section 3 for further discussion on any required modifications.

## 2.2.2 Kent County 3310

The area EPS was evaluated, and it was determined that the most viable interconnecting circuit for Site E is the 3310, a 34.5 kV unregulated, three-phase, 3 wire, wye, ungrounded, radial, sub-transmission circuit that originates out of the Company’s Kent County Substation, in West Greenwich, RI (the “Interconnecting Circuit #2”). This circuit is located overhead on Division Street, approximately 3.21 miles from the proposed Facility. This line extension will include the following work:

### Alternative #1

**Note: Due to other ongoing projects, this option is available to the Customer if the ISA is executed by a date to be specified in the ISA.**

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- Approximately ~19,200 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following distribution line work:
  - Install ~16,800 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road
    - Subject to cost sharing with previous projects. If cable work is not performed under previous projects, then the Customer will be responsible for the full cost.
  - Install ~700 circuit feet of 3-500 kcmil CU EPR 35 kV cable from 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Reivity Energy POI)
    - Subject to cost sharing with previous projects. If cable work is not performed under previous projects, then the Customer will be responsible for the full cost.
  - Install ~200 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Reivity Energy POI) to a 2-way MH on Customer property
  - Install ~100 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the 2-way MH on Customer property to proposed riser pole on Customer property
  - Install ~1400 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road
    - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.

**Alternative #2**

**Note: Due to other ongoing projects, this option will be required if the ISA is not executed by a date to be specified in the ISA.**

- Approximately 19,200 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following distribution line work: (Section 2.2 & Appendix B)
  - Remove ~16,800 circuit feet of 3-500 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road
  - Install ~16,800 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road

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- Install ~700 circuit feet of 3-500 kcmil CU EPR 35 kV cable from 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI)
  - Subject to cost sharing with previous projects. If cable work is not performed under previous projects, then the Customer will be responsible for the full cost.
- Install ~200 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revity Energy POI) to a 2-way MH on Customer property
- Install ~100 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the 2-way MH on Customer property to proposed riser pole on Customer property
- Install ~1400 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road
  - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.

**Common to Alternatives #1 and #2**

- Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
  - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.
- Approximately ~19,200 circuit foot line extension from Hopkins Hill Road to the Facility, which includes the following civil work:
  - Install MH and duct system (~14,900 feet) from proposed riser on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road
    - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
    - Corresponding MH and duct system is being designed and constructed by a third party. If this MH and duct system does not get completed, significant schedule delays are anticipated.

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- Install MH and duct system (~600 feet) from 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI)
  - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Revity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer).
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self-built by Customer).

An underground line extension originating from the overhead line on Hopkins Hill Rd will be required to reach the proposed Facilities. There is one river that will need to be crossed with overhead conductors. The Big River Bridge was not constructed to allow for installation of concrete encased ducts.

Civil work from the proposed 3-way MH on Weaver Hill Road (Revity Energy POI) to the proposed riser pole on Customer property to be self-built by Customer.

Civil work from the proposed riser pole on Hopkins Hill Road to the 3-way Manhole at the intersection of Nooseneck Hill Road and Weaver Hill Road to be performed by others. National Grid to perform civil work from the 3-way Manhole at the intersection of Nooseneck Hill Road and Weaver Hill Road, to first 3-way MH on Weaver Hill Road (Revity Energy POI).

Civil work scope performed by the Customer will require Company review and acceptance of the proposed plans, as well as Company review and acceptance of the ductbank before covering.

The ability to generate is contingent on this Facility being served by the Interconnecting Circuit during normal operating conditions. Therefore, if the Interconnecting Circuit is out of service, or if abnormal operating conditions of the area EPS are in effect, the Company reserves the right to direct the Customer to disengage the Facility.

The Interconnecting Circuit has the following characteristics:

- Refer to Section 3.0 for circuit loading characteristics.
- The existing and in-process generation at the substation and on the interconnecting circuit is summarized in Table 3. Values shown are based on full nameplate DG output:

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Feeder	Generation installed and operating at time of study (kW)	Generation in process at time of study (kW)	Generation proposed for this Project (kW)	TOTAL (kW)
3309	165	6	35,450	35,621
3310	434	34,254	5,250	39,938
3311	30,209	27,814	0	58,023
3312	2,735	4,057	0	6,792
<b>TOTAL</b>	33,543	66,131	40,700	<b>140,374</b>

**Table 3: Generation at the Substation and Interconnecting Circuit**

- There is one (1) existing recloser on the circuit, none of which are in between the substation and the facility, summarized in Table 4. Refer to Section 5 for further discussion on any required modifications.

Location	Status	Mid-line recloser, or existing DG project PCC recloser	In between Facility and Substation
Pole #18-1, Hopkins Hill Road, West Greenwich	In Service	Mid-line	No

**Table 4: Recloser Locations**

- There are no existing capacitor banks installed on this circuit. Refer to Section 3 for further discussion on any required modifications.
- There are no existing regulators installed on this circuit. Refer to Section 3 for further discussion on any required modifications.

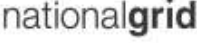
## 2.3 Interconnection

Refer to the interconnection diagram in Appendix B for approximate PCC location.

Should the Customer elect to move forward with the Project, the Company's Design Personnel will specify the exact location of the Company's facilities and installation details. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements.

The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.

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The PCC is defined as the point where the Customer owned conductors terminate to the Company revenue meter, which is located at the following locations:

- Site A – Proposed Pole #35-23, 18 Weaver Hill Road, West Greenwich, RI
- Site B – Proposed Pole #35-20, 18 Weaver Hill Road, West Greenwich, RI
- Site C – Proposed Pole #35-17, 18 Weaver Hill Road, West Greenwich, RI
- Site D – Proposed Pole #35-8, 18 Weaver Hill Road, West Greenwich, RI
- Site E – Proposed Pole #5-6, 18 Weaver Hill Road, West Greenwich, RI
- Site F – Proposed Pole #35-11, 18 Weaver Hill Road, West Greenwich, RI
- Site G – Proposed Pole #35-14, 18 Weaver Hill Road, West Greenwich, RI.

The Customer must install their facilities up to the Company revenue meter. The Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Customer conductors to the Company meter.

If National Grid right of way (R.O.W) is involved, then the Customer shall provide detailed drawings of any planned construction within any National Grid R.O.W., for the Company’s review and subsequent approval, showing elevation grades of all phases of construction within the R. O. W. before any construction may begin. Plans and drawings must be submitted that meet all the Company’s requirements before the interconnection process can move forward. These plans shall be submitted to National Grid’s R.O.W./Real-Estate group and the Transmission R.O.W. Engineering and construction group for review and comment before any construction can be allowed to move forward. There may be additional costs and subsequent delays involved with the review, and, or oversight of any construction in, or adjacent to, the Company’s R.O.W., and if any Company owned facilities need modification as a result of the Customer’s proposed construction. These costs will be in addition to, and outside of the scope of, this SIS. Failure of the Customer to reimburse the Company for these costs may delay or negate the interconnection process.

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### 3.0 Power Flow Analysis

The power flow analysis was substantially performed using electrical system modeling software. A model of the Interconnecting Circuits, as described in Section 2.2, was developed based on data extracted from the Company’s Geographical Information System (“GIS”). A field review of both feeders was performed on 09/25/2019.

#### **Kent County 3309**

The analysis considered cases at peak load (16,999 kVA @ 93.24% PF) and net minimum load (6,479 kVA @ 99.26% Lagging PF) at time of maximum expected generation (9:00AM – 6:00PM) on the circuit.

#### **Kent County 3310**

The analysis considered cases at peak load (16,284 kVA @ 100% PF) and net minimum load (5,017 kVA @ 99.52% Lagging PF) at time of maximum expected generation (9:00AM – 6:00PM) on the circuit.

Circuit peak and minimum load values have been taken from the Company’s historical load data that has been compiled over 12 months, from 1/1/2019 to 1/1/2020.

### 3.1 Reverse Power Flow at Substation

#### **Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309**

The possibility of the Facility causing reverse power flow through the Company’s substation transformer was reviewed.

Analysis shows that the maximum potential generation exceeds the observed minimum load on the Kent County 34.5 kV bus. However, the substation is currently equipped with bi-directional metering which was previously installed for reasons unrelated to DG work. No additional work is required on the substation bulk power metering.

#### **Site E: Kent County 3310**

The possibility of the Facility causing reverse power flow through the Company’s substation transformer was reviewed.

Analysis shows that the maximum potential generation exceeds the observed minimum load on the Kent County 34.5 kV bus. However, the substation is currently equipped with bi-directional metering which was previously installed for reasons unrelated to DG work. No additional work is required on the substation bulk power metering.

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### 3.2 Interconnecting Circuit Load Flow Analysis

#### Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309

The area EPS was examined with and without the Facility operating at full output. The analysis demonstrated that the addition of the Facility will not create thermal loading problems on the Interconnecting Circuit, or the associated substation.

Due to the size of the Project and the distance to the Kent County Substation, the Facility has an adverse effect on the power factor of the Interconnecting Circuit #1, where Vars consumed by the interconnecting transformers results in significant added Var losses on the Company EPS.

Specifically, no conductor, transformer, or voltage regulator overloads occur as a result of this interconnection. All Company owned mainline conductor and distribution facilities are thermally large enough to accommodate the proposed generation.

#### Site E: Kent County 3310

The area EPS was examined with and without the Facility operating at full output. The analysis demonstrated that the addition of the Facility will not create thermal loading problems on the Interconnecting Circuit, or the associated substation.

Specifically, no conductor, transformer, or voltage regulator overloads occur as a result of this interconnection. All Company owned mainline conductor and distribution facilities are thermally large enough to accommodate the proposed generation.

### 3.3 Interconnecting Circuit Voltage Analysis

#### Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309

The Company is obligated to hold distribution voltages at customer service points to defined limits in ANSI Standard C84.1- 2006. Range A of the ANSI standard requires the Company to hold voltage within +/- 5% of nominal at the PCC.

Under emergency conditions, voltage on the system could reach 90% of nominal prior to corrective action being taken. The Customer is advised to consider this in planning their system requirements and equipment settings, however, no warranties or guarantees are implied.

Under normal operating conditions it is expected that the Company will be able to meet its obligations for ANSI C84.1 with the system generation at full power. The Customer must maintain voltage at the PCC at +/- 5% of nominal under normal conditions. Also, the PV interconnection shall not contribute to greater than a 3.0% change in steady state voltage on the EPS under any conditions.

The analysis of this facility determined that when the Facility generation is at full output, the voltage range at the PCC was within acceptable limits.

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Customer provided manufacturer’s test reports have been reviewed for 1.4PU pickup values with 1ms or less total clearing time. The proposed design has been found to meet the necessary requirements.

**Site E: Kent County 3310**

The Company is obligated to hold distribution voltages at customer service points to defined limits in ANSI Standard C84.1- 2006. Range A of the ANSI standard requires the Company to hold voltage within +/- 5% of nominal at the PCC.

Under emergency conditions, voltage on the system could reach 90% of nominal prior to corrective action being taken. The Customer is advised to consider this in planning their system requirements and equipment settings, however, no warranties or guarantees are implied.

Under normal operating conditions it is expected that the Company will be able to meet its obligations for ANSI C84.1 with the system generation at full power. The Customer must maintain voltage at the PCC at +/- 5% of nominal under normal conditions. Also, the PV interconnection shall not contribute to greater than a 3.0% change in steady state voltage on the EPS under any conditions.

The analysis of this facility determined that when the Facility generation is at full output, the voltage range at the PCC was within acceptable limits.

Customer provided manufacturer’s test reports have been reviewed for 1.4PU pickup values with 1ms or less total clearing time. The proposed design has been found to meet the necessary requirements.

**3.4 Flicker Analysis**

**Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309**

The IEEE 1547 standard and IEEE 1453 flicker assessments were used to estimate whether or not this site would be likely to cause unacceptable voltage flicker on the interconnecting feeder. This method evaluates for both short term and long-term voltage flicker against IEEE1547-2018 Table 25 - DER Flicker Emission Limits.

The IEEE Recommended Practice for Measurement and Limits of Voltage Fluctuations and Associated Light Flicker on AC Power Systems, IEEE Std. 1453-2015 was used as a basis for flicker and voltage fluctuation analysis.

This Facility was modeled using the Long-Term Dynamics module of CYME<sup>1</sup>. A long-term dynamic profile for the Facility was used that simulates the voltage fluctuation of the site over a 6-hour period. Other significant DG existing or in process ahead of this

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Project were modeled at full output and modeled with the appropriate voltage fluctuation curve to simulate reasonable voltage fluctuations.

The generation profile used is based on live metered data from a PV site that is similar in size to this Project. The data is intended to simulate realistic power output from the site, resulting in a varied output from the PV.

Given the nature of flicker, it is impossible to predict voltage flicker under all conceivable environmental conditions. Therefore, the flicker results are used as a metric to evaluate whether or not there is a readily apparent concern related to voltage flicker.

The Company will not be held liable for any power quality issues that may develop with the Customer or any other customers as result of the interconnection of this generation.

Analysis shows that the predicted flicker and voltage fluctuations are expected to be acceptable, provided that the following conditions are met:

- The system modifications identified elsewhere in this study are implemented.
- To mitigate the power factor concerns, analysis has shown that operating all inverters at 99.8% power factor (exporting Vars onto the EPS), will offset VAR losses and enable unity power factor operation at the PCC.

**Site E: Kent County 3310**

The IEEE 1547 standard and IEEE 1453 flicker assessments were used to estimate whether or not this site would be likely to cause unacceptable voltage flicker on the interconnecting feeder. This method evaluates for both short term and long-term voltage flicker against IEEE1547-2018 Table 25 - DER Flicker Emission Limits.

Analysis shows that  $P_{st}$  and  $P_{lt}$  are within acceptable limits and no mitigation for voltage flicker is recommended.

The IEEE Recommended Practice for Measurement and Limits of Voltage Fluctuations and Associated Light Flicker on AC Power Systems, IEEE Std. 1453-2015 was used as a basis for flicker and voltage fluctuation analysis.

This Facility was modeled using the Long-Term Dynamics module of CYME<sup>2</sup>. A long-term dynamic profile for the Facility was used that simulates the voltage fluctuation of the site over a 6-hour period. Other significant DG existing or in process ahead of this Project were modeled at full output and modeled with the appropriate voltage fluctuation curve to simulate reasonable voltage fluctuations.

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The generation profile used is based on live metered data from a PV site that is similar in size to this Project. The data is intended to simulate realistic power output from the site, resulting in a varied output from the PV.

Given the nature of flicker, it is impossible to predict voltage flicker under all conceivable environmental conditions. Therefore, the flicker results are used as a metric to evaluate whether or not there is a readily apparent concern related to voltage flicker.

The Company will not be held liable for any power quality issues that may develop with the Customer or any other customers as result of the interconnection of this generation.

Analysis shows that the predicted flicker and voltage fluctuations are expected to be acceptable, provided that the following conditions are met:

- The system modifications identified elsewhere in this study are implemented.
- The reactive contribution of the PV at the PCC operates at Unity PF.

## 4.0 Risk of Islanding

### 4.1 Islanding Analysis (ESB 756D Section 7.6.12)

The project was screened for the potential of islanding risk. Per IEEE 1547 *section 4.4.1 Unintentional Islanding*, for an unintentional island in which the DG energizes a portion of the Area EPS through the PCC, the DG interconnection system shall detect the island and cease to energize the Area EPS within two seconds of the formation of an island.

#### **Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309**

Based on known in-service and in-progress projects at the time of study, the generation shown in Table 5 was considered on this feeder. Three-phase projects greater than 100kW are listed individually. All other projects below 25kW are listed as a single line item.

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Project Size (kW)	Certified / Non-Certified
169	All Projects <100kW CERTIFIED
2	All Projects <100kW NON-CERTIFIED
7,500	CERTIFIED
8,500	CERTIFIED
9,750	CERTIFIED
750	CERTIFIED
8,750	CERTIFIED

**Table 5: Generation Considered for Risk of Islanding Analysis**

Analysis indicates that the overall ability of this Facility to island more than 2.0 seconds is considered a likely event. As a result, a PCC recloser with reclose blocking will be required. Additionally, live-line reclose blocking must be implemented at the following line reclosers.

Location	Status (Existing or New)
Pole #10, Hopkins Hill Road, Coventry, RI	Existing
Pole #10-2, Hopkins hill Road, West Greenwich, RI	New

**Table 6: Recloser Locations**

**Site E: Kent County 3310**

Based on known in-service and in-progress projects at the time of study, the generation shown in Table 7 was considered on this feeder. Three-phase projects greater than 100kW are listed individually. All other projects below 25kW are listed as a single line item.

Project Size (kW)	Certified / Non-Certified
448	All Projects <100kW CERTIFIED
0	All Projects <100kW NON-CERTIFIED
740	CERTIFIED
3,500	CERTIFIED
10,000	CERTIFIED
10,000	CERTIFIED
10,000	CERTIFIED
5,250	CERTIFIED

**Table 7: Generation Considered for Risk of Islanding Analysis**

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Analysis indicates that the overall ability of this Facility to island more than 2.0 seconds is considered a likely event. As a result, a PCC recloser with reclose blocking will be required. Additionally, live-line reclose blocking must be implemented at the following line reclosers.

Location	Status (Existing or New)
Pole #25-1, Hopkins Hill Rd, West Greenwich, RI	New

**Table 8: Recloser Locations**

## 5.0 Short Circuit and Protection Analysis Company Facilities

The Company performed a review of the Project relative to the short circuit and protective device impacts on the Interconnecting Circuit. This review identifies EPS enhancements that are necessary to complete the Project and its ability to meet Rhode Island R.I.P.U.C 2180 interconnection tariff and the requirements of the Company’s ESB 756D. The Interconnecting Circuit, including all relevant DG was modeled in a software package called ASPEN OneLiner<sup>3</sup>. The model was developed using Company records for feeder characteristics, and Customer provided documentation. Refer to Section 2.1.1 for any assumptions made in the model.

### 5.1 Fault Detection at Substation (ESB 756D Section 6.2.2)

#### Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309

Addition of generation sources to sub-transmission feeders can result in the back-feeding of the substation transformers, effectively turning a station designed for load into a generation step-up transformer. Due to the Kent County T1, T2 and T7 supply transformer configurations, there is a path for zero sequence ground fault current to single line to ground faults on the transmission line. Therefore, the Facility does not pose a significant risk of causing temporary overvoltage to develop on the primary side of the substation transformer. Substation modifications related to 3V<sub>0</sub> are not required.

#### Site E: Kent County 3310

Addition of generation sources to sub-transmission feeders can result in the back-feeding of the substation transformers, effectively turning a station designed for load into a generation step-up transformer. Due to the Kent County T1, T2 and T7 supply transformer configurations, there is a path for zero sequence ground fault current to single line to ground faults on the transmission line. Therefore, the Facility does not pose a significant risk of causing temporary overvoltage to develop on the primary side of the substation transformer. Substation modifications related to 3V<sub>0</sub> are not required.

<sup>3</sup> ASPEN OneLiner V12.5, Build: 19177 (2015.01.28), Copyright © 1987-2013 ASPEN.

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## 5.2 PCC Impedance

### Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309

The Interconnecting Circuit impedance is shown below in per unit at the PCC for the proposed Facility, using a 100 MVA base. The PCC location is shown in Appendix B. These values take into account existing system conditions, but not the impact of the Customer's new Facility.

#### **Pre-Project**

#### **System Impedance at PCC**

$$Z1 = 0.12 + j0.48 \text{ p.u.}$$

$$Z0 = 0.72 + j1.55 \text{ p.u.}$$

### Site E: Kent County 3310

The Interconnecting Circuit impedance is shown below in per unit at the PCC for the proposed Facility, using a 100 MVA base. The PCC location is shown in Appendix B. These values take into account existing system conditions, but not the impact of the Customer's new Facility.

#### **Pre-Project**

#### **System Impedance at PCC**

$$Z1 = 0.03 + j0.15 \text{ p.u.}$$

$$Z0 = 0.59 + j1.36 \text{ p.u.}$$

## 5.3 Fault Current Contributions

### Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309

Table 9 summarizes the Facility's effect on fault current levels at the PCC. These fault currents are within existing equipment ratings. Mitigation strategies are required to accommodate the proposed Facility, as described in Sections 5.4 and □.

The Customer is responsible for ensuring that their own equipment is rated to withstand the available fault current according to the NEC and National Grid ESB 750, which specifies that the fault current should be no more than 80% of the device interrupting rating.

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PRE PROJECT	SUB BUS (Amps @ 34.5 kV)	PCC (Amps @ 34.5 kV)
3-phase (LLL)	21786	3424
Phase-Ground (LG)	24333	1902

POST PROJECT	SUB BUS (Amps @ 34.5 kV)	PCC (Amps @ 34.5 kV)	DELTA I <sub>fault</sub> @ SUB BUS	DELTA I <sub>fault</sub> @PCC
3-phase (LLL)	22597	4137	4%	21%
Phase-Ground (LG)	25382	2350	4%	24%

Table 9: Fault Duty

**Site E: Kent County 3310**

Table 10 summarizes the Facility’s effect on fault current levels at the PCC. These fault currents are within existing equipment ratings. Mitigation strategies are required to accommodate the proposed Facility, as described in Sections 5.4 and □.

The Customer is responsible for ensuring that their own equipment is rated to withstand the available fault current according to the NEC and National Grid ESB 750, which specifies that the fault current should be no more than 80% of the device interrupting rating.

PRE PROJECT	SUB BUS (Amps @ 34.5 kV)	PCC (Amps @ 34.5 kV)
3-phase (LLL)	21779	4327
Phase-Ground (LG)	24322	2548

POST PROJECT	SUB BUS (Amps @ 34.5 kV)	PCC (Amps @ 34.5 kV)	DELTA I <sub>fault</sub> @ SUB BUS	DELTA I <sub>fault</sub> @PCC
3-phase (LLL)	22590	4484	4%	4%
Phase-Ground (LG)	25368	2620	4%	3%

Table 10: Fault Duty

**5.4 Substation Protective Device Modifications**

**Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309**

The protection coordination review of the area EPS revealed that the following modifications to the existing substation protective devices will be required. Associated costs are identified in Section 9.0 of this Impact Study:

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- Add load encroachment settings to the Kent County Transformer #7, 34.5 kV directional overcurrent relay (67)

**Site E: Kent County 3310**

The protection coordination review of the area EPS revealed that the following modifications to the existing substation protective devices will be required. Associated costs are identified in Section 9.0 of this Impact Study:

- Add load encroachment settings to the Kent County Transformer #7, 34.5 kV directional overcurrent relay (67)
- Change the settings of the 3310 breaker at Kent County Substation.

**5.5 Area EPS Protective Device Coordination**

**Site A, Site B, Site C, Site D, Site F, Site G: Kent County 3309**

The Project will require a Company owned recloser at the PCC.

The existing device settings and associated time-current curves were evaluated for protective devices on the Interconnecting Circuit.

The protection coordination review of the area EPS revealed that the following modifications to the existing EPS protective devices will be required. Associated costs are identified in Section 9.0 of this Impact Study. Refer to Appendix B for system modification drawings:

- Install a new recloser at the tap for the proposed line extension to the facility at Pole #10-2, Hopkins Hill Road, Coventry, RI. (Appendix B)
- Change settings of the recloser at Pole #10, Hopkins Hill Road, Coventry, RI.

**Site E: Kent County 3310**

The Project will require a Company owned recloser at the PCC.

The existing device settings and associated time-current curves were evaluated for protective devices on the Interconnecting Circuit.

The protection coordination review of the area EPS revealed that the following modifications to the existing EPS protective devices will be required. Associated costs are identified in Section 9.0 of this Impact Study. Refer to Appendix B for system modification drawings:

- Install a new recloser at the tap for the proposed line extension to the facility at Pole #25-1, Hopkins Hill Rd, Coventry, RI. (Appendix B)

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## 6.0 Customer Equipment Requirements

The following Section discusses requirements for Customer owned equipment, which are further outlined in detail in ESB 756D. References to ESB 756D are provided in each sub-section below. It is the Customer's responsibility to comply with all requirements of ESB 756D. Please note that applicable sections of ESB 756D are referenced for information purposes and may not comprise the entirety of applicable sections.

In general, the Customer Facility shall have the capability to withstand voltage and current surges in accordance with the environments defined in IEEE Standard C62.41.2-2002 or IEEE Standard C37.90.1-2002 as applicable.

### 6.1 Revenue Metering Requirements (ESB 756D Section 7.2.2 and 7.2.3)

#### Site A, Site B, Site C, Site D, Site E, Site F, Site G:

For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the National Grid revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or, in locations with suitable wireless service, a wireless meter.

Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of National Grid. If approved, a wireless-enabled meter will be installed, at the customer's expense. If and when National Grid's retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to National Grid's revenue meter is provided.

Refer to *Appendix A Figures A-1 and A-2 - Revenue Meter Phone Line Installation Guide*).

The Customer is advised to contact Generation and Load Administration ([NewGenCoord@iso-ne.com](mailto:NewGenCoord@iso-ne.com)) at ISO New England regarding all metering, communications circuits, remote access gateway (rig), financial assurance, paperwork, database updates, etc. that may be required for this Facility.

### 6.2 Interconnecting Transformer (ESB 756D Section 7.3)

#### Site A:

The documentation provided states the interconnecting transformer is three (3) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded

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secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 7.1.

The proposed transformer satisfies the requirements of the ESB.

**Site B:**

The documentation provided states the interconnecting transformer is.

- Three (3) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 7.1.
- One (1) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 6.3.

The proposed transformer satisfies the requirements of the ESB.

**Site C:**

The documentation provided states the interconnecting transformer one (1) Customer owned 250 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 3.5.

The proposed transformer satisfies the requirements of the ESB.

**Site D:**

The documentation provided states the interconnecting transformer is.

- Two (2) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 7.1.
- One (1) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 6.3.
- One (1) Customer owned 2,000 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 6.8.

The proposed transformer satisfies the requirements of the ESB.

**Site E:**

The documentation provided states the interconnecting transformer is.

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- Two (2) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.3.
- One (1) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.8.

The proposed transformer satisfies the requirements of the ESB.

**Site F:**

The documentation provided states the interconnecting transformer is.

- Three (3) Customer owned 2,000 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.8.
- Three (3) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 6.3.

The proposed transformer satisfies the requirements of the ESB.

**Site G:**

The documentation provided states the interconnecting transformer is one (1) Customer owned 750 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of Z=5.75% along with X/R ratio of 5.2.

The proposed transformer satisfies the requirements of the ESB.

**6.3 Effective Grounding (ESB 756D Section 7.3.2.1)**

**Site A, Site B, Site C, Site D, Site E, Site F, Site G:**

The Facility is proposing to connect to a non-effectively grounded 34.5 kV circuit, and therefore does not require a means of effective grounding.

**6.4 Manual Generator Disconnecting Means (ESB 756D Section 7.4)**

**Site A, Site B, Site C, Site D, Site E, Site F, Site G:**

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The Customer provided documents satisfy the requirement of this Section of ESB 756D.

## 6.5 Primary Protection (ESB 756D Section 7.6 & 7.8)

### Site A, Site B, Site C, Site D, Site E, Site F, Site G:

The following section relates to the primary means of protection by the Customer. This includes the inverter relay functionality.

#### 6.5.1 Primary Protective Relaying (ESB 756D Section 7.6.1, 7.6.2, 7.6.11, & 7.8)

##### Site A, Site B, Site C, Site D, Site E, Site F, Site G:

The Customer provided documents indicate that the generator/inverter will be provided with an internal relay that will trip the generator interrupting device. Proposed settings for the 27, 59, 81O/U functions have been provided for review.

#### 6.5.2 Primary Frequency Protection (ESB 756D Section 7.6.8, 7.6.11.1, and 7.8)

##### Site A, Site B, Site C, Site D, Site E, Site F, Site G:

Frequency elements trip settings for primary relaying are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.8, 7.6.11, and 7.8.

The R.I.P.U.C No. 2180, requires that, the DER cease to energize the area EPS within 2 seconds, refer to IEEE1547 and UL1741.

The Customer provided documents show acceptable relay settings in accordance with the aforementioned requirements.

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**6.5.3 Primary Voltage Relay Elements (ESB 756D Section 7.6.7, 7.6.11.1, and 7.8)**

**Site A, Site B, Site C, Site D, Site E, Site F, Site G:**

The Customer provided documents show undervoltage (27) and overvoltage (59) elements that satisfy the requirements of this Section of ESB 756D.

Voltage relay elements trip settings are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.11 and 7.8. This requirement is met.

**6.6 Secondary Protection**

The following section relates to the secondary means of protection, also referred to as redundant relaying.

**6.6.1 Generator Interrupting Device (ESB 756D Section 7.5)**

**Site A, Site B, Site D, Site E, Site F:**

A Company owned recloser is required at the PCC, which will contain utility facing protective elements (27, 59, 81O/U). A Generator Interrupting Device shall be installed for site protection, with overcurrent functionality. The Customer design shows a circuit breaker for site protection.

The Customer provided documents indicate an interrupting device on the high side (Customer 34.50 kV side) of the interconnecting transformer, which satisfies the requirements of ESB 756D.

**Site C, Site G:**

A Company owned recloser is required at the PCC, which will contain utility facing protective elements (27, 59, 81O/U). A Generator Interrupting Device shall be installed for site protection. The Customer design shows a fuse for site protection.

The Customer provided documents indicate an interrupting device on the high side (Customer 34.50 kV side) of the interconnecting transformer, which satisfies the requirements of ESB 756D.

**6.6.2 Secondary Overcurrent Relay Elements (ESB 756D Section 7.6.10)**

**Site A, Site B, Site D, Site E, Site F:**

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The Customer provided documents show a phase overcurrent (51) relay element and associated settings that satisfy the requirements of ESB 756D and allow for satisfactory coordination with other devices in the EPS.

Customer proposed settings are provided on the Customer drawings, as attached in Appendix C.

**Site C:**

The Customer design shows a 5E fuse for site protection.

**Site G:**

The Customer design shows a 15E fuse for site protection.

**6.6.3 Secondary Protective Relaying (ESB 756D Section 7.6.3)**

**Site A, Site B, Site D, Site E, Site F:**

The Customer provided documents indicate that a redundant utility grade relay is provided that will trip the generator interrupting device. Relays make/model is included on the Customer single line.

**Site C, Site G:**

Not applicable.

**6.6.4 Secondary Frequency Protection (ESB 756D Section 7.6.8, 7.6.11.1, and 7.8)**

**Site A, Site B, Site D, Site E, Site F:**

Frequency elements trip settings for primary relaying are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.8, 7.6.11, and 7.8.

The R.I.P.U.C. No. 2180, requires that, the DER cease to energize the area EPS within 2 seconds, refer to IEEE1547 and UL1741.

The Customer provided documents show acceptable relay settings in accordance with the aforementioned requirements.

**Site C, Site G:**

Not applicable.

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**6.6.5 Secondary Voltage Relay Elements (ESB 756D Section 7.6.7,  
7.6.11.1, and 7.8)**

**Site A, Site B, Site D, Site E, Site F:**

The Customer provided documents show undervoltage (27) and overvoltage (59) elements that satisfy the requirements of this Section of ESB 756D.

Voltage relay elements trip settings are required to comply with ISO-NE ride-through requirements as described in ESB756C Section 7.6.11 and 7.8. This requirement is met.

The Customer provided a revised one-line diagram showing a neutral overvoltage (59N) element with the following settings and allow for satisfactory coordination with other devices in the EPS.

59N – Neutral Overvoltage.

Customer proposed:  $3V_0 = 12.45$  kV primary pickup (75 V), 0.8 second time delay.

**Site C, Site G:**

Not applicable.

**6.6.6 Current Transformers (“CT”) (ESB 756D Section 7.6.4.1)**

**Site A, Site B, Site D, Site E, Site F:**

The Customer provided documents show current transformer with ratings listed, which satisfies this Section of ESB 756D.

**6.6.7 Voltage Transformers (“VT”) and Connections (ESB 756D**

**Sections 7.6.4.2)**

**Site A, Site B, Site D, Site E, Site F:**

The Customer provided documents show wye-grounded/wye-grounded VT’s and show the VT ratio, which satisfies this Section of ESB 756D.

**Site C, Site G:**

Not applicable.

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**6.6.8 Protective Relay Hard-Wiring (ESB 756D Section 7.6.5)**

**Site A, Site B, Site D, Site E, Site F:**

The Customer provided documents call for hardwiring of the redundant relaying trip circuits, therefore satisfies the requirements of this section of ESB 756D.

**Site C, Site G:**

Not applicable.

**6.6.9 Protective Relay Supply (ESB 756D Section 7.6.5 and 7.6.6)**

**Site A, Site B, Site D, Site E, Site F:**

The Customer provided documents indicate a power supply for the redundant relay that satisfies the requirements of this section of ESB 756D.

The Customer has proposed a DC power supply. The Customer shall demonstrate in the witness test that the relay will trip if the DC voltage goes out of the normal operating range.

It is recommended that the power DC power supply be connected to the utility (source) side of the interrupting device in order to ensure power availability to close the interrupting device after an extended outage. This is a recommendation, for consideration by the Customer. It is not a requirement by the Company.

**Site C, Site G:**

Not applicable.

**6.6.10 Utility Restoration Detection (ESB 756A Section 4.5.2.7 & 756C**

**Section 7.8.3)**

**Site A, Site B, Site D, Site E, Site F:**

The DER shall not connect or return to service following a trip (including any ground fault current sources) until detecting a minimum 5 minutes of healthy utility voltage and frequency. “Healthy Utility Voltage and Frequency” is defined by ESB 756D Table 7.8.3-1. The five-minute time interval is required to restart if the utility voltage or frequency falls outside of this window.

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All the devices associated with five-minute timing must meet IEEE C37.90 standard and be capable of withstanding voltage and current surges.

The Customer provided settings and timing device information is acceptable as shown.

**Site C, Site G:**

Not applicable.

**6.6.11 Relay Failure Protection (ESB 756D Section 7.6.3)**

**Site A, Site B, Site D, Site E, Site F:**

For all required tripping functions, either redundant relaying or relay failure protection, where a hardware or power supply failure for the redundant relay automatically trips and blocks close of the associated breaker, is required.

The Customer shall provide revised documentation to meet this requirement.

**Site C, Site G:**

Not applicable.

**6.7 Synchronizing Devices (ESB 756D Section 7.6.9 and 7.6.11.2)**

**Site A, Site B, Site C, Site D, Site E, Site F, Site G:**

Project is inverter based; therefore, synchronizing devices are not required.

**6.8 Customer Cabling**

**Site A, Site B, Site C, Site D, Site E, Site F, Site G:**

The Company is not responsible for the protection of the Customer cable and primary protection for the Customer cable must be provided at the change of ownership.

**7.0 Telemetry and Telecommunications**

**Site A, Site B, Site C, Site D, Site E, Site F, Site G:**

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The Customer is advised to communicate with ISO-New England for any telemetry requirement as ISO-NE may require real-time monitoring between ISO-NE EMS and the DG site. The Customer shall refer to the ISO-NE website and ISO-NE customer service help desk for details.

This project is considered an independent power producer (IPP), an RTU for telecommunication will not be required by the Company.

## 8.0 Inspection, Compliance Verification, Customer Testing, and Energization Requirements

### 8.1 Inspections and Compliance Verification

#### Site A, Site B, Site C, Site D, Site E, Site F, Site G:

A municipal electrical inspection approval certificate from the local authority having jurisdiction is required of the Customer's Facilities (i.e. primary service entrance conduit, primary switchgear, wiring, and generation equipment). The Company must receive the Customer's Draft set of Project documentation and test plan for the functional verification tests at least four (4) weeks before the Company's field audit. Documentation from the customer must include, but not be limited to:

- Equipment cut sheets and shop drawings for all major equipment
- Inverter manufacturer cut sheet including method of island detection and UL certification
- Inverter protective relay settings
- Settings for any other Customer relay related to the Project
- The most recent version of the single line diagram and site plan, reflecting all modifications required in this Impact Study
- Single line diagram of the Facility
- Site diagram of the Facility
- A 3-line diagram and DC schematic illustrating the protection and control scheme
- The proposed testing procedure
- The proposed energization plans.
- All provided Customer drawings shall be stamped and signed by an Electrical Professional Engineer that is licenses in the state where the Facility is located.

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The DG Customer shall adhere to all other Company related verification and compliance requirements as set forth in the applicable ESB 750 series documents. These and documented acceptance testing requirements of these facilities will be specified during the Draft design review of the Project prior to the Company’s field audit and energization.

## 8.2 Testing and Commissioning

### Site A, Site B, Site C, Site D, Site E, Site F, Site G:

The Customer shall submit initial relay settings to the Company no later than twenty-one (21) calendar days following the Company’s acceptance of the Facility’s service connection’s Draft MA state licensed professional engineer sealed design. If changes/updates are necessary, the Company will notify the Customer three (3) business days after the initial relay settings were received, and the Customer shall submit the revised settings within seven (7) calendar days from such notification. Within three (3) business days of receipt of the proposed Draft relay settings, the Company shall provide comments on and/or acceptance of the settings. If the process must continue beyond the above identified time frames due to errors in the relay settings, the Company retains the right to extend the Testing and Commissioning process, as needed, to ensure the Draft relay settings are correct.

Assuming no major issues occurring with the relay settings, the Customer shall submit a Testing and Commissioning Plan (TCP) to the Company for review and acceptance, no later than forty-five (45) calendar days following the Company’s acceptance of the Facilities Draft design. The TCP must be drafted, including Company acceptance, no later than six (6) weeks prior to functional testing. The Company requires a minimum of 5 business days for review of any submitted documentation.

## 8.3 Energization and Synchronization

### Site A, Site B, Site C, Site D, Site E, Site F, Site G:

The “Generator Disconnect Switch” at the interconnection point shall remain “open” until successful completion of the Company’s field audit and witness testing.

Prior to the start of construction, the DG Customer shall designate an Energization Coordinator (EC), and prepare and submit an Energization Plan (EP) to the Company for review and comment. The energization schedule shall be submitted to the Company and communicated with the Company’s local Regional Control Center at least two (2) weeks in advance of proposed energization. Further details of the EP and synchronization requirements will be specified during the Draft design review of the Project.

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The Customer shall submit as-built design drawings to the Company 90 days following commercial operation of their DG Facility.

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## 9.0 Cost Estimate

The non-binding good faith cost planning grade estimate for the Company's work associated with the interconnection of this Facility to the EPS, as identified in this report, is shown below in Table 11 & Table 12:

### Alternative #1:

National Grid System Modification	Conceptual Cost +/-25% Planning Grade Cost Estimate not including Tax Liability				Associated Tax Liability Applied to Capital	Total Customer Costs includes Tax Liability on Capital Portion
	Pre-Tax Total	Capital	O&M	Removal		
<b>NECO - Civil Work</b>					<b>11.08%</b>	<b>Total</b>
Approximate donated property tax. See Note #2	\$0	\$0	\$0	\$0	\$69,554	\$69,554
National Grid Supervision and Design Support for Customer Underground Civil Construction. See Note #3	\$165,000	\$165,000	\$0	\$0	\$18,282	\$183,282
Distribution Civil work, 3309 & 3310 Circuit. See Note #4 (Cost Sharing may be applicable)	\$16,136,861	\$16,136,861	\$0	\$0	\$1,787,964	\$17,924,825
<b>SUBTOTAL</b>	<b>\$16,301,861</b>	<b>\$16,301,861</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,875,800</b>	<b>\$18,177,661</b>

NECO - Line Work, Customer Property	Pre-Tax Total	Capital	O&M	Removal	11.08%	Total
Equipment at Point of Common Coupling, 3309 Circuit. See Note #5	\$784,147	\$784,147	\$0	\$0	\$86,883	\$871,030
Equipment at Point of Common Coupling, 3310 Circuit. See Note #6	\$376,192	\$376,192	\$0	\$0	\$41,682	\$417,874
<b>SUBTOTAL</b>	<b>\$1,160,339</b>	<b>\$1,160,339</b>	<b>\$0</b>	<b>\$0</b>	<b>\$128,566</b>	<b>\$1,288,905</b>

NECO - Line Work, Mainline - Alternative #1	Pre-Tax Total	Capital	O&M	Removal	11.08%	Total
Distribution Line work, 3309 Circuit. See Note #7	\$6,106,255	\$6,104,020	\$0	\$2,235	\$676,325	\$6,782,580
Distribution Line work, 3310 Circuit. See Note #8 (Cost Sharing may be applicable)	\$5,397,714	\$5,387,972	\$5,272	\$4,470	\$596,987	\$5,994,701
Implement live line reclose blocking and settings change at Pole #10, Hopkins Hill Road, Coventry.	\$1,600	\$0	\$1,600	\$0	\$0	\$1,600
<b>SUBTOTAL</b>	<b>\$11,505,569</b>	<b>\$11,491,992</b>	<b>\$6,872</b>	<b>\$6,705</b>	<b>\$1,273,313</b>	<b>\$12,778,882</b>

NECO - Substation Work (Distribution Level)	Pre-Tax Total	Capital	O&M	Removal	9.90%	Total
Overcurrent Setting change at Kent County 3310 Station Breaker	\$1,600	\$0	\$1,600	\$0	\$0	\$1,600

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Add Load Encroachment to the Kent County T7 Directional Overcurrent Relay. (Cost Sharing may be applicable)	\$16,000	\$15,000	\$1,000	\$0	\$1,485	\$17,485
<b>SUBTOTAL</b>	<b>\$17,600</b>	<b>\$15,000</b>	<b>\$2,600</b>	<b>\$0</b>	<b>\$1,485</b>	<b>\$19,085</b>

Witness Testing & EMS	Pre-Tax Total	Capital	O&M	Removal	NA	Total
Witness Testing. See Note #9	\$6,250	NA	\$6,250	NA	NA	\$6,250
EMS integration. See Note #10	\$10,000	NA	\$10,000	NA	NA	\$10,000
<b>SUBTOTAL</b>	<b>\$16,250</b>	<b>\$0</b>	<b>\$16,250</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16,250</b>

	Pre-Tax Total	Capital	O&M	Removal	Tax	Total
<b>Totals</b>	<b>\$29,001,619</b>	<b>\$28,969,192</b>	<b>\$25,722</b>	<b>\$6,705</b>	<b>\$3,279,163</b>	<b>\$32,280,782</b>

**Notes**

1. Definition of abbreviation: NECO-Naragansett Electric Co.; NEPCO-New England Power Co.
2. Approximate donated property tax for the Customer installation of (6) - 2 way manholes (3000 feet) - 4 way, 6" PVC - DB concrete encased duct bank, (200 feet) - 2 way, 6" PVC - DB concrete encased duct bank and associated equipment. Customer is responsible for performing, any and all, temporary and permanent restoration.
3. National Grid supervision and design support for underground civil construction performed by the Customer. This cost includes: preparation of design package (Scope, Construction specifications, Construction standards/drawings, Vendor information, etc....), review and approval of civil design drawings, and review and approval of civil constructions by full-time National Grid inspector.
4. Installation of (5) - 3 way manholes, (21) - 2 way manholes, (400 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14600 feet) 4 way, 6" PVC - DB concrete encased duct bank, (600 feet) 9 way, 6" PVC - DB concrete encased duct bank and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.
5. Install ~1,100 circuit feet of 3-477 AAC, one (1) 35 kV load break switch, one (1) 35 kV recloser, two disconnect switches and six (6) primary meters along with six (6) disconnect switches at the PCC.
6. Install ~250 feet of 3-1/c-477 AL Bare conductor, one (1) 35 kV load break switch, one (1) 35 kV recloser, two (2) single-phase transformers and one (1) primary meter at the PCC
7. Extend the Kent County 3309, 34.5 KV circuit underground from proposed Pole #10-2, Hopkins Hill Road, West Greenwich, RI to the 3309 PCC-POI located at 18 Weaver Hill Road, West Greenwich, RI. (approximately 4.3 Miles). Estimate included in table above assumes installation of 3-1/c-1000 kcmil CU EPR 35 KV cable and associated equipment. Costs include one (1) bridge crossing with risers to 477 Al bare conductor, Installation of new tap recloser located at Pole #10-2, Hopkins Hill Road, West Greenwich, RI, and associated equipment.
8. Extend the Kent County 3310, 34.5 KV circuit underground from proposed Pole #25-1, Hopkins Hill Road, West Greenwich, RI to the 3310 PCC-POI located at 18 Weaver Hill Road, West Greenwich, RI. (approximately 3.6 Miles). Estimate included in table above assumes installation of 3-1/c-1000 kcmil CU EPR 35 KV cable, 3-1/c-500 kcmil CU EPR 35 KV cable, and associated equipment. Costs include one (1) bridge crossing with risers to 477 Al bare conductor, Installation of new tap recloser located at Pole #25-1, Hopkins Hill Road, West Greenwich, RI, and associated equipment.
9. Witness Testing including review of witness test documentation and manpower for attending witness test.
10. Integration of DG and EPS modifications into Company's Energy Management System (EMS)

**Table 11: Cost Estimates (Alternative #1)**

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**Alternative #2:**

National Grid System Modification	Conceptual Cost +/-25% Planning Grade Cost Estimate not including Tax Liability				Associated Tax Liability Applied to Capital	Total Customer Costs includes Tax Liability on Capital Portion
	Pre-Tax Total	Capital	O&M	Removal		
<b>NECO - Civil Work</b>					11.08%	<b>Total</b>
Approximate donated property tax. See Note #2	\$0	\$0	\$0	\$0	\$69,554	\$69,554
National Grid Supervision and Design Support for Customer Underground Civil Construction. See Note #3	\$165,000	\$165,000	\$0	\$0	\$18,282	\$183,282
Distribution Civil work, 3309 & 3310 Circuit. See Note #4 (Cost Sharing may be applicable)	\$16,136,861	\$16,136,861	\$0	\$0	\$1,787,964	\$17,924,825
<b>SUBTOTAL</b>	<b>\$16,301,861</b>	<b>\$16,301,861</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,875,800</b>	<b>\$18,177,661</b>

NECO - Line Work, Customer Property	Pre-Tax Total	Capital	O&M	Removal	11.08%	Total
Equipment at Point of Common Coupling, 3309 Circuit. See Note #5	\$784,147	\$784,147	\$0	\$0	\$86,883	\$871,030
Equipment at Point of Common Coupling, 3310 Circuit. See Note #6	\$376,192	\$376,192	\$0	\$0	\$41,682	\$417,874
<b>SUBTOTAL</b>	<b>\$1,160,339</b>	<b>\$1,160,339</b>	<b>\$0</b>	<b>\$0</b>	<b>\$128,566</b>	<b>\$1,288,905</b>

NECO - Line Work, Mainline - Alternative #2	Pre-Tax Total	Capital	O&M	Removal	11.08%	Total
Distribution Line work, 3309 Circuit. See Note #7	\$6,106,255	\$6,104,020	\$0	\$2,235	\$676,325	\$6,782,580
Distribution Line work, 3310 Circuit. See Note #8 (Cost Sharing may be applicable)	\$5,811,039	\$5,668,337	\$5,271	\$137,431	\$628,052	\$6,439,091
Implement live line reclose blocking and settings change at Pole #10, Hopkins Hill Road, Coventry.	\$1,600	\$0	\$1,600	\$0	\$0	\$1,600
<b>SUBTOTAL</b>	<b>\$11,918,894</b>	<b>\$11,772,357</b>	<b>\$6,871</b>	<b>\$139,666</b>	<b>\$1,304,377</b>	<b>\$13,223,271</b>

NECO - Substation Work (Distribution Level)	Pre-Tax Total	Capital	O&M	Removal	9.90%	Total
Overcurrent Setting change at Kent County 3310 Station Breaker	\$1,600	\$0	\$1,600	\$0	\$0	\$1,600
Add Load Encroachment to the Kent County T7 Directional Overcurrent Relay. (Cost Sharing may be applicable)	\$16,000	\$15,000	\$1,000	\$0	\$1,485	\$17,485
<b>SUBTOTAL</b>	<b>\$17,600</b>	<b>\$15,000</b>	<b>\$2,600</b>	<b>\$0</b>	<b>\$1,485</b>	<b>\$19,085</b>

Witness Testing & EMS	Pre-Tax Total	Capital	O&M	Removal	NA	Total
Witness Testing. See Note #9	\$6,250	NA	\$6,250	NA	NA	\$6,250

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EMS integration. See Note #10	\$10,000	NA	\$10,000	NA	NA	\$10,000
<b>SUBTOTAL</b>	<b>\$16,250</b>	<b>\$0</b>	<b>\$16,250</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16,250</b>

	Pre-Tax Total	Capital	O&M	Removal	Tax	Total
<b>Totals</b>	<b>\$29,414,944</b>	<b>\$29,249,557</b>	<b>\$25,721</b>	<b>\$139,666</b>	<b>\$3,310,228</b>	<b>\$32,725,171</b>

**Notes**

- Definition of abbreviation: NECO-Naragansett Electric Co.; NEPCO-New England Power Co.
- Approximate donated property tax for the Customer installation of (6) - 2 way manholes (3000 feet) - 4 way, 6" PVC - DB concrete encased duct bank, (200 feet) - 2 way, 6" PVC - DB concrete encased duct bank and associated equipment. Customer is responsible for performing, any and all, temporary and permanent restoration.
- National Grid supervision and design support for underground civil construction performed by the Customer. This cost includes preparation of design package (Scope, Construction specifications, Construction standards/drawings, Vendor information, etc....), review and approval of civil design drawings, and review and approval of civil constructions by full-time National Grid inspector.
- Installation of (5) - 3 way manholes, (21) - 2 way manholes, (400 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14600 feet) 4 way, 6" PVC - DB concrete encased duct bank, (600 feet) 9 way, 6" PVC - DB concrete encased duct bank and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.
- Install ~1,100 circuit feet of 3-477 AAC, one (1) 35 kV load break switch, one (1) 35 kV recloser, two disconnect switches and six (6) primary meters along with six (6) disconnect switches at the PCC.
- Install ~250 feet of 3-1/c-477 AL Bare conductor, one (1) 35 kV load break switch, one (1) 35 kV recloser, two (2) single-phase transformers and one (1) primary meter at the PCC
- Extend the Kent County 3309, 34.5 KV circuit underground from proposed Pole #10-2, Hopkins Hill Road, West Greenwich, RI to the 3309 PCC-POI located at 18 Weaver Hill Road, West Greenwich, RI. (approximately 4.3 Miles). Estimate included in table above assumes installation of 3-1/c-1000 kcmil CU EPR 35 KV cable and associated equipment. Costs include one (1) bridge crossing with risers to 477 Al bare conductor, Installation of new tap recloser located at Pole #10-2, Hopkins Hill Road, West Greenwich, RI, and associated equipment.
- Extend the Kent County 3310, 34.5 KV circuit underground from proposed Pole #25-1, Hopkins Hill Road, West Greenwich, RI to the 3310 PCC-POI located at 18 Weaver Hill Road, West Greenwich, RI. (approximately 3.6 Miles). Estimate included in table above assumes removal of 3-1/c 500 kcmil CU EPR 35 KV cable, installation of 3-1/c-1000 kcmil CU EPR 35 KV cable, 3-1/c-500 kcmil CU EPR 35 KV cable, and associated equipment. Costs include one (1) bridge crossing with risers to 477 Al bare conductor, Installation of new tap recloser located at Pole #25-1, Hopkins Hill Road, West Greenwich, RI, and associated equipment.
- Witness Testing including review of witness test documentation and manpower for attending witness test.
- Integration of DG and EPS modifications into Company's Energy Management System (EMS)

**Table 12: Cost Estimates (Alternative #2)**

The planning grade estimate provided herein is based on information provided by the Interconnecting Customer for the study and is prepared using historical cost data from similar projects. The associated tax effect liability included is the result of an IRS rule, which states that all costs for construction collected by the Company, as well as the value of donated property, are considered taxable income.<sup>4</sup> This estimate is valid for ninety (90) calendar days from the issuance of this report, after which time it becomes void. If the Interconnection Customer elects to proceed with this project after the ninety (90) calendar days, a revised estimate may be required.

<sup>4</sup> Actual charges shall include the tax rate in effect at the time the charges are incurred.

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This interconnection application may result in costs charged to The Narragansett Electric Company (the Company) by an Affected System Operator (ASO). Please note that in addition to the payment obligation for your share of the cost of any transmission upgrades identified in an ASO Study or identified during the Distribution System Impact Study of your application, when your facility is energized you also will be assessed for the on-going carrying charges for the transmission upgrades (plus cost security before your facility is energized), as specified in your Interconnection Service Agreement. The on-going carrying charges include O&M, property taxes, and other carrying costs associated with transmission upgrades. The transmission upgrades and on-going carrying charges are calculated and charged to the Company by the ASO, in most instances the Company's transmission provider, New England Power Company (NEP), in accordance with the ASO's tariff (for NEP, Schedule 21-NEP, Attachment DAF, to the ISO-NE Open Access Transmission Tariff ("DAF Charges") and data from the FERC Form 1). You will be charged initially on an estimated basis for the transmission upgrade costs, which will be reconciled to actual costs. On-going carrying charges are calculated by multiplying the capital portion of the transmission upgrade costs by the transmission carrying charge rate in effect at the time. For NEP, the on-going carrying charge rate is subject to adjustment annually as estimated transmission upgrade costs are reconciled to actual costs. The current on-going carrying charge rate for NEP is 5.21%.

The estimated duration for the Company to complete construction of the System Modifications will be identified in the final Interconnection Service Agreement.

The project schedule may be impacted by the ability to have planned outages to allow work to take place on the distribution system. Outages will be contingent on the ability to support the load normally supplied by affected circuits. The schedule can also be impacted by unknown factors over which the Company has no control. The interconnection schedule is contingent on the Interconnecting Customer's successful compliance with the requirements outlined in this report and timely completion of its obligations as defined in *ESB756D, Exhibit 2: Company Requirements for Projects Not Eligible for the Simplified Process*. The schedule for the Company's work shall be addressed during the development, or after the execution, of the Interconnection Agreement.


## 10.0 Conclusion

The project was found to be feasible. It will be allowed to interconnect with certain system modifications and additions to the local Company EPS. Associated costs are provided in Section 9.0.

The Customer must submit revised documentation as identified herein, to the Company for review and approval before an ISA can move forward.

A milestone schedule shall be included in the final ISA and shall be reflective of the tasks identified in ESB756D, Exhibit 2. Upon execution of the final ISA, and prior to advancing the project, the Customer shall provide a detailed project schedule, inclusive of the Exhibit 2 tasks referenced above. After completion of final design and all associated applications, fees, permitting and

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easement requirements are satisfied, System Modifications for this Project will be placed in queue for construction.

If a Customer fails to meet the R.I.P.U.C. No. 2180, Section 3.4 Time Frames and does not provide the necessary information required by the Company within the longer of 15 days or half the time allotted to the Company to perform a given step, or as extended by mutual agreement, then the Company may terminate the application and the Customer must re-apply.

***Note: Authorization for parallel operation will not be issued without a fully executed Interconnection Agreement, receipt of the necessary insurance documentation, and successful completion of the Company approved witness testing. Such authorization shall be provided in writing.***

## 11.0 Revision History

<u>Version</u>	<u>Date</u>	<u>Description of Revision</u>
1.0	04/21/2021	Issue to the Customer.

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## Appendix A Revenue Metering Phone Line Requirements

An analog phone line to National Grid's revenue meter shall be provided by the Customer. The analog phone line must be capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc. The phone line can be a phone (extension) off the customers PBX phone system, or it may be a separate dedicated phone line as provided by the Telephone Company. The following is to be used as a guide, please contact the Company if additional information is required. The most common installations are outlined below, Wall mounted Meter Installation, Outdoor Padmount Transformer Meter Installation, and Outdoor Pole Mounted Meter Installation.

### 1) WALL MOUNTED METER INSTALLATION

If the meter is wall mounted indoor or outdoor the customer shall provide a telephone line within 12" of the meter socket and additional equipment as described and shown below in figures 1A & 1B. National Grid will connect the meter to the customer provided phone line.

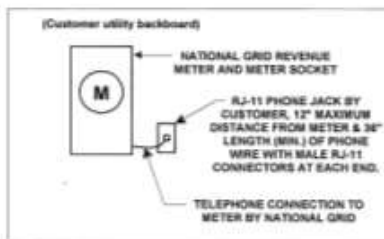


Figure 1A – Indoor Meter Installation  
not to scale

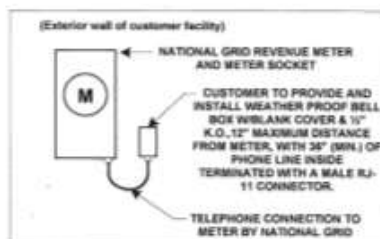


Figure 1B – Outdoor Meter Installation  
not to scale

### 2) OUTDOOR PADMOUNT TRANSFORMER METER INSTALLATION

If the meter is mounted outside on the secondary compartment of the padmount transformer as shown below the conduit shall stub up and roughly line up with the bottom or side knock out of the meter socket and terminate into a weatherproof box or fitting. A liquid tight flexible conduit whip with end bushing and locknut of sufficient length to reach and terminate at the knockout location of the meter socket with three feet of telephone wire coiled (and terminated with a male RJ-11 connector) at its end shall be connected to the weatherproof box or fitting. National Grid will connect the conduit whip to the meter socket and terminate the telephone wire to the meter (see figure 2 below).

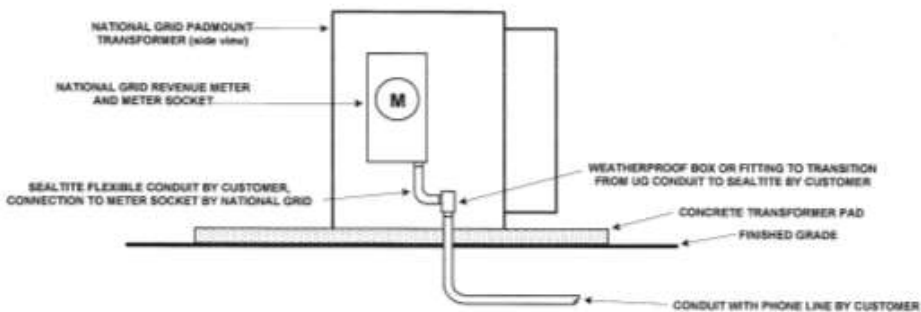


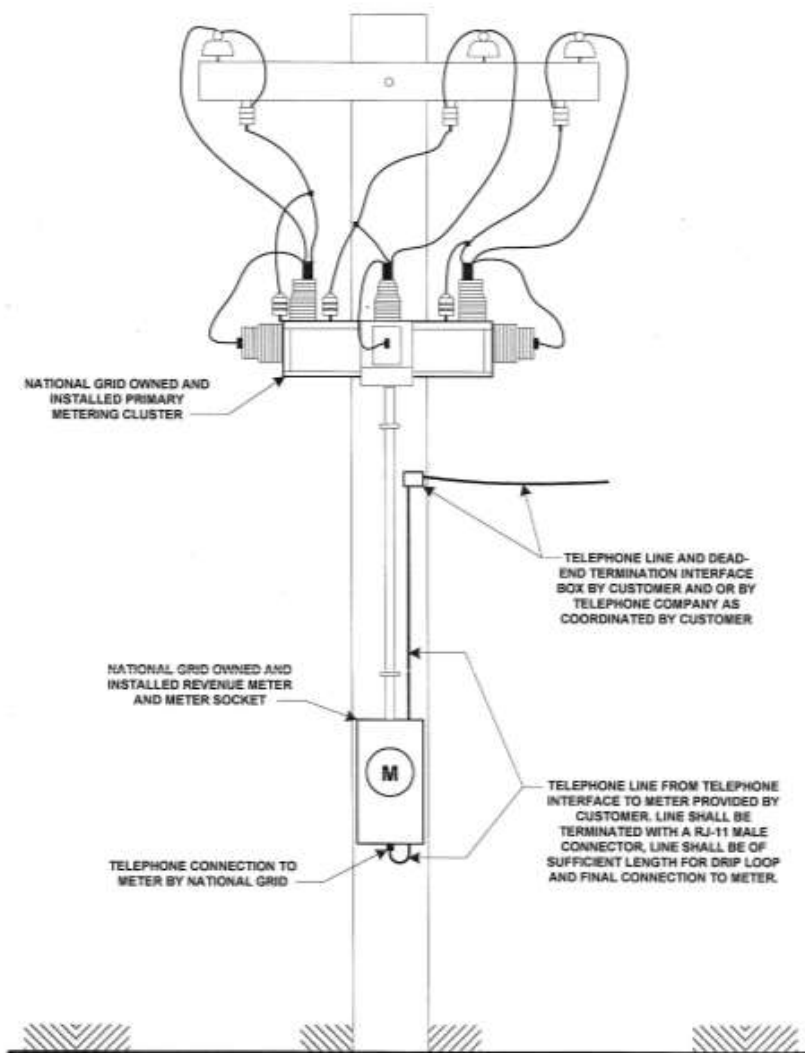
Figure A- 1: Revenue Meter Phone Line Installation Guide

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**3) OUTDOOR POLE MOUNTED METER INSTALLATION**

If the meter is located outdoor on a Company owned utility pole as part of a primary metering installation the Customer will install and connect a phone line from the Telephone Company provided termination interface box, the line shall be terminated with a RJ-11 male connector and be of sufficient length to reach the meter socket and create a drip loop, as well as additional line for final connection to the meter. The customer is responsible for the Telephone Company phone line installation. (see figure 3 below).



**Figure A- 2: Revenue Meter Phone Line Installation Guide**

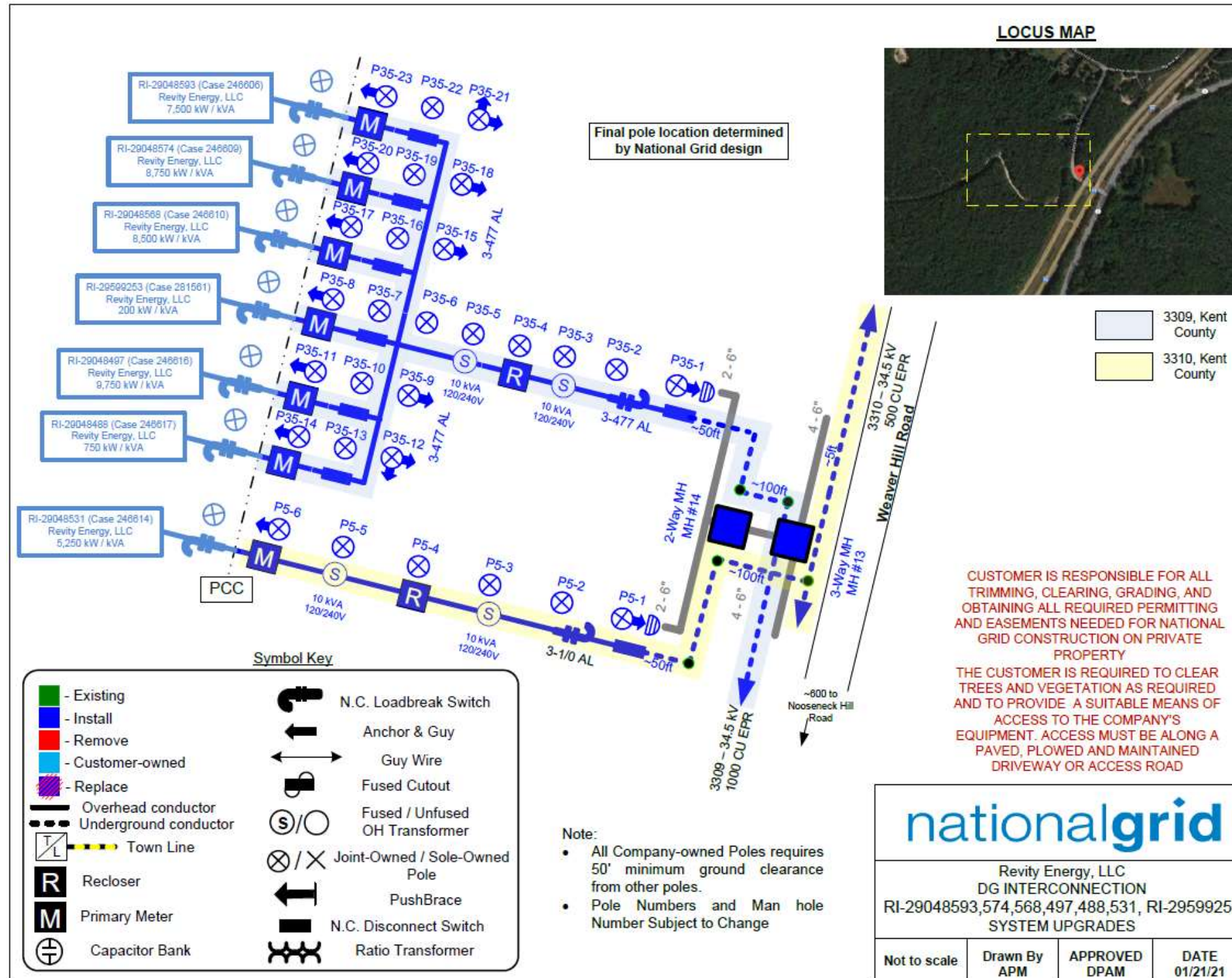
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### Appendix B System Modification Diagrams

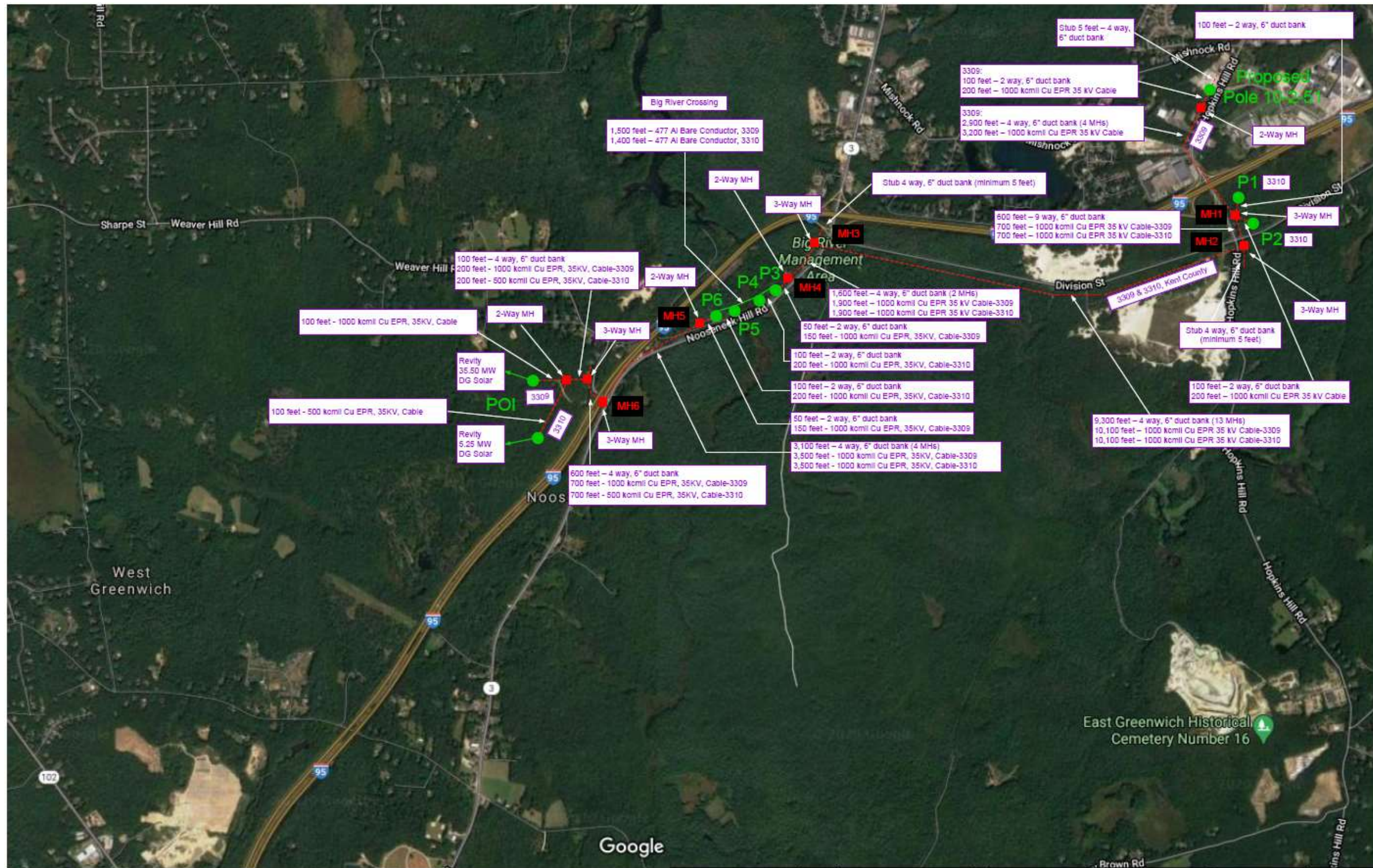
*Note: Company EPS modification diagrams provided in this Appendix are intended as a diagrammatic reference of work required to be completed before this Facility may interconnect. The Company will be performing a detailed design following this Impact Study, should the Customer elect to move forward with the interconnection process. At that time, the Company will determine exact locations and requirements for system modification designs. Refer to the body of this Impact Study for further discussion regarding specific EPS modifications that are required for the interconnection of this Facility.*

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**Figure B- 1: PCC Configuration**

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**Figure B- 2: System Modification**

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CUSTOMER IS RESPONSIBLE FOR ALL TRIMMING, CLEARING, GRADING, AND OBTAINING ALL REQUIRED PERMITTING AND EASEMENTS NEEDED FOR NATIONAL GRID CONSTRUCTION ON PRIVATE PROPERTY

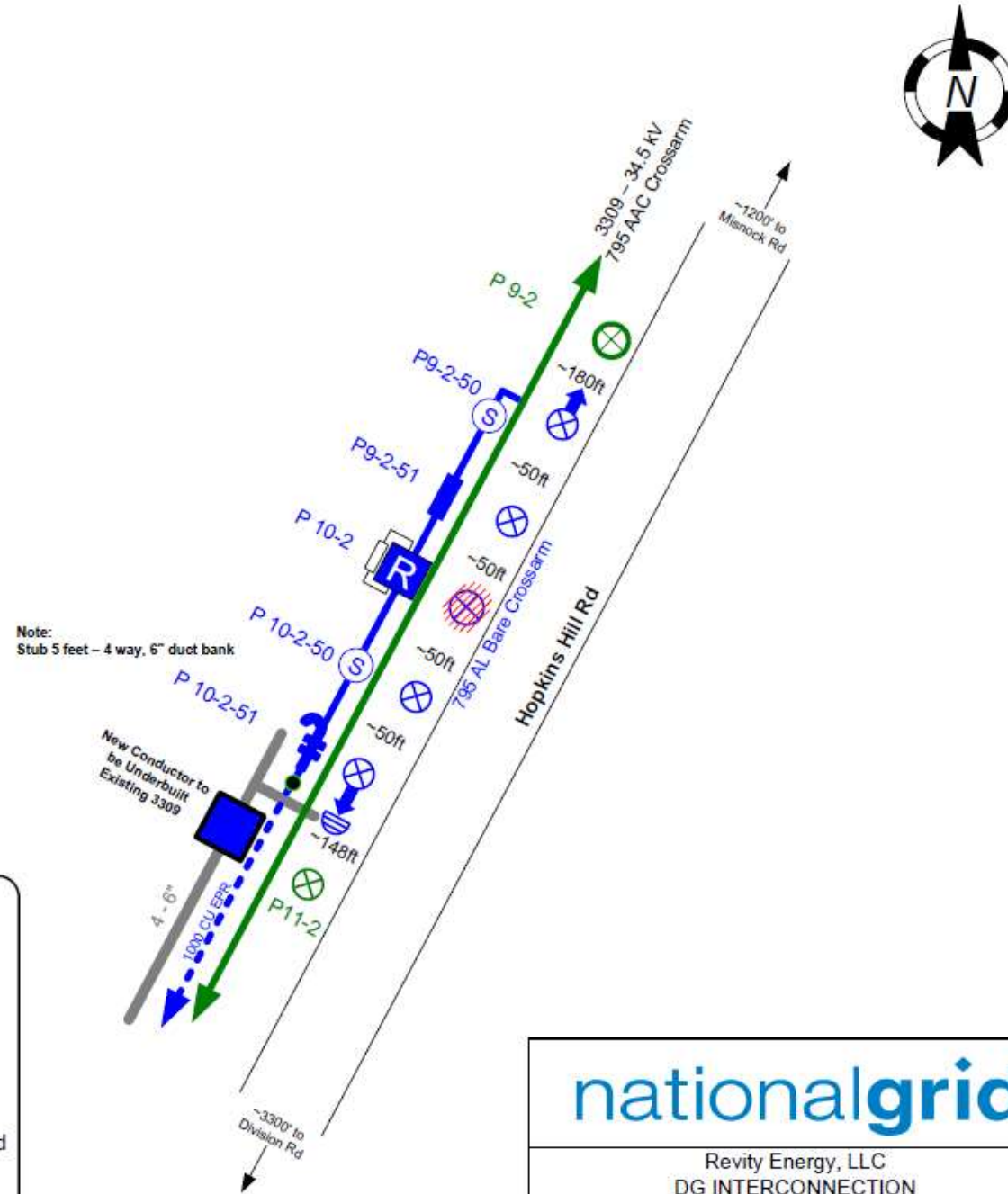
THE CUSTOMER IS REQUIRED TO CLEAR TREES AND VEGETATION AS REQUIRED AND TO PROVIDE A SUITABLE MEANS OF ACCESS TO THE COMPANY'S EQUIPMENT. ACCESS MUST BE ALONG A PAVED, PLOWED AND MAINTAINED DRIVEWAY OR ACCESS ROAD

LOCUS MAP



Symbol Key

- Existing	N.C. Loadbreak Switch
- Install	Anchor & Guy
- Remove	Guy Wire
- Customer-owned	Fused Cutout
- Replace	Fused / Unfused OH Transformer
Overhead conductor	Joint-Owned / Sole-Owned Pole
Underground conductor	PushBrace
Town Line	N.C. Disconnect Switch
Recloser	Ratio Transformer
Primary Meter	
Capacitor Bank	



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DG INTERCONNECTION  
RI-29048593,574,568,497,488, RI-29599253  
SYSTEM UPGRADES

Not to scale	Drawn By APM	APPROVED DPAM	DATE 1/21/21
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Figure B- 3: System Modification

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CUSTOMER IS RESPONSIBLE FOR ALL TRIMMING, CLEARING, GRADING, AND OBTAINING ALL REQUIRED PERMITTING AND EASEMENTS NEEDED FOR NATIONAL GRID CONSTRUCTION ON PRIVATE PROPERTY

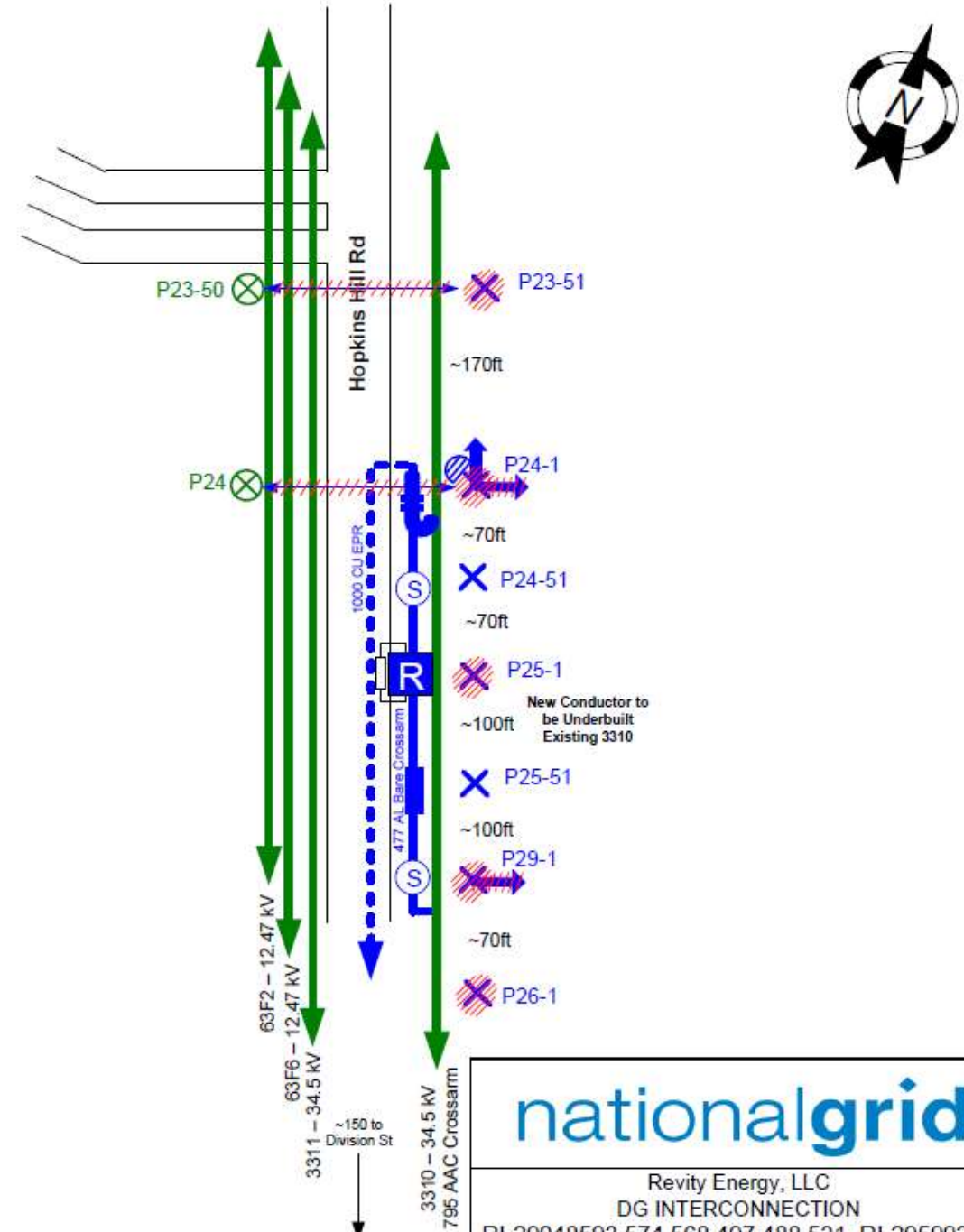
THE CUSTOMER IS REQUIRED TO CLEAR TREES AND VEGETATION AS REQUIRED AND TO PROVIDE A SUITABLE MEANS OF ACCESS TO THE COMPANY'S EQUIPMENT. ACCESS MUST BE ALONG A PAVED, PLOWED AND MAINTAINED DRIVEWAY OR ACCESS ROAD

**LOCUS MAP**



**Symbol Key**

	- Existing		N.C. Loadbreak Switch
	- Install		Anchor & Guy
	- Remove		Guy Wire
	- Customer-owned		Fused Cutout
	- Replace		Fused / Unfused OH Transformer
	Overhead conductor		Joint-Owned / Sole-Owned Pole
	Underground conductor		PushBrace
	Town Line		N.C. Disconnect Switch
	Recloser		Ratio Transformer
	Primary Meter		
	Capacitor Bank		



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DG INTERCONNECTION  
RI-29048593,574,568,497,488,531, RI-29599253  
SYSTEM UPGRADES

Not to scale	Drawn By APM	APPROVED DPAM	DATE 3/18/21
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**Figure B- 4: System Modification**

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### Appendix C Customer Site and Single Line Diagram

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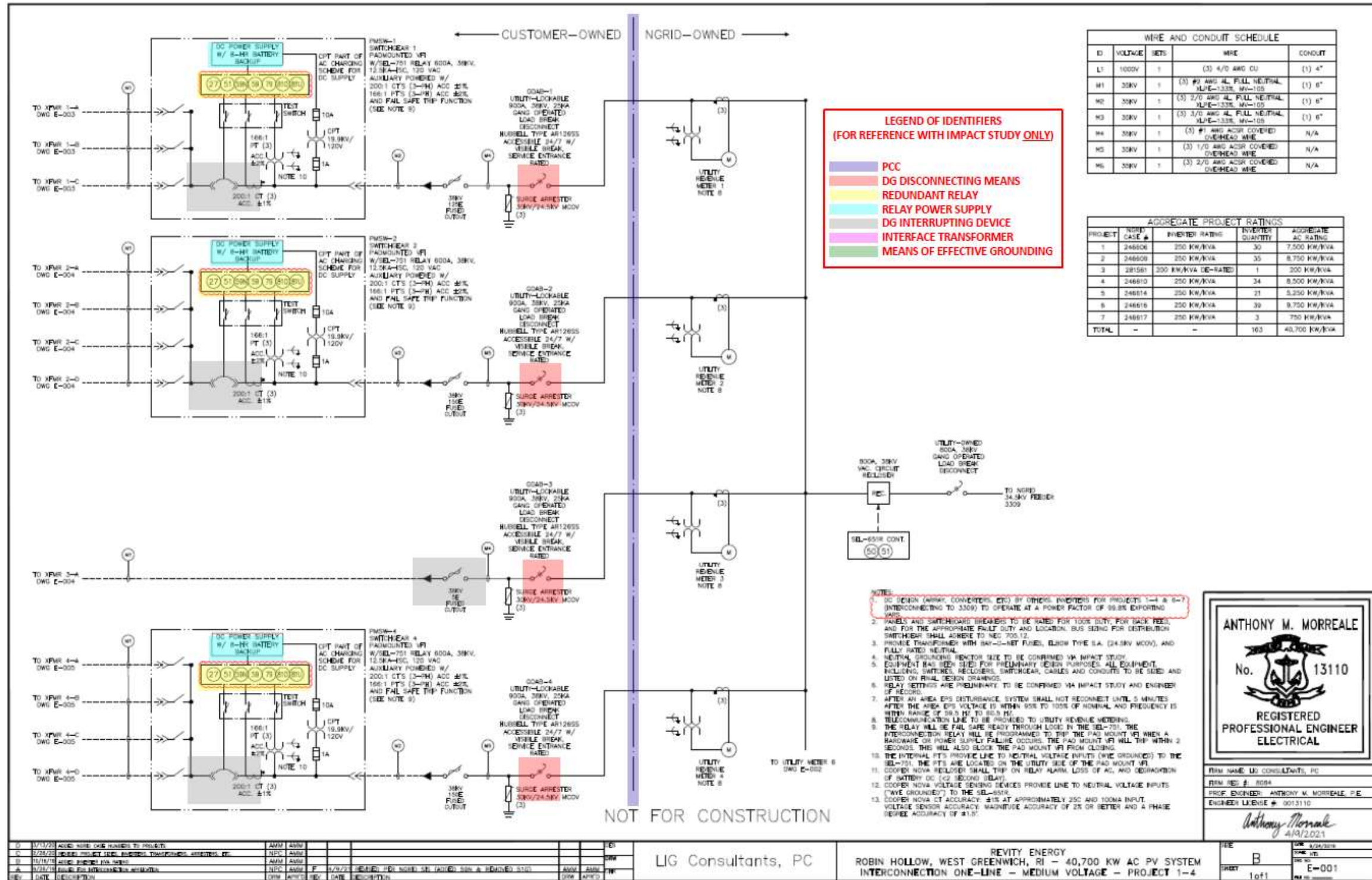


Figure C-1: Project One-Line

(Refer to body of Impact Study for specific discussion on equipment and requirements. Highlighting of equipment in this Figure does not necessarily denote acceptance)

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Sponsor:  
Customer Energy Integration-NE

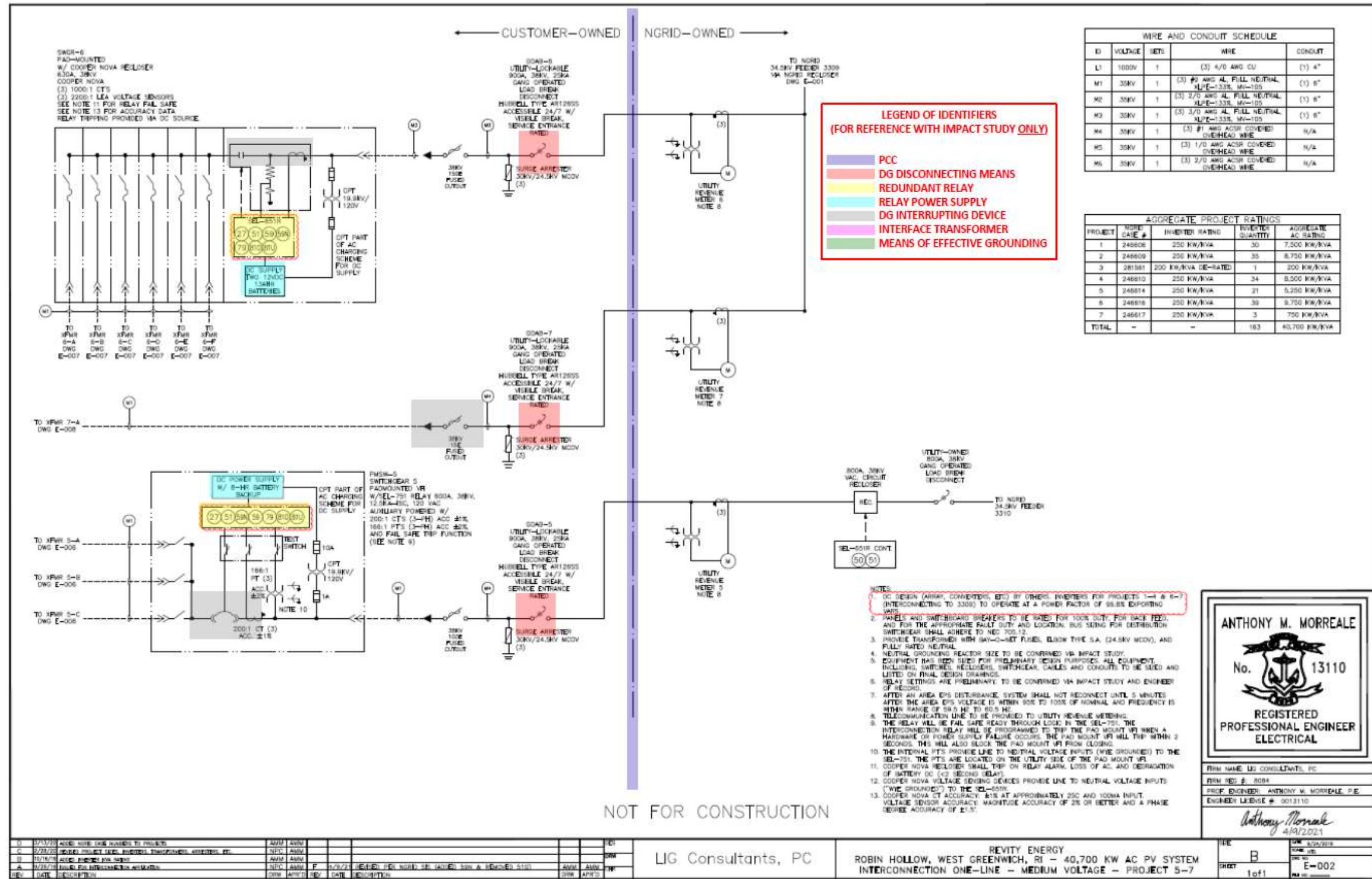


Figure C- 2: Project One-Line  
(Refer to body of Impact Study for specific discussion on equipment and requirements. Highlighting of equipment in this Figure does not necessarily denote acceptance)

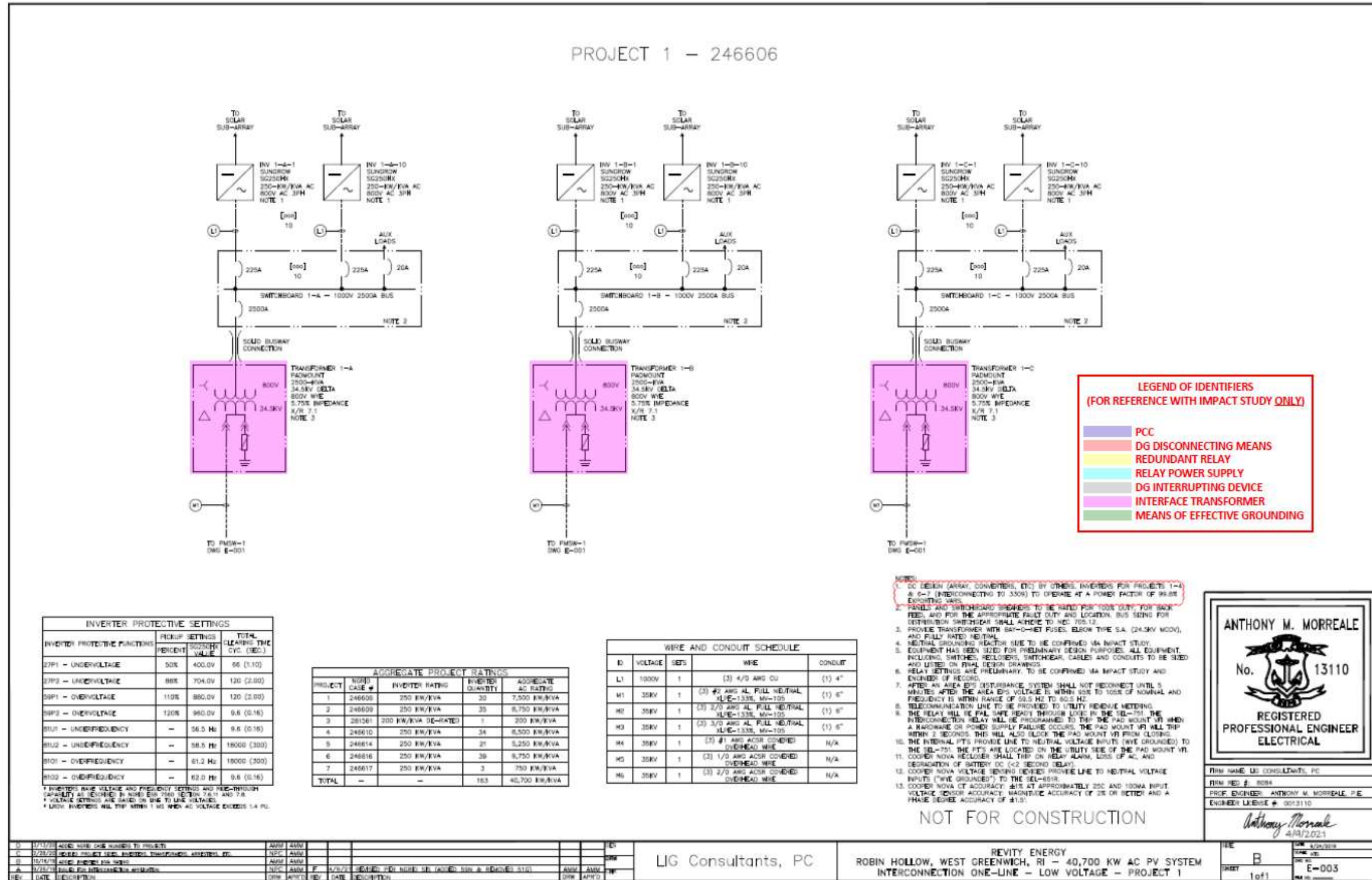


Figure C- 3: Project One-Line  
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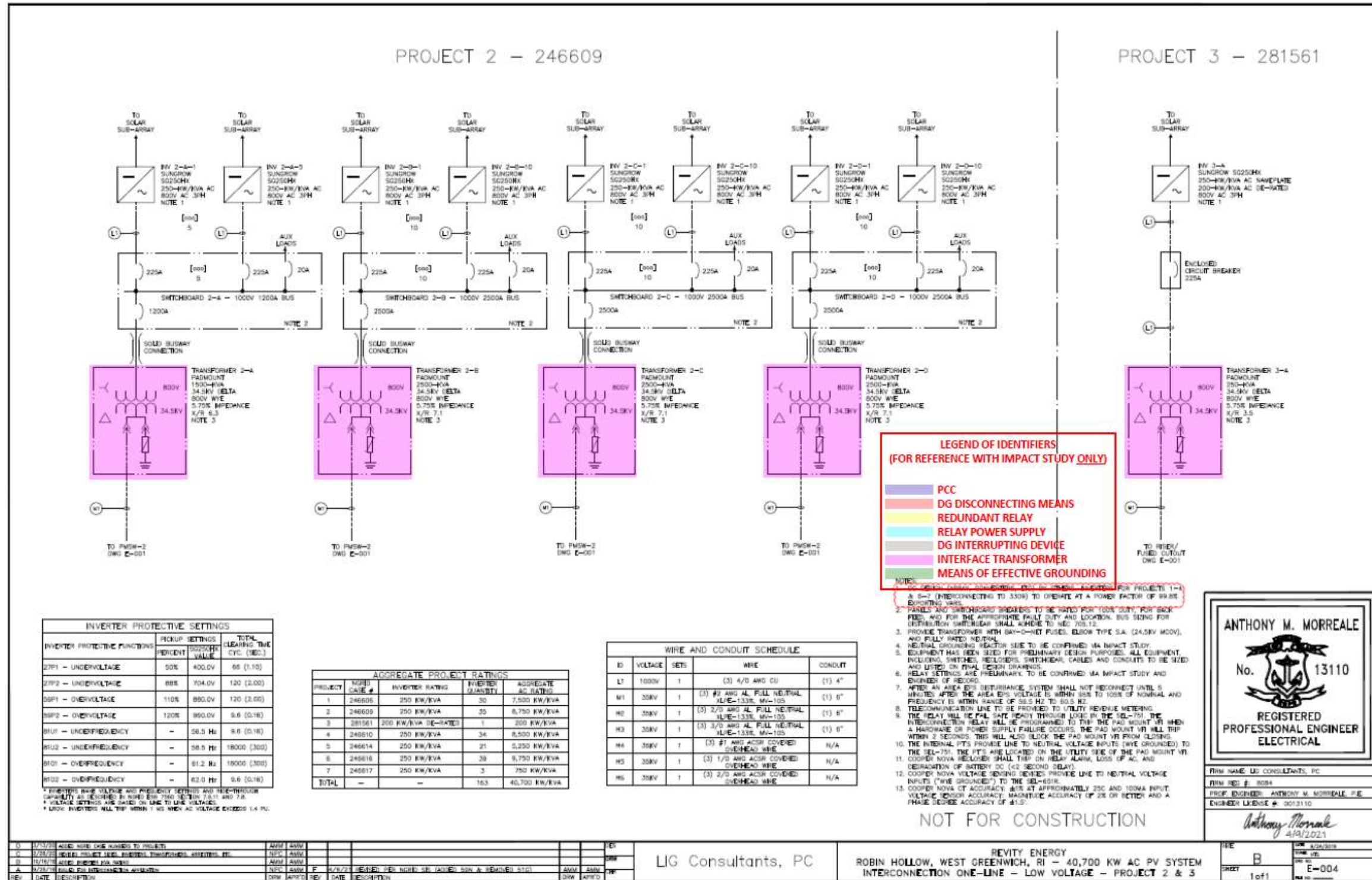


Figure C- 4: Project One-Line  
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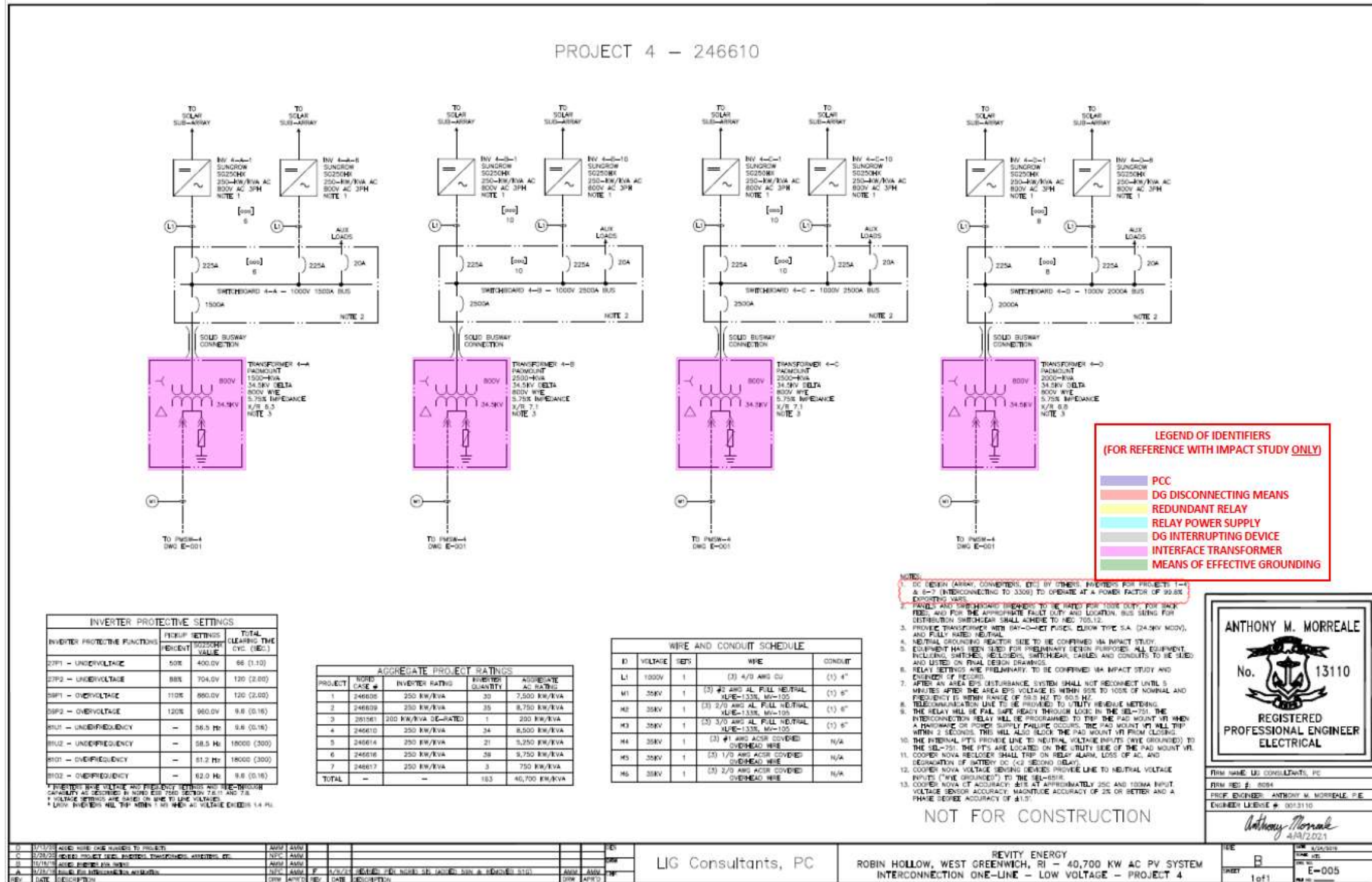


Figure C- 5: Project One-Line  
(Refer to body of Impact Study for specific discussion on equipment and requirements. Highlighting of equipment in this Figure does not necessarily denote acceptance)



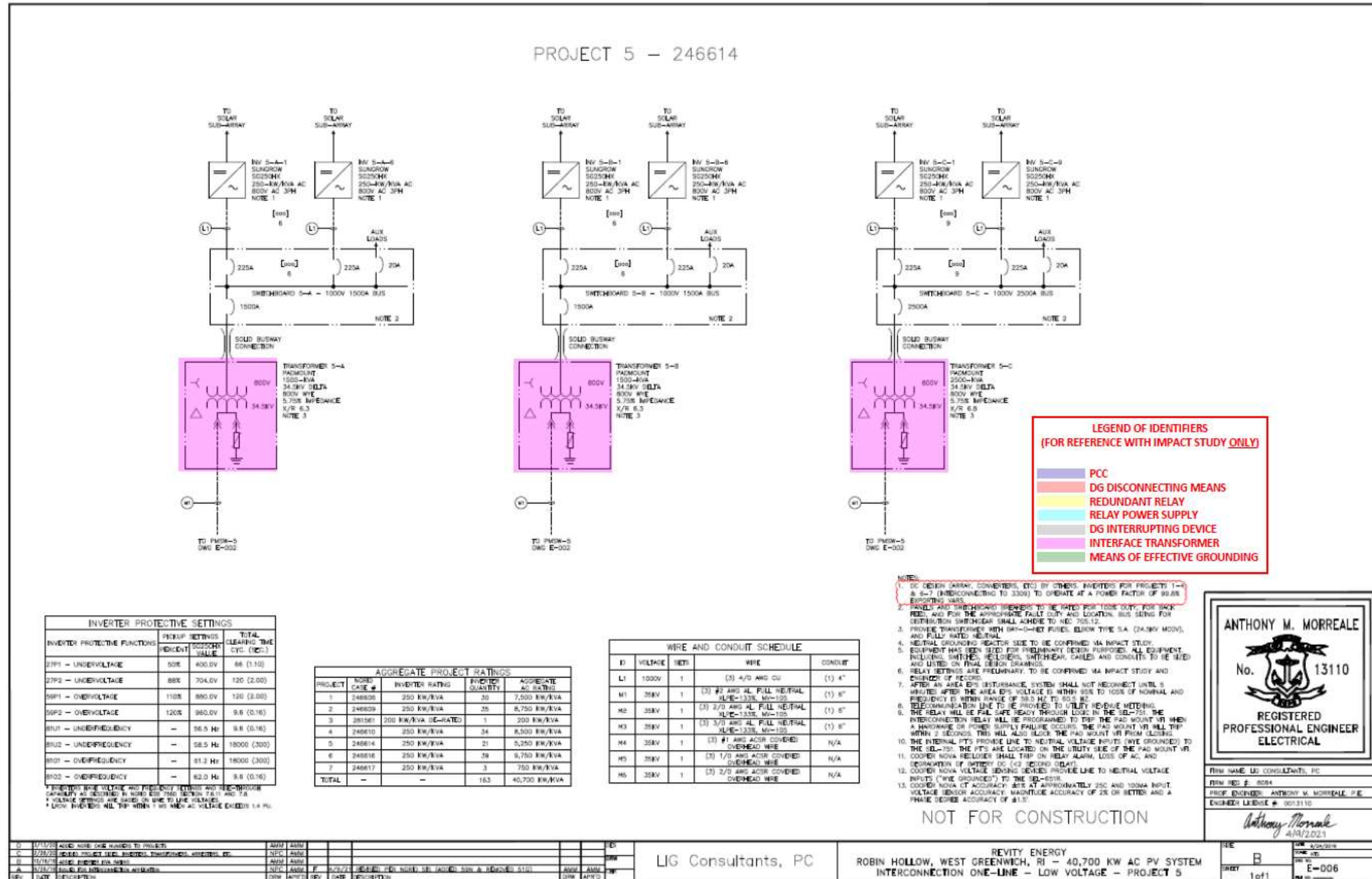


Figure C- 6: Project One-Line  
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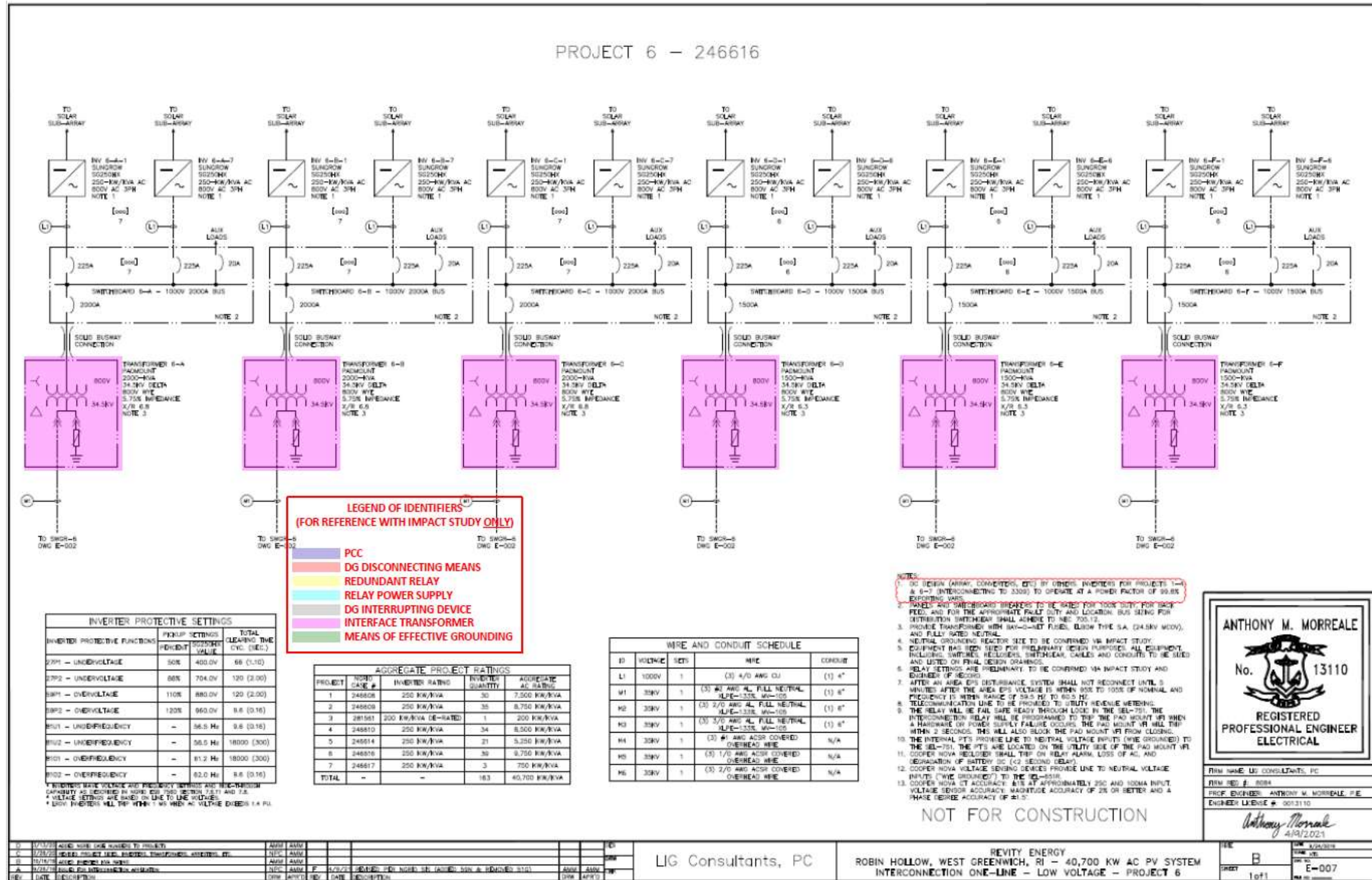


Figure C- 7: Project One-Line  
(Refer to body of Impact Study for specific discussion on equipment and requirements. Highlighting of equipment in this Figure does not necessarily denote acceptance)

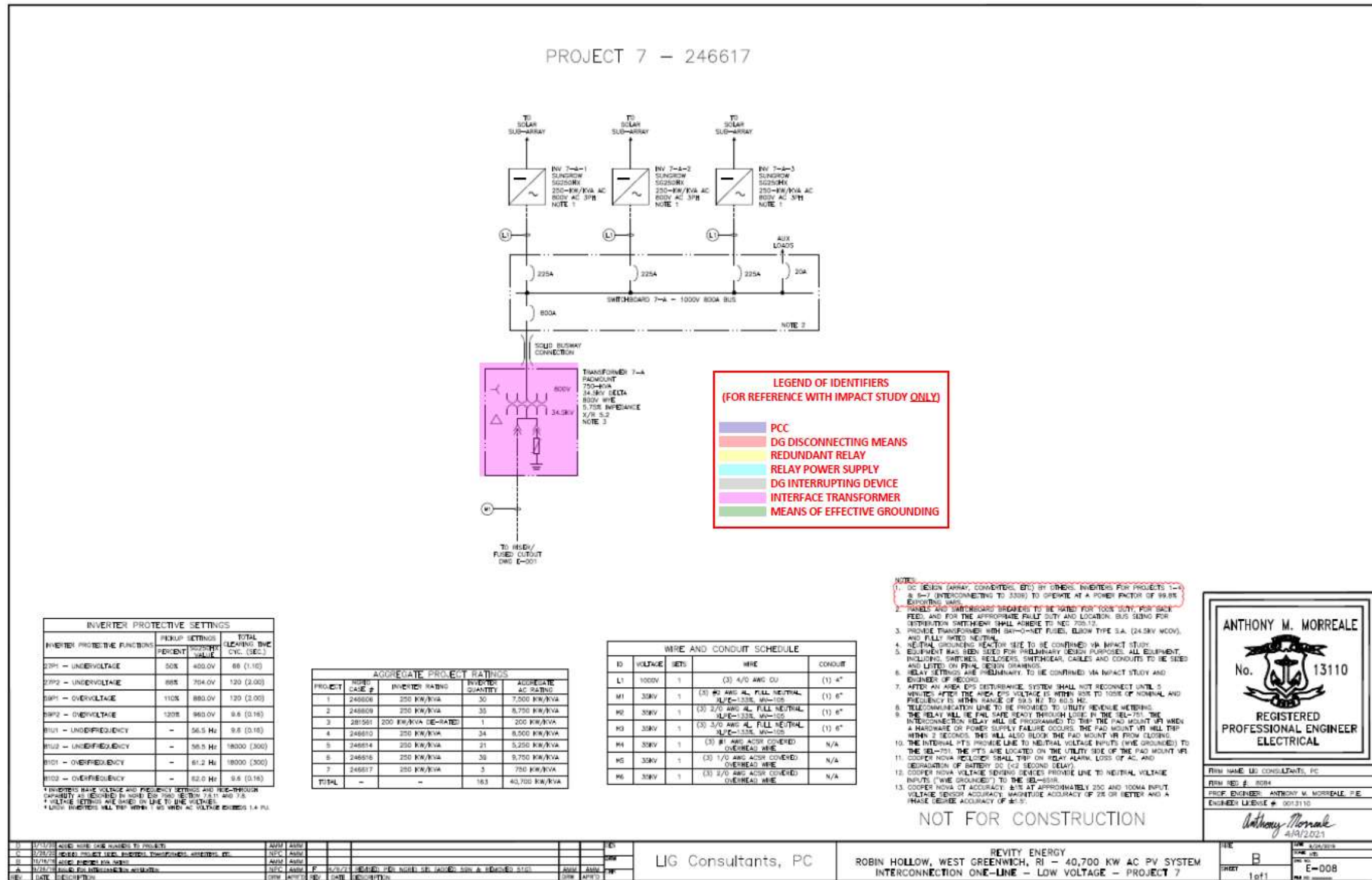


Figure C- 8: Project One-Line  
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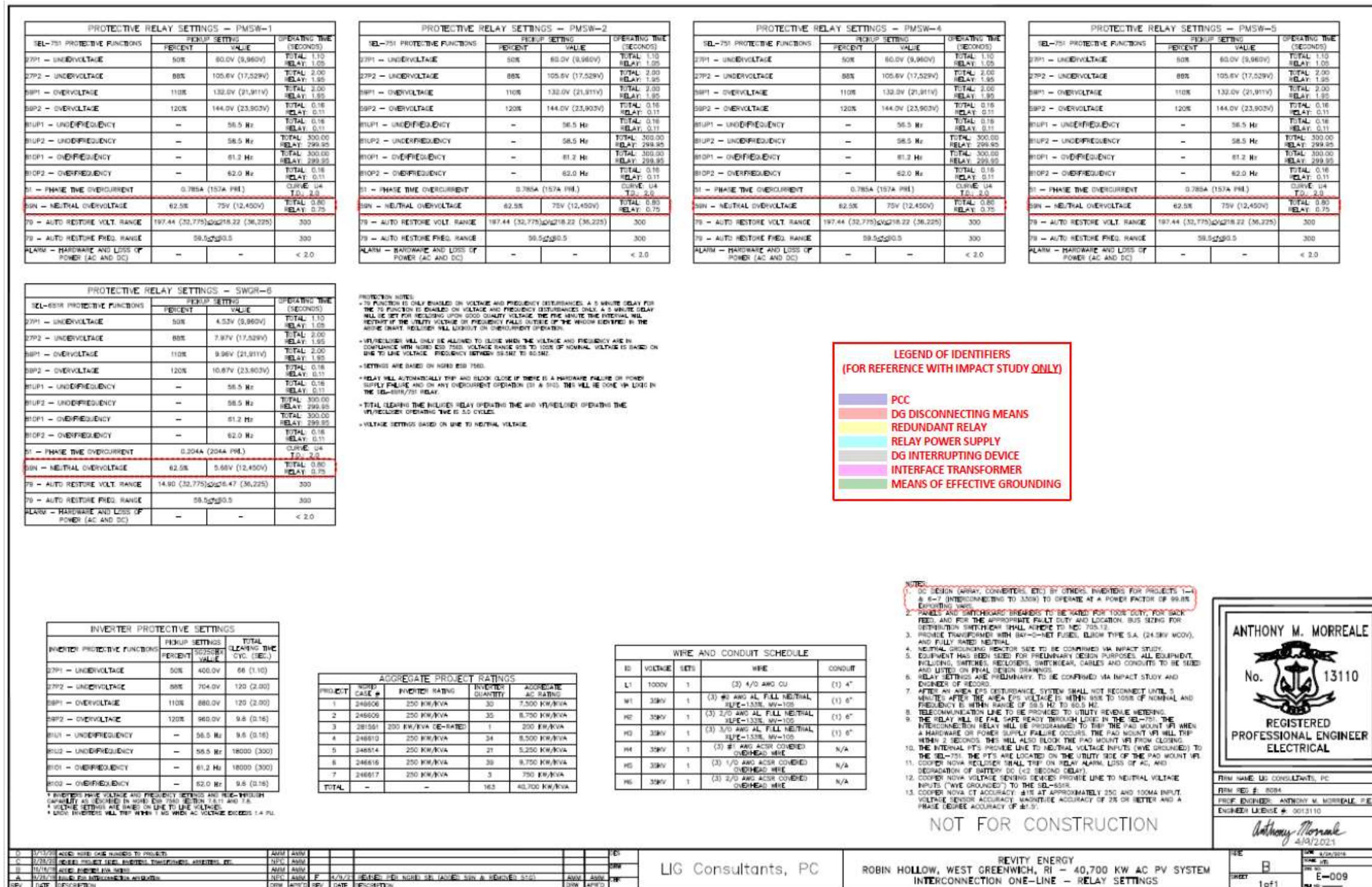


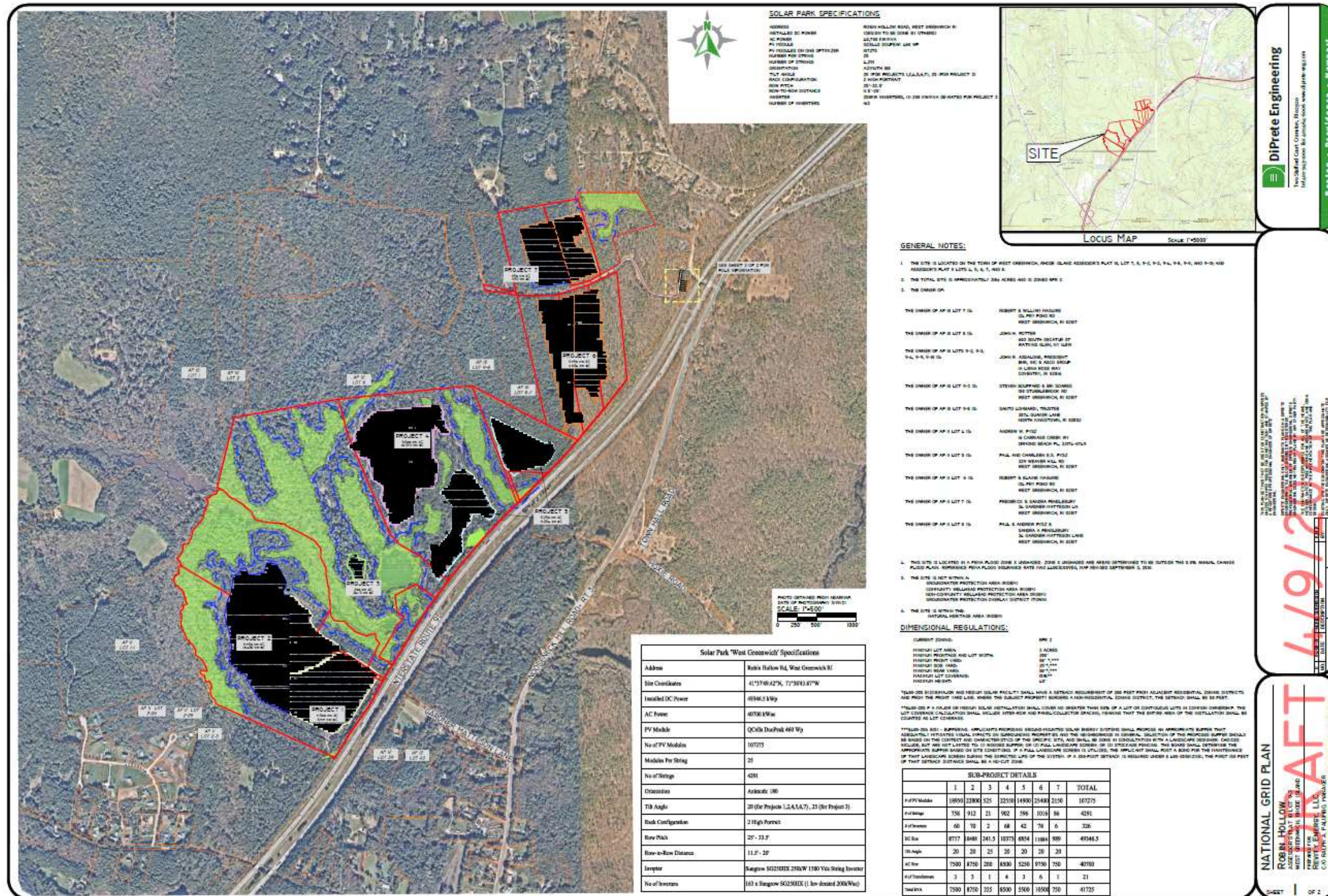
Figure C-9: Project One-Line  
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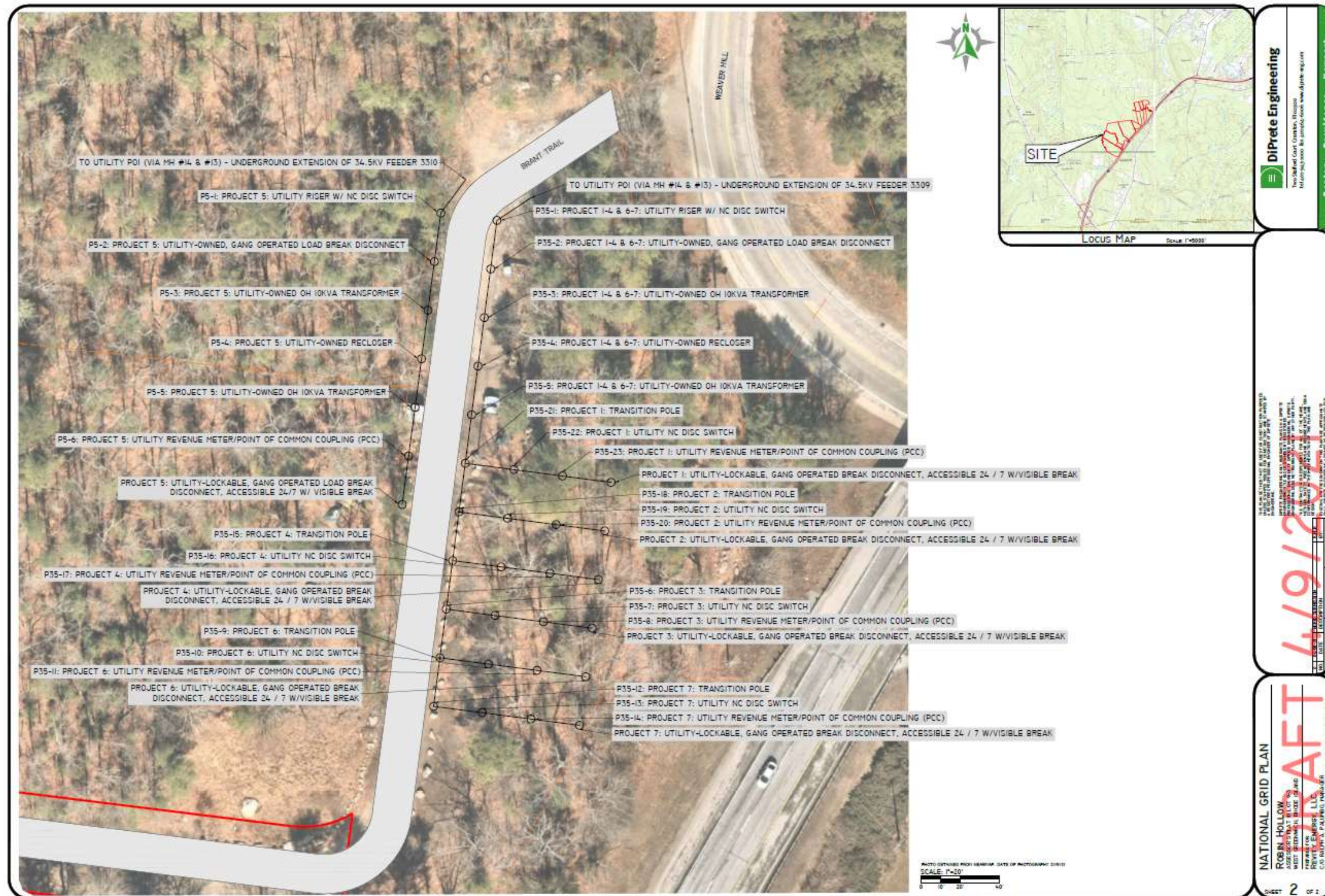
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**Figure C- 10: Project Site Plan**

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**Figure C- 11: Project Site Plan**

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	<b>Energy Development Partners 9,200 kW / kVA rating, Inverter Based Photovoltaic 189 Weaver Hill Road, West Greenwich, RI</b>	<b>FINAL</b>


## Revised System Impact Study for Distributed Generation Interconnection to Rhode Island Energy’s 34.5 kV System

**DG WR:** RI-28228074  
**DG Case#:** 00197003  
**Applicant:** Energy Development Partners  
**Address:** 189 Weaver Hill Road  
**City:** West Greenwich, RI  
**DG kW/kVA:** 9,200 kW / kVA  
**DG Type:** Inverter Based Photovoltaic  
**Feeder:** 3310, Kent County Substation

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## Definitions

The following is a list of acronyms/synonyms used in this Interconnection Study:

BESS – Battery Energy Storage System

Company – Rhode Island Energy

Customer – The interconnecting customer of this project

DG – Distributed Generation

DER – Distributed Energy Resources

DTT – Direct Transfer Trip

EPS – Electrical Power System

ESB – Rhode Island Energy’s Electrical Service Bulletin

Facility – The distributed generating facility for this project, including all related appurtenances and equipment.

IA – Interconnection Application

Interconnecting Circuit – Circuit to which the Facility will connect.

ISA – Interconnection Service Agreement

ISO-NE – Independent System Operator of New England

MH - Manhole

NPCC – Northeast Power Coordinating Council

PCC – Point of Common Coupling (point of demarcation between the Customer and Company facilities)

PF – Power Factor

$P_{it}$  – Long term flicker emission limit

Project – The interconnection of the Facility to the Company electrical power system.


$P_{st}$  – Short Term flicker emission limit

P.U – Per Unit

PV - Photovoltaic

RTU – Remote Terminal Unit

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## Executive Summary

The Company has completed the Revised Impact Study, for the interconnection of Energy Development Partners, (“Customer”) a 9,200 kW / kVA Inverter based photovoltaic, (“the Facility”), to its 34.5 kV distribution system, (“the Project”), and presents the conclusions of the study herein.


The interconnection requirements specified are exclusive to this project and are based upon the most recent information submitted by the Customer, which is attached for reference in Appendix C. Any further design changes made by the Customer post IA without the Company’s knowledge, review, and/or approval will render the findings of this report null and void.

## System Modifications

In general, the Project was found to be feasible with certain modifications to the existing Company System and operating conditions, which are described in detail in the body of this Study. Significant modifications include:

1. Distribution line work (Section 2.2, Appendix B):
  - Install ~16,100 feet of 3-1/c 1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
    - Subject to cost sharing with previous projects. If cable work is not performed under previous projects, then the Customer will be responsible for the full cost.
    - Prior analysis has shown that this project requires the installation of 3-1/c 500 kcmil Cu EPR 35 kV cable in this section. The costs provided in this study are for the installation of 3-1/c 500 kcmil Cu EPR 35 kV cable. Another Customer has paid for the installation of 3-1/c 1000 kcmil Cu EPR 35 kV cable.
  - Install ~700 feet of 3-1/c 500 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road.
  - Install ~4100 feet of 3-1/c 500 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road to the 3-way MH at EDP 10 MW POI located at 189 Weaver Hill Road.
  - Install ~200 feet of 3-1/c 500 kcmil CU EPR 35 kV cable from the 3-way MH at EDP 10 MW POI located at 189 Weaver Hill Road to proposed riser pole on Customer property.
  - Install ~1,400 feet of overhead 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
    - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.

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2. Distribution Civil Work (Section 2.2, Appendix B):

- Install MH and duct system (~14,300 feet) from proposed riser on Hopkins Hill Road to 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road.
    - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
    - Corresponding MH and duct system is being designed and constructed by a third party. If this MH and duct system does not get completed, significant schedule delays are anticipated.
  - Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road.
    - Corresponding MH and duct system is being designed and constructed by a third party. If this MH and duct system does not get completed, significant schedule delays are anticipated.
  - Install MH and duct system (~3700 feet) from first 3-way MH on Weaver Hill Road to 3-way MH at EDP 10 MW POI located at 189 Weaver Hill Road (to be self-built by Customer).
  - Install MH and duct system (~100 feet) from 3-way MH at EDP 10 MW POI located at 189 Weaver Hill Road to proposed riser pole on Customer property (to be self-built by Customer).
3. Add Load encroachment settings to the Kent county T7 Directional Overcurrent Relay (Section 5.4)
4. Install ~410 circuit feet of 3-477 AL Bare Conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) 35 kV disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry, RI. (Section 2.2 & 5.5, Appendix B)
- Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.
5. Install ~250 feet of 3-477 AL Bare conductor, one (1) 35 kV load break switch, one (1) 35 kV recloser, two (2) single-phase transformers and one (1) primary meter at the PCC. (Appendix B)

**Cost Estimate**

Refer to the Cost Estimate table in Section 9.0 for a listing of major modifications and associated costs. The total estimated planning grade cost of the work associated with the interconnection of the Facility, is \$24,545,166 +/-25% and includes Company EPS modifications, Customer interconnection, and taxes. An estimated construction schedule will be provided in the final Interconnection Service Agreement.

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### Special Operating Requirements

The Customer is required to comply with the following special operating requirements in order to interconnect to the Company EPS:

1. The reactive contribution of the PV at the PCC operates at 99.5% PF exporting VARs into EPS. (Section 3.4)

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## 1.0 Introduction

The Customer has requested interconnection of a Facility to the Company's existing infrastructure.

The analysis utilized Customer provided documentation to examine the effects on the Company system when the new Facility is connected. The results identify required modifications to the Customer one line diagram(s) and Company infrastructure in order to accommodate the interconnection. As such, the interconnection of the Facility has been evaluated under specific conditions. Should the Customer make any changes to the design, other than those identified in this study, it may require additional time for review, and possibly additional cost.

In accordance with the R.I.P.U.C. 2180 tariff and the Company's ESB series, the Company has completed an Impact Study to determine the scope of the required modifications to its EPS and/or the Facility for providing the requested interconnection service.

Analysis will be performed in accordance with applicable reliability standards and study practices, and in compliance with the applicable codes, standards, and guidelines listed in the Company's *Electric System Bulletin No. 756 Appendix D: Distributed Generation Connected to Rhode Island Energy Distribution Facilities Per The Rhode Island Standards for Interconnecting Distributed Generation ("ESB756D")* to determine the incremental impact and any potential adverse impacts associated with the interconnection of the Facility to the EPS.


## 2.0 Project Description

### 2.1 Customer Facility

The Customer proposes to install the following:

- Two (2) Customer owned SMA 4600-UP-US, three phase inverters for an assumed total of 9,200 kW / kVA of inverter-based PV.
- Two (2) Customer owned 4,600 kVA, 34.5 kV wye-ground, 600 V delta secondary padmounted interface transformer with an impedance of Z =5.75% along with X/R ratio of 11.
- One (1) Customer owned padmounted switchgear 35kV, 600A, 200 kV BIL G&W Viper recloser with SEL-651R relay assembly with 8-hour battery backup.
- One (1) Customer owned GOAB switch, S&C Model #147513, 200 kV BIL, 40kA with a Visible, lockable blades and utility accessible 24/7.

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A copy of the Customer one lines are provided in Appendix C, illustrating the Customer’s proposed design and proposed interconnection to the area EPS. The Customer documents are not binding and shall require modifications and/or clarification as identified herein.

The following parameters were assessed as part of the Project evaluation:

1. The voltage and frequency trip settings as shown on the one line (dated 09/28/2021).


Any advanced inverter functionality other than that specifically called out on the Customer documentation and/or outlined herein shall be subject to additional study before being enabled.

## 2.2 Company Area EPS

The area EPS was evaluated, and it was determined that the most viable interconnecting circuit is 3310, a 34.5 kV unregulated, three-phase, 3 wire, wye, ungrounded, radial, sub-transmission circuit that originates out of the Company’s Kent County Substation, in West Greenwich, RI (the “Interconnecting Circuit”). This circuit is located overhead on Division Street, approximately 3.9 miles from the proposed Facility. This Line Extension will include the following work:

- Distribution Line Work (Section 2.2, Appendix B):
  - Install ~16,100 feet of 3-1/c 1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road
    - Subject to cost sharing with previous projects. If cable work is not performed under previous projects, then the Customer will be responsible for the full cost.
    - Prior analysis has shown that this project requires the installation of 3-1/c 500 kcmil Cu EPR 35 kV cable in this section. The costs provided in this study are for the installation of 3-1/c 500 kcmil Cu EPR 35 kV cable. Another Customer has paid for the installation of 3-1/c 1000 kcmil Cu EPR 35 kV cable.
  - Install ~700 feet of 3-1/c 500 kcmil CU EPR 35 kV cable from 3-way MH at the intersection of Weaver Hill Road to the first 3-way MH on Weaver Hill Road.
  - Install ~4100 feet of 3-1/c 500 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road to the 3-way MH at EDP 10 MW POI located at 189 Weaver Hill Road.


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- Install ~200 feet of 3-1/c 500 kcmil CU EPR 35 kV cable from the 3-way MH at EDP 10 MW POI located at 189 Weaver Hill Road to proposed riser pole on Customer property.
- Install ~1,400 feet of overhead 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
  - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.
- Install ~410 feet of 3-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry.
  - Subject to cost sharing with previous projects. If work is not performed under previous projects, then the Customer will be responsible for the full cost.
- Distribution Civil Work (Section 2.2, Appendix B):
  - Install MH and duct system (~14,300 feet) from proposed riser on Hopkins Hill Road to 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road
    - Subject to cost sharing with previous projects. If civil work is not performed under previous projects, then the Customer will be responsible for the full cost.
    - Corresponding MH and duct system is being designed and constructed by a third party. If this MH and duct system does not get completed, significant schedule delays are expected.
  - Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road
    - Corresponding MH and duct system is being designed and constructed by a third party. If this MH and duct system does not get completed, significant schedule delays are expected.
  - Install MH and duct system (~3,700 feet) from first 3-way MH on Weaver Hill Road to 3-way MH at EDP 10 MW POI located at 189 Weaver Hill Road (to be self-built by Customer).
  - Install MH and duct system (~100 feet) from 3-way MH at EDP 10 MW POI located at 189 Weaver Hill Road to proposed riser pole on Customer property (to be self-built by Customer).

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An underground line extension originating from the overhead line on Hopkins Hill Rd will be required to reach the proposed Facilities. There is one river that will need to be crossed with overhead conductors alongside the bridge. The Big River Bridge was not constructed to allow for installation of concrete encased ducts.

The Customer shall perform civil work from the first 3-way Manhole on Weaver Hill Road to the proposed riser pole on Customer property. Civil work scope performed by the Customer will require Company review and approval of the proposed plans, as well as Company review and approval of the ductbank prior to covering.

The ability to generate is contingent on this Facility being served by the Interconnecting Circuit during normal operating conditions. Therefore, if the Interconnecting Circuit is out of service, or if abnormal operating conditions of the area EPS are in effect, the Company reserves the right to direct the Customer to disengage the Facility.

The Interconnecting Circuit has the following characteristics:

- Refer to Section 3.0 for circuit loading characteristics.
- The existing and in-process generation at the substation and on the interconnecting circuit is summarized in Table 1. Values shown are based on full nameplate DG output:

Feeder	Generation installed and operating at time of study (kW)	Generation in process at time of study (kW)	Generation proposed for this Project (kW)	TOTAL (kW)
3309	165	0	0	165
3310	434	24,248	9,200	33,882
3311	30,284	23,795	0	54,079
3312	2,735	4,049	0	6,784
<b>TOTAL</b>	<b>33,618</b>	<b>52,092</b>	<b>9,200</b>	<b>94,910</b>

**Table 1: Generation at the Substation and Interconnecting Circuit**


- There is one (1) existing recloser on the circuit, none of which are in between the substation and the facility, summarized in Table 2. Refer to Section 5 for further discussion on any required modifications.

Location	Status	Mid-line recloser, or existing DG project PCC recloser	In between Facility and Substation
Pole #18-1, Hopkins Hill Road, West Greenwich	In Service	Mid-line	No

**Table 2: Recloser Locations**

- There are no existing capacitor banks installed on this circuit. Refer to Section 3 for further discussion on any required modifications.

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- There are no existing regulators installed on this circuit. Refer to Section 3 for further discussion on any required modifications.

### 2.3 Interconnection

Refer to the interconnection diagram in Appendix B for approximate PCC location.


Should the Customer elect to move forward with the Project, the Company's Design Personnel will specify the exact location of the Company's facilities and installation details. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements.

The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.

For this Project, the PCC is defined as the point where the Customer owned conductors terminate to the Company revenue meter, which is located at Pole #10-6, 189 Weaver Hill Road, West Greenwich, RI. The Customer must install their facilities up to the Company revenue meter. The Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Customer conductors to the Company meter.

If a Rhode Island Energy right of way (R.O.W) is involved, then the Customer shall provide detailed drawings of any planned construction within any Rhode Island Energy R.O.W., for the Company's review and subsequent approval, showing elevation grades of all phases of construction within the R. O. W. before any construction may begin. Plans and drawings must be submitted that meet all the Company's requirements before the interconnection process can move forward. These plans shall be submitted to Rhode Island Energy's R.O.W./Real-Estate group and the Transmission R.O.W. Engineering and construction group for review and comment before any construction can be allowed to move forward. There may be additional costs and subsequent delays involved with the review, and, or oversight of any construction in, or adjacent to, the Company's R.O.W., and if any Company owned facilities need modification as a result of the Customer's proposed construction. These costs will be in addition to, and outside of the scope of, this SIS. Failure of the Customer to reimburse the Company for these costs may delay or negate the interconnection process.

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### 3.0 Power Flow Analysis

The power flow analysis was substantially performed using electrical system modeling software. A model of the Interconnecting Circuit, as described in Section 2.2, was developed based on data extracted from the Company’s Geographical Information System (“GIS”). A field review of the feeder was performed on 09/25/2019.

The analysis considered cases at peak load (16,284 kVA @ 100% PF) and net minimum load (5,017 kVA @ 99.52% Lagging PF) at time of maximum expected generation (9:00AM – 6:00PM) on the circuit.

Circuit peak and minimum load values have been taken from the Company’s historical load data that has been compiled over 12 months, from 1/1/2019 to 1/1/2020.

#### 3.1 Reverse Power Flow at Substation

The possibility of the Facility causing reverse power flow through the Company’s substation transformer was reviewed.

Analysis shows that the maximum potential generation exceeds the observed minimum load on the Kent County 34.5 kV bus. However, the substation is currently equipped with bi-directional metering which was previously installed for reasons unrelated to DG work. No additional work is required on the substation bulk power metering.

#### 3.2 Interconnecting Circuit Load Flow Analysis

The area EPS was examined with and without the Facility operating at full output. The analysis demonstrated that the addition of the Facility will not create thermal loading problems on the Interconnecting Circuit, or the associated substation.


Specifically, no conductor, transformer, or voltage regulator overloads occur as a result of this interconnection. All Company owned mainline conductor and distribution facilities are thermally large enough to accommodate the proposed generation.

#### 3.3 Interconnecting Circuit Voltage Analysis

The Company is obligated to hold distribution voltages at customer service points to defined limits in ANSI Standard C84.1- 2006. Range A of the ANSI standard requires the Company to hold voltage within +/- 5% of nominal at the PCC.

Under emergency conditions, voltage on the system could reach 90% of nominal prior to corrective action being taken. The Customer is advised to consider this in planning their system requirements and equipment settings, however, no warranties or guarantees are implied.

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Under normal operating conditions it is expected that the Company will be able to meet its obligations for ANSI C84.1 with the system generation at full power. The Customer must maintain voltage at the PCC at +/- 5% of nominal under normal conditions. Also, the PV interconnection shall not contribute to greater than a 3.0% change in steady state voltage on the EPS under any conditions.

The analysis of this facility determined that when the Facility generation is at full output, the voltage range at the PCC was within acceptable limits.

Customer provided manufacturer’s test reports have been reviewed for 1.4PU pickup values with 1ms or less total clearing time. The proposed design has been found to meet the necessary requirements.

### 3.4 Flicker Analysis

The IEEE 1547 standard and IEEE 1453 flicker assessments were used to estimate whether or not this site would be likely to cause unacceptable voltage flicker on the interconnecting feeder. This method evaluates for both short term and long-term voltage flicker against IEEE1547-2018 Table 25 - DER Flicker Emission Limits.

Analysis shows that  $P_{st}$  and  $P_{it}$  are within acceptable limits and no mitigation for voltage flicker is recommended.

The IEEE Recommended Practice for Measurement and Limits of Voltage Fluctuations and Associated Light Flicker on AC Power Systems, IEEE Std. 1453-2015 was used as a basis for flicker and voltage fluctuation analysis.

This Facility was modeled using the Long-Term Dynamics module of CYME<sup>1</sup>. A long-term dynamic profile for the Facility was used that simulates the voltage fluctuation of the site over a 6-hour period. Other significant DG existing or in process ahead of this Project were modeled at full output and modeled with the appropriate voltage fluctuation curve to simulate reasonable voltage fluctuations.


The generation profile used is based on live metered data from a PV site that is similar in size to this Project. The data is intended to simulate realistic power output from the site, resulting in a varied output from the PV.

Given the nature of flicker, it is impossible to predict voltage flicker under all conceivable environmental conditions. Therefore, the flicker results are used as a metric to evaluate whether or not there is a readily apparent concern related to voltage flicker.

The Company will not be held liable for any power quality issues that may develop with the Customer or any other customers as result of the interconnection of this generation.

<sup>1</sup> CYME Power Engineering Software, Version 8.1, Revision 01, Build 115, Copyright © 1986-2017, Cooper Industries, Ltd.

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Analysis shows that the predicted flicker and voltage fluctuations are expected to be acceptable, provided that the following conditions are met:

- The system modifications identified elsewhere in this study are implemented.
- The reactive contribution of the PV at the PCC operates at 99.5% PF exporting VARs into EPS.

## 4.0 Risk of Islanding

### 4.1 Islanding Analysis (ESB 756D Section 7.6.12)

The project was screened for the potential of islanding risk. Per IEEE 1547 *section 4.4.1 Unintentional Islanding*, for an unintentional island in which the DG energizes a portion of the Area EPS through the PCC, the DG interconnection system shall detect the island and cease to energize the Area EPS within two seconds of the formation of an island.


Based on known in-service and in-progress projects at the time of study, the generation shown in Table 3 was considered on this feeder. Three-phase projects greater than 100kW are listed individually. All other projects below 25kW are listed as a single line item.

Project Size (kW)	Certified / Non-Certified
442	All Projects <100kW CERTIFIED
0	All Projects <100kW Non-CERTIFIED
740	CERTIFIED
3,500	CERTIFIED
9,200	CERTIFIED
10,000	CERTIFIED
10,000	CERTIFIED

**Table 3: Generation Considered for Risk of Islanding Analysis**

Analysis indicates that the overall ability of this Facility to island more than 2.0 seconds is considered a likely event. As a result, a PCC recloser with reclose blocking will be required. Additionally, live-line reclose blocking must be implemented at the following line reclosers summarized in Table 4.

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Location	Status (Existing or New)
Pole #25-3, Hopkins Hill Road, Coventry, RI	New

**Table 4: Recloser Locations**

## 5.0 Short Circuit and Protection Analysis Company Facilities

The Company performed a review of the Project relative to the short circuit and protective device impacts on the Interconnecting Circuit. This review identifies EPS enhancements that are necessary to complete the Project and its ability to meet Rhode Island R.I.P.U.C 2180 interconnection tariff and the requirements of the Company’s ESB 756D. The Interconnecting Circuit, including all relevant DG was modeled in a software package called ASPEN OneLiner<sup>2</sup>. The model was developed using Company records for feeder characteristics, and Customer provided documentation.

### 5.1 Fault Detection at Substation (ESB 756D Section 6.2.2)


Addition of generation sources to sub-transmission feeders can result in the back-feeding of the substation transformers, effectively turning a station designed for load into a generation step-up transformer. Due to the Kent County T1, T2 and T7 supply transformer configurations, there is a path for zero sequence ground fault current to single line to ground faults on the transmission line. Therefore, the Facility does not pose a significant risk of causing temporary overvoltage to develop on the primary side of the substation transformer. Substation modifications related to  $3V_0$  are not required.

### 5.2 PCC Impedance

The Interconnecting Circuit impedance is shown below in per unit at the PCC for the proposed Facility, using a 100 MVA base. The PCC location is shown in Appendix B. These values take into account existing system conditions, but not the impact of the Customer’s new Facility.

<sup>2</sup> ASPEN OneLiner V12.5, Build: 19177 (2015.01.28), Copyright © 1987-2013 ASPEN.

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**Pre-Project**

**System Impedance at PCC**

$Z1 = 0.05 + j0.26 \text{ p.u.}$

$Z0 = 0.65 + j1.38 \text{ p.u.}$

**5.3 Fault Current Contributions**

Table 5 summarizes the Facility’s effect on fault current levels at the PCC. These fault currents are within existing equipment ratings. Mitigation strategies are required to accommodate the proposed Facility, as described in Sections 5.4 and 5.5.

The Customer is responsible for ensuring that their own equipment is rated to withstand the available fault current according to the NEC and Rhode Island Energy ESB 750, which specifies that the fault current should be no more than 80% of the device interrupting rating.

PRE PROJECT	SUB BUS (Amps @ 34.5 kV)	PCC (Amps @ 34.5 kV)
3-phase (LLL)	21581	3999
Phase-Ground (LG)	24066	2346

POST PROJECT	SUB BUS (Amps @ 34.5 kV)	PCC (Amps @ 34.5 kV)	DELTA $I_{\text{fault}}$ @ SUB BUS	DELTA $I_{\text{fault}}$ @PCC
3-phase (LLL)	21779	4199	1%	5%
Phase-Ground (LG)	24322	2478	1%	6%

**Table 5: Fault Duty**

**5.4 Substation Protective Device Modifications**


The protection coordination review of the area EPS revealed that the following modifications to the existing substation protective devices will be required. Associated costs are identified in Section 9.0 of this Impact Study:

- Add load encroachment settings to the Kent County Transformer #7, 34.5 kV directional overcurrent relay (67)

**5.5 Area EPS Protective Device Coordination**

The Project will require a Company owned recloser at the PCC.

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The existing device settings and associated time-current curves were evaluated for protective devices on the Interconnecting Circuit.

The protection coordination review of the area EPS revealed that the following modifications to the existing EPS protective devices will be required. Associated costs are identified in Section 9.0 of this Impact Study. Refer to Appendix B for system modification drawings:

- Install a recloser at the tap for the proposed line extension to the facility at Pole #25-3, Hopkins Hill Rd, Coventry, RI. (Appendix B-3)

## 6.0 Customer Equipment Requirements

The following Section discusses requirements for Customer owned equipment, which are further outlined in detail in ESB 756D. References to ESB 756D are provided in each sub-section below. It is the Customer’s responsibility to comply with all requirements of ESB 756D. Please note that applicable sections of ESB 756D are referenced for information purposes and may not comprise the entirety of applicable sections.

In general, the Customer Facility shall have the capability to withstand voltage and current surges in accordance with the environments defined in IEEE Standard C62.41.2-2002 or IEEE Standard C37.90.1-2002 as applicable.

### 6.1 Revenue Metering Requirements (ESB 756D Section 7.2.2 and 7.2.3)

For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the Rhode Island Energy revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or, in locations with suitable wireless service, a wireless meter.


Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of Rhode Island Energy. If approved, a wireless-enabled meter will be installed, at the customer’s expense. If and when Rhode Island Energy’s retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to Rhode Island Energy’s revenue meter is provided.

Refer to *Appendix A Figures A-1 and A-2 - Revenue Meter Phone Line Installation Guide*).

The Customer is advised to contact Generation and Load Administration ([NewGenCoord@iso-ne.com](mailto:NewGenCoord@iso-ne.com)) at ISO New England regarding all metering, communications circuits, remote access gateway (rig), financial assurance, paperwork, database updates, etc. that may be required for this Facility.

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## 6.2 Interconnecting Transformer (ESB 756D Section 7.3)

The documentation provided states the interconnecting transformer are two (2) Customer owned 4,600 kVA, 34.5 kV delta, 690 V delta secondary padmounted interface transformer with an impedance of  $Z = 5.75\%$  along with X/R ratio of 11.0.

The proposed transformer satisfies the requirements of the ESB.

## 6.3 Effective Grounding (ESB 756D Section 7.3.2.1)

The Facility is proposing to connect to a non-effectively grounded 34.5 kV circuit, and therefore does not require a means of effective grounding.

As a result, the customers proposed configuration satisfies the requirements of the ESB.

## 6.4 Manual Generator Disconnecting Means (ESB 756D Section 7.4)

The Customer provided documents satisfy the requirement of this Section of ESB 756D.

## 6.5 Primary Protection (ESB 756D Section 7.6 & 7.8)


The following section relates to the primary means of protection by the Customer. This includes the inverter relay functionality.

### 6.5.1 Primary Protective Relaying (ESB 756D Section 7.6.1, 7.6.2, 7.6.11, & 7.8)

The Customer provided documents indicate that the generator/inverter will be provided with an internal relay that will trip the generator interrupting device. Proposed settings for the 27, 59, 81O/U functions have been provided for review.

### 6.5.2 Primary Frequency Protection (ESB 756D Section 7.6.8, 7.6.11.1, and 7.8)

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Frequency elements trip settings for primary relaying are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.8, 7.6.11, and 7.8.

The R.I.P.U.C No. 2180, requires that, the DER cease to energize the area EPS within 2 seconds, refer to IEEE1547 and UL1741.

The Customer provided documents show acceptable inverter relay settings in accordance with the aforementioned requirements.

### 6.5.3 Primary Voltage Relay Elements (ESB 756D Section 7.6.7, 7.6.11.1, and 7.8)

The Customer provided documents show undervoltage (27) and overvoltage (59) elements that satisfy the requirements of this Section of ESB 756D.

Voltage relay elements trip settings are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.11 and 7.8. This requirement is met.

## 6.6 Secondary Protection

The following section relates to the secondary means of protection, also referred to as redundant relaying.

### 6.6.1 Generator Interrupting Device (ESB 756D Section 7.5)


A Company owned recloser is required at the PCC, which will contain utility facing protective elements (27, 59, 81O/U). A Generator Interrupting Device shall be installed for site protection, with overcurrent functionality. The Customer design shows a circuit breaker for site protection.

The Customer provided documents indicate an interrupting device on the high side (Customer 34.5 kV side) of the interconnecting transformer, which satisfies the requirements of ESB 756D.

### 6.6.2 Secondary Overcurrent Relay Elements (ESB 756D Section 7.6.10)

The Customer provided documents show a phase overcurrent (51) relay element and associated settings.

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Customer proposed settings are provided on the Customer drawings, as attached in Appendix C.

51 – Phase

Customer Proposed: 300A primary amps pickup, 2 second time delay, U4 curve.

### 6.6.3 Secondary Protective Relaying (ESB 756D Section 7.6.3)

The Customer provided documents indicate that a redundant utility grade relay is provided that will trip the generator interrupting device. Relays make/model is included on the Customer single line.

### 6.6.4 Secondary Frequency Protection (ESB 756D Section 7.6.8, 7.6.11.1, and 7.8)

Frequency elements trip settings for primary relaying are required to comply with ISO-NE ride-through requirements as described in ESB756D Section 7.6.8, 7.6.11, and 7.8.

The R.I.P.U.C. No. 2180, requires that, the DER cease to energize the area EPS within 2 seconds, refer to IEEE1547 and UL1741.

The Customer provided documents show acceptable relay settings in accordance with the aforementioned requirements.

### 6.6.5 Secondary Voltage Relay Elements (ESB 756D Section 7.6.7, 7.6.11.1, and 7.8)


The Customer provided documents show undervoltage (27) and overvoltage (59) elements that satisfy the requirements of this Section of ESB 756D. The Customer provided documents show neutral overvoltage (59N) that are unacceptable.

Voltage relay elements trip settings are required to comply with ISO-NE ride-through requirements as described in ESB756C Section 7.6.11 and 7.8. This requirement is met.

The Customer provided one-line diagram shows acceptable settings for neutral overvoltage 59N protection.

59N – Neutral Overvoltage

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Customer Proposed:  $3V_0 = 12.45$  kV primary pickup (46.7 V), 0.8 second time delay.

#### 6.6.6 Current Transformers (“CT”) (ESB 756D Section 7.6.4.1)

The Customer provided documents show current transformer with ratings listed, which satisfies this Section of ESB 756D.

#### 6.6.7 Voltage Transformers (“VT”) and Connections (ESB 756D

##### Sections 7.6.4.2)

The Customer provided documents show wye-grounded/wye-grounded VT’s and show the VT ratio, which satisfies this Section of ESB 756D.

#### 6.6.8 Protective Relay Hard-Wiring (ESB 756D Section 7.6.5)

The Customer provided documents call for hardwiring of the redundant relaying trip circuits, therefore satisfies the requirements of this section of ESB 756D.

#### 6.6.9 Protective Relay Supply (ESB 756D Section 7.6.5 and 7.6.6)

The Customer provided documents indicate a power supply for the redundant relay that satisfies the requirements of this section of ESB 756D.

The Customer has proposed a DC power supply. The Customer shall demonstrate in the witness test that the relay will trip if the DC voltage goes out of the normal operating range.


It is recommended that the power DC power supply be connected to the utility (source) side of the interrupting device in order to ensure power availability to close the interrupting device after an extended outage. This is a recommendation, for consideration by the Customer. It is not a requirement by the Company.

#### 6.6.10 Utility Restoration Detection (ESB 756A Section 4.5.2.7 & 756C

##### Section 7.8.3)

The DER shall not connect or return to service following a trip (including any ground fault current sources) until detecting a minimum 5 minutes of healthy utility voltage and frequency. “Healthy Utility Voltage and Frequency” is defined by ESB 756D Table 7.8.3-1. The five-minute time

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interval is required to restart if the utility voltage or frequency falls outside of this window.

All the devices associated with five-minute timing must meet IEEE C37.90 standard and be capable of withstanding voltage and current surges.

The Customer provided settings and timing device information is acceptable as shown.

### 6.6.11 Relay Failure Protection (ESB 756D Section 7.6.3)

For all required tripping functions, either redundant relaying or relay failure protection, where a hardware or power supply failure for the redundant relay automatically trips and blocks close of the associated breaker, is required.

The Customer's one line diagram shows devices and settings to satisfy this requirement.

### 6.7 Synchronizing Devices (ESB 756D Section 7.6.9 and 7.6.11.2)

Project is inverter based; therefore, synchronizing devices are not required.

### 6.8 Customer Cabling


The Company is not responsible for the protection of the Customer cable and primary protection for the Customer cable must be provided at the change of ownership.

## 7.0 Telemetry and Telecommunications

The Customer is advised to communicate with ISO-New England for any telemetry requirement as ISO-NE may require real-time monitoring between ISO-NE EMS and the DG site. The Customer shall refer to the ISO-NE website and ISO-NE customer service help desk for details.

This project is considered an independent power producer (IPP), an RTU for telecommunication will not be required by the Company.

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## 8.0 Inspection, Compliance Verification, Customer Testing, and Energization Requirements


### 8.1 Inspections and Compliance Verification

A municipal electrical inspection approval certificate from the local authority having jurisdiction is required of the Customer's Facilities (i.e. primary service entrance conduit, primary switchgear, wiring, and generation equipment). The Company must receive the Customer's Draft set of Project documentation and test plan for the functional verification tests at least four (4) weeks before the Company's field audit. Documentation from the customer must include, but not be limited to:

- Equipment cut sheets and shop drawings for all major equipment.
- Inverter manufacturer cut sheet including method of island detection and UL certification.
- Inverter protective relay settings
- Settings for any other Customer relay related to the Project.
- The most recent version of the single line diagram and site plan, reflecting all modifications required in this Impact Study.
- Single line diagram of the Facility
- Site diagram of the Facility
- A 3-line diagram and DC schematic illustrating the protection and control scheme.
- The proposed testing procedure
- The proposed energization plan.
- All provided Customer drawings shall be stamped and signed by an Electrical Professional Engineer that is licenses in the state where the Facility is located.

The DG Customer shall adhere to all other Company related verification and compliance requirements as set forth in the applicable ESB 750 series documents. These and documented acceptance testing requirements of these facilities will be specified during the Draft design review of the Project prior to the Company's field audit and energization.

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## 8.2 Testing and Commissioning

The Customer shall submit initial relay settings to the Company no later than twenty-one (21) calendar days following the Company’s acceptance of the Facility’s service connection’s Draft MA state licensed professional engineer sealed design. If changes/updates are necessary, the Company will notify the Customer three (3) business days after the initial relay settings were received, and the Customer shall submit the revised settings within seven (7) calendar days from such notification. Within three (3) business days of receipt of the proposed Draft relay settings, the Company shall provide comments on and/or acceptance of the settings. If the process must continue beyond the above identified time frames due to errors in the relay settings, the Company retains the right to extend the Testing and Commissioning process, as needed, to ensure the Draft relay settings are correct.

Assuming no major issues occurring with the relay settings, the Customer shall submit a Testing and Commissioning Plan (TCP) to the Company for review and acceptance, no later than forty-five (45) calendar days following the Company’s acceptance of the Facilities Draft design. The TCP must be drafted, including Company acceptance, no later than six (6) weeks prior to functional testing. The Company requires a minimum of 5 business days for review of any submitted documentation.


## 8.3 Energization and Synchronization

The “Generator Disconnect Switch” at the interconnection point shall remain “open” until successful completion of the Company’s field audit and witness testing.

Prior to the start of construction, the DG Customer shall designate an Energization Coordinator (EC), and prepare and submit an Energization Plan (EP) to the Company for review and comment. The energization schedule shall be submitted to the Company and communicated with the Company’s local Regional Control Center at least two (2) weeks in advance of proposed energization. Further details of the EP and synchronization requirements will be specified during the Draft design review of the Project.

The Customer shall submit as-built design drawings to the Company 90 days following commercial operation of their DG Facility.

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## 9.0 Cost Estimate

The non-binding good faith cost planning grade estimate for the Company's work associated with the interconnection of this Facility to the EPS, as identified in this report, is shown below in Table 6:

Rhode Island Energy System Modification	Conceptual Cost +/-25% Planning Grade Cost Estimate not including Tax Liability				Associated Tax Liability Applied to Capital	Total Customer Costs includes Tax Liability on Capital Portion
	Pre-Tax Total	Capital	O&M	Removal		
<b>RIE - Civil Work</b>					11.08%	<b>Total</b>
Approximate donated property tax. See Note #1.	\$0	\$0	\$0	\$0	\$82,718	\$82,718
RIE Supervision and Design Support for Customer Underground Civil Construction. See Note #2	\$165,000	\$165,000	\$0	\$0	\$18,282	\$183,282
Distribution Civil work, 3310 circuit See Note #3 (Cost Sharing may be applicable)	\$15,904,009	\$15,904,009	\$0	\$0	\$1,762,164	\$17,666,173
<b>SUBTOTAL</b>	<b>\$16,069,009</b>	<b>\$16,069,009</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,863,164</b>	<b>\$17,932,173</b>

<b>RIE - Line Work, Customer Property</b>	Pre-Tax Total	Capital	O&M	Removal	11.08%	Total
Equipment at Point of Common Coupling, 3310 Circuit. See Note #4	\$310,038	\$310,038	\$0	\$0	\$34,352	\$344,390
<b>SUBTOTAL</b>	<b>\$310,038</b>	<b>\$310,038</b>	<b>\$0</b>	<b>\$0</b>	<b>\$34,352</b>	<b>\$344,390</b>

<b>RIE - Line Work, Mainline</b>	Pre-Tax Total	Capital	O&M	Removal	11.08%	Total
Distribution Line work, 3310 Circuit. See Note #5 (Cost Sharing may be applicable)	\$5,621,801	\$5,612,059	\$5,272	\$4,470	\$621,816	\$6,243,617
<b>SUBTOTAL</b>	<b>\$5,621,801</b>	<b>\$5,612,059</b>	<b>\$5,272</b>	<b>\$4,470</b>	<b>\$621,816</b>	<b>\$6,243,617</b>


<b>RIE - Substation Work (Distribution Level)</b>	Pre-Tax Total	Capital	O&M	Removal	9.90%	Total
Add Load Encroachment to the Kent County T7 Directional Overcurrent Relay. (Cost Sharing may be applicable)	\$16,000	\$15,000	\$1,000	\$0	\$1,485	\$17,485
<b>SUBTOTAL</b>	<b>\$16,000</b>	<b>\$15,000</b>	<b>\$1,000</b>	<b>\$0</b>	<b>\$1,485</b>	<b>\$17,485</b>

<b>Witness Testing &amp; EMS</b>	Pre-Tax Total	Capital	O&M	Removal	NA	Total
Witness Testing. See Note #6	\$2,500	NA	\$2,500	NA	NA	\$2,500

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EMS integration. See Note #7	\$5,000	NA	\$5,000	NA	NA	\$5,000
<b>SUBTOTAL</b>	<b>\$7,500</b>	<b>\$0</b>	<b>\$7,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,500</b>

	Pre-Tax Total	Capital	O&M	Removal	Tax	Total
<b>Totals</b>	<b>\$22,024,348</b>	<b>\$22,006,106</b>	<b>\$13,772</b>	<b>\$4,470</b>	<b>\$2,520,818</b>	<b>\$24,545,166</b>

**Notes**

- 1 Approximate donated property tax for the Customer installation of (1) - 3-way manhole, (5) - 2-way manholes, (100 feet) 2-way, 6" PVC - DB concrete encased ductbank, (3700 feet) - 4-way, 6" PVC - DB concrete encased ductbank and associated equipment. Customer is responsible for performing, any and all, temporary and permanent restoration.
- 2 RIE supervision and design support for underground civil construction performed by the Customer. The cost includes preparation of design package (Scope, Construction specifications, Construction standards/drawings, Vendor information, etc....), review and approval of civil design drawings, and review and approval of civil construction by full-time RIE inspector.
- 3 Installation of (4) - 3 way manholes, (21) - 2 way manholes, (300 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,000 feet) 4 way, 6" PVC - DB concrete encased duct bank, (600 feet) 6 way, 6" PVC - DB concrete encased duct bank and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.
- 4 Installation of pole-mounted equipment at the POI-PCC, including approximately 250 feet of 3-477 Al Bare conductor, one (1) 35 kV load break switch, one (1) 35 kV recloser, two (2) single-phase transformers, one (1) primary meter, and associated equipment.
- 5 Extend the Kent County 3310, 34.5 kV circuit underground from proposed Pole #26-2, Hopkins Hill Road, West Greenwich, RI to the proposed DG facility located at 189 Weaver Hill Road, West Greenwich, RI. (approximately 3.9 Miles). Estimate included in table above assumes installation of 3-1/c-500 kcmil CU EPR 35 kV cable, and associated equipment. Costs include one (1) bridge crossing with risers to 477 Al bare conductor, installation of new tap recloser located on Hopkins Hill Road, West Greenwich, RI, and associated equipment.
- 6 Witness Testing including review of witness test documentation and manpower for attending witness test.
- 7 Integration of DG and EPS modifications into Company's Energy Management System (EMS)


**Table 6: Cost Estimates**

The planning grade estimate provided herein is based on information provided by the Interconnecting Customer for the study and is prepared using historical cost data from similar projects. The associated tax effect liability included is the result of an IRS rule, which states that all costs for construction collected by the Company, as well as the value of donated property, are considered taxable income.<sup>3</sup> This estimate is valid for ninety (90) calendar days from the issuance of this report, after which time it becomes void. If the Interconnection Customer elects to proceed with this project after the ninety (90) calendar days, a revised estimate may be required.

This interconnection application may result in costs charged to The Narragansett Electric Company (the Company) by an Affected System Operator (ASO). Please note that in addition to the payment obligation for your share of the cost of any transmission upgrades identified in an ASO Study or identified during the Distribution System Impact Study of your application, when

<sup>3</sup> Actual charges shall include the tax rate in effect at the time the charges are incurred.

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your facility is energized you also will be assessed for the on-going carrying charges for the transmission upgrades (plus cost security before your facility is energized), as specified in your Interconnection Service Agreement. The on-going carrying charges include O&M, property taxes, and other carrying costs associated with transmission upgrades. The transmission upgrades and on-going carrying charges are calculated and charged to the Company by the ASO, in most instances the Company’s transmission provider, New England Power Company (NEP), in accordance with the ASO’s tariff (for NEP, Schedule 21-NEP, Attachment DAF, to the ISO-NE Open Access Transmission Tariff (“DAF Charges”) and data from the FERC Form 1). You will be charged initially on an estimated basis for the transmission upgrade costs, which will be reconciled to actual costs. On-going carrying charges are calculated by multiplying the capital portion of the transmission upgrade costs by the transmission carrying charge rate in effect at the time. For NEP, the on-going carrying charge rate is subject to adjustment annually as estimated transmission upgrade costs are reconciled to actual costs. The current on-going carrying charge rate for NEP is 5.21%.

The estimated duration for the Company to complete construction of the System Modifications will be identified in the final Interconnection Service Agreement.

The project schedule may be impacted by the ability to have planned outages to allow work to take place on the distribution system. Outages will be contingent on the ability to support the load normally supplied by affected circuits. The schedule can also be impacted by unknown factors over which the Company has no control. The interconnection schedule is contingent on the Interconnecting Customer’s successful compliance with the requirements outlined in this report and timely completion of its obligations as defined in *ESB756D, Exhibit 2: Company Requirements for Projects Not Eligible for the Simplified Process*. The schedule for the Company’s work shall be addressed during the development, or after the execution, of the Interconnection Agreement.

## 10.0 Conclusion


The project was found to be feasible. It will be allowed to interconnect with certain system modifications and additions to the local Company EPS. Associated costs are provided in Section 9.0.

The Customer must submit revised documentation as identified herein, to the Company for review and approval before an ISA can move forward.

A milestone schedule shall be included in the final ISA and shall be reflective of the tasks identified in ESB756D, Exhibit 2. Upon execution of the final ISA, and prior to advancing the project, the Customer shall provide a detailed project schedule, inclusive of the Exhibit 2 tasks referenced above. After completion of final design and all associated applications, fees, permitting and easement requirements are satisfied, System Modifications for this Project will be placed in queue for construction.

If a Customer fails to meet the R.I.P.U.C. No. 2180, Section 3.4 Time Frames and does not provide the necessary information required by the Company within the longer of 15 days or half

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the time allotted to the Company to perform a given step, or as extended by mutual agreement, then the Company may terminate the application and the Customer must re-apply.

***Note: Authorization for parallel operation will not be issued without a fully executed Interconnection Agreement, receipt of the necessary insurance documentation, and successful completion of the Company approved witness testing. Such authorization shall be provided in writing.***

## 11.0 Revision History


<u>Version</u>	<u>Date</u>	<u>Description of Revision</u>
1.0	05/11/2021	Original Underground Study
2.0	01/31/2022	Over-head Restudy
3.0	09/20/2021	Fully Underground Design Restudy

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## Appendix A Revenue Metering Phone Line Requirements

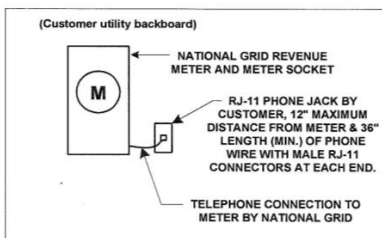
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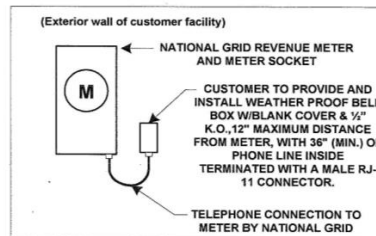
An analog phone line to National Grid's revenue meter shall be provided by the Customer. The analog phone line must be capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc. The phone line can be a phone (extension) off the customers PBX phone system, or it may be a separate dedicated phone line as provided by the Telephone Company. The following is to be used as a guide, please contact the Company if additional information is required. The most common installations are outlined below, [Wall mounted Meter Installation](#), [Outdoor Padmount Transformer Meter Installation](#), and [Outdoor Pole Mounted Meter Installation](#).

**1) WALL MOUNTED METER INSTALLATION**

If the meter is wall mounted indoor or outdoor the customer shall provide a telephone line within 12" of the meter socket and additional equipment as described and shown below in figures 1A & 1B. National Grid will connect the meter to the customer provided phone line.



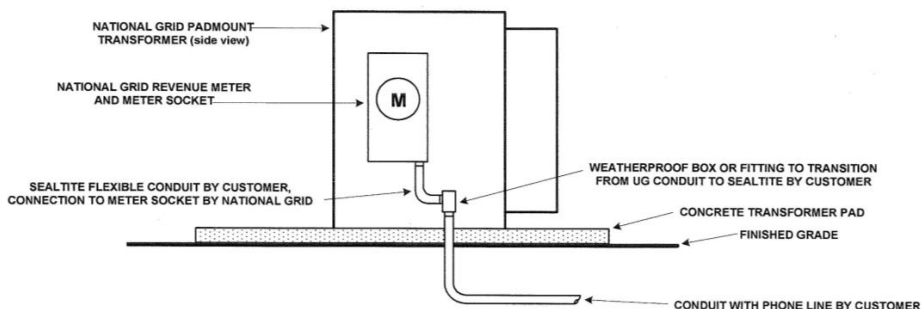
**Figure 1A – Indoor Meter Installation**  
not to scale



**Figure 1B – Outdoor Meter Installation**  
not to scale


**2) OUTDOOR PADMOUNT TRANSFORMER METER INSTALLATION**

If the meter is mounted outside on the secondary compartment of the padmount transformer as shown below the conduit shall stub up and roughly line up with the bottom or side knock out of the meter socket and terminate into a weatherproof box or fitting. A liquid tight flexible conduit whip with end bushing and locknut of sufficient length to reach and terminate at the knockout location of the meter socket with three feet of telephone wire coiled (and terminated with a male RJ-11 connector) at its end shall be connected to the weatherproof box or fitting. National Grid will connect the conduit whip to the meter socket and terminate the telephone wire to the meter (see figure 2 below).



**Figure A- 1: Revenue Meter Phone Line Installation Guide**

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3) OUTDOOR POLE MOUNTED METER INSTALLATION

If the meter is located outdoor on a Company owned utility pole as part of a primary metering installation the Customer will install and connect a phone line from the Telephone Company provided termination interface box, the line shall be terminated with a RJ-11 male connector and be of sufficient length to reach the meter socket and create a drip loop, as well as additional line for final connection to the meter. The customer is responsible for the Telephone Company phone line installation. (see figure 3 below).

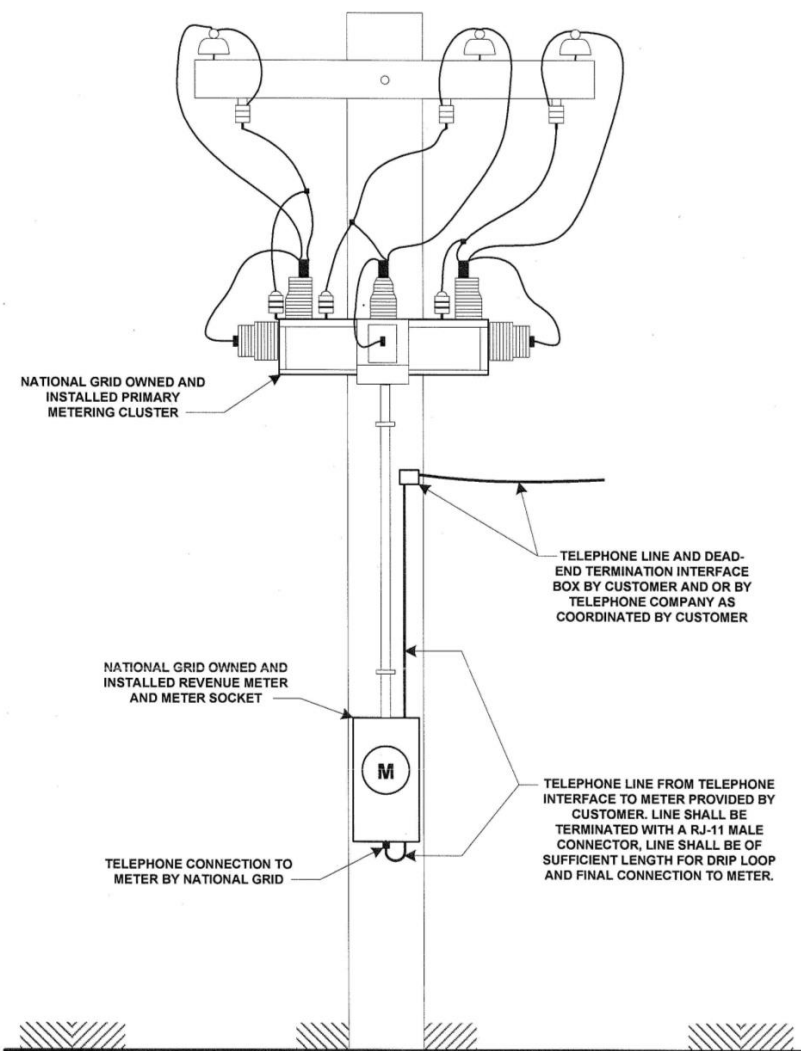


Figure A- 2: Revenue Meter Phone Line Installation Guide

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File: SP. RI-28228074 App File: 03-RI-28228074_Case-197003_West-Greenwich_FINAL_9.20.2022	Originating Department: Distribution Planning & Asset Management – NE	Sponsor: Customer Energy Integration-NE

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## Appendix B System Modification Diagrams

*Note: Company EPS modification diagrams provided in this Appendix are intended as a diagrammatic reference of work required to be completed before this Facility may interconnect. The Company will be performing a detailed design following this Impact Study, should the Customer elect to move forward with the interconnection process. At that time, the Company will determine exact locations and requirements for system modification designs. Refer to the body of this Impact Study for further discussion regarding specific EPS modifications that are required for the interconnection of this Facility.*

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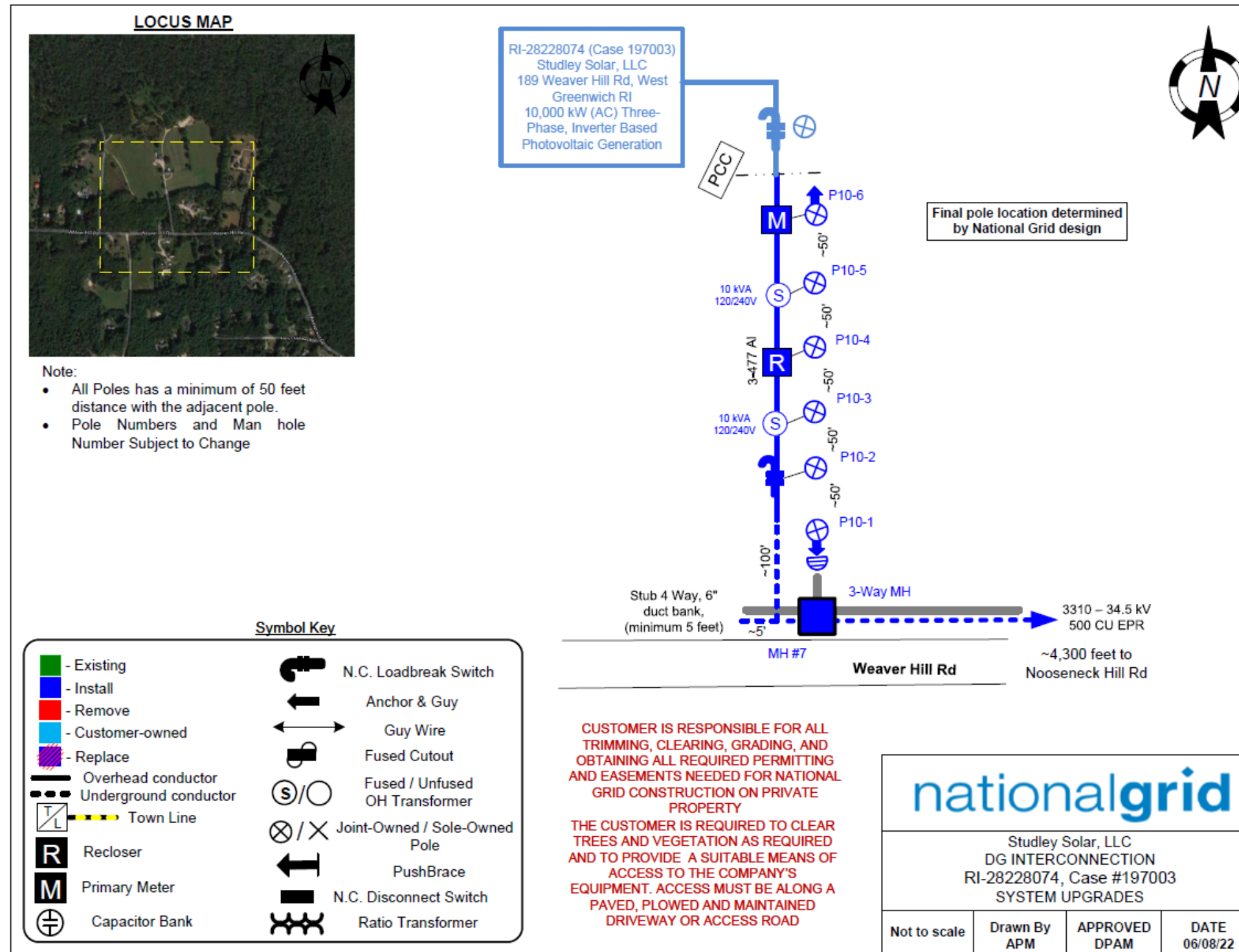


Figure B- 1: PCC Configuration

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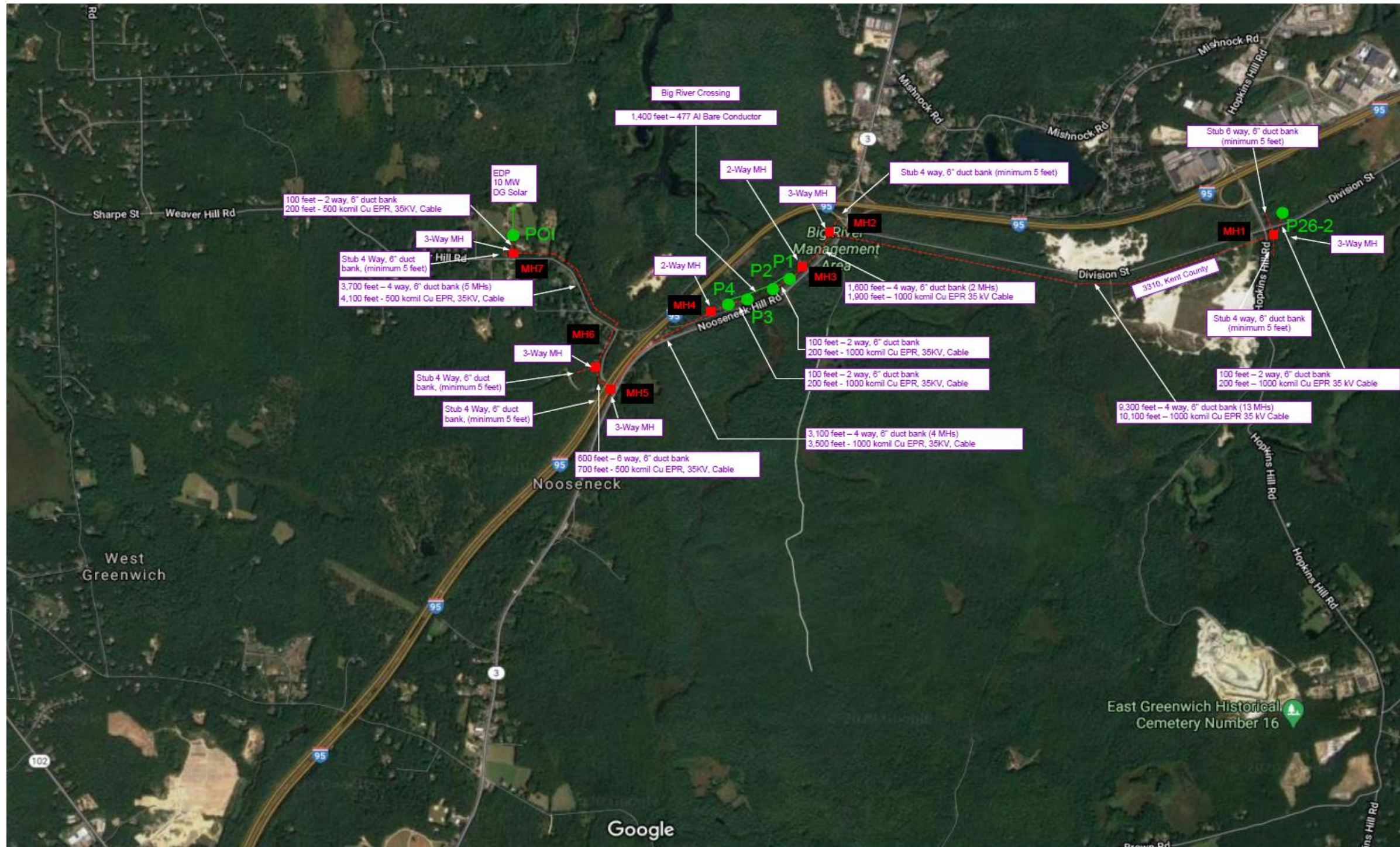
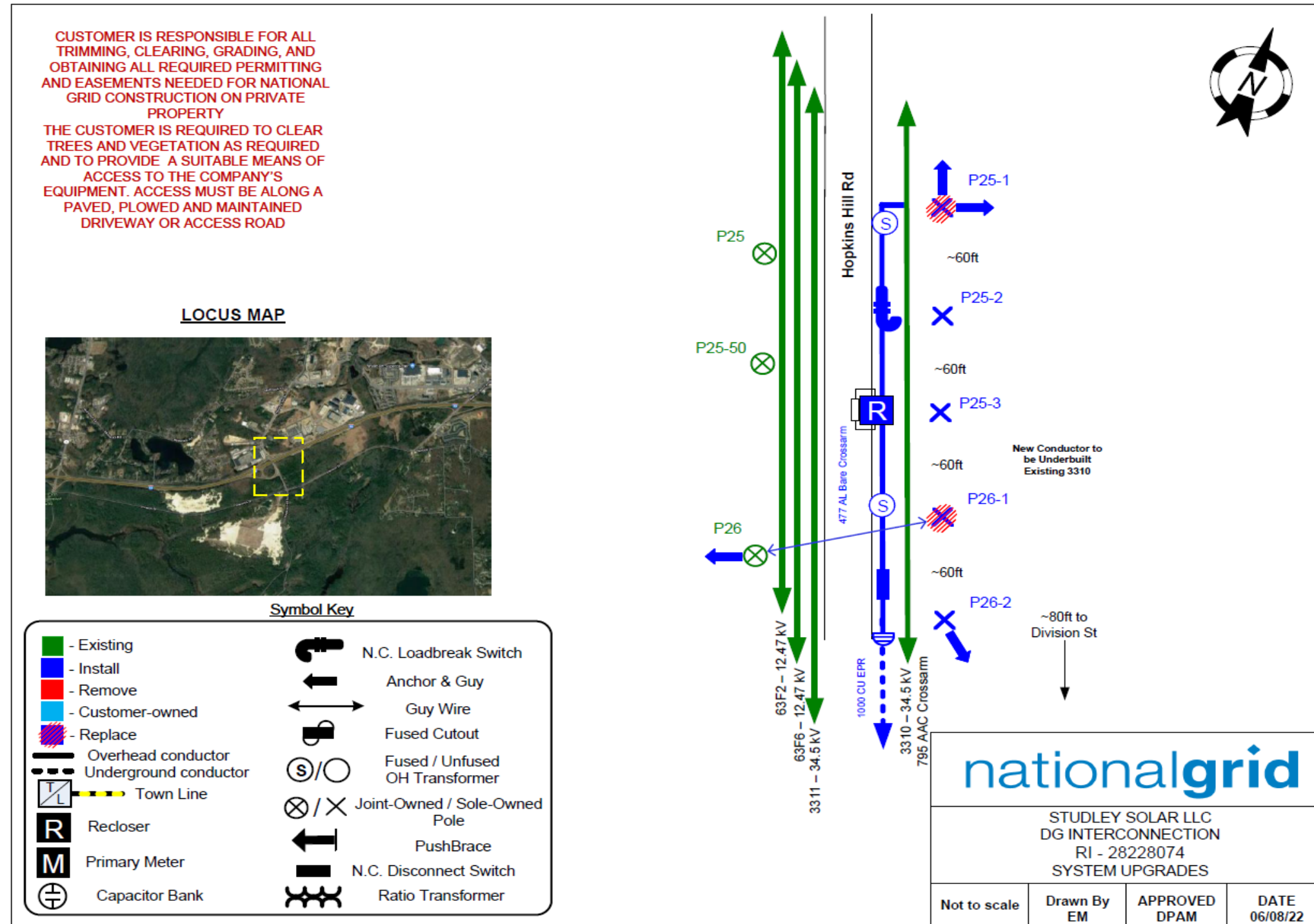


Figure B- 2: System Modification

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**Figure B- 3: System Modification**

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### Appendix C Customer Site and Single Line Diagram

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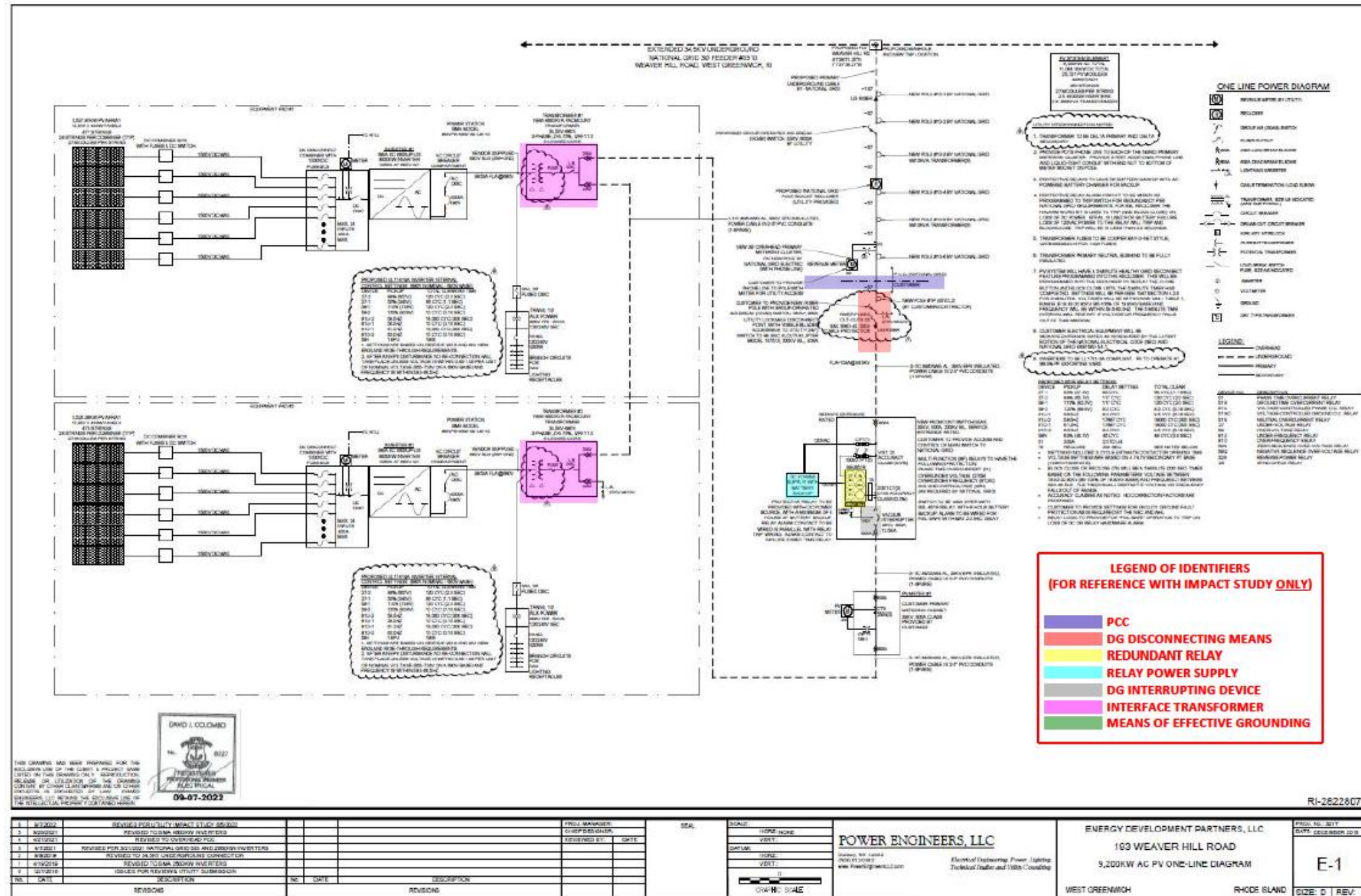


Figure C- 1: Project One-Line  
(Refer to body of Impact Study for specific discussion on equipment and requirements. Highlighting of equipment in this Figure does not necessarily denote acceptance)

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Originating Department:  
Distribution Planning & Asset Management – NE

Sponsor:  
Customer Energy Integration-NE

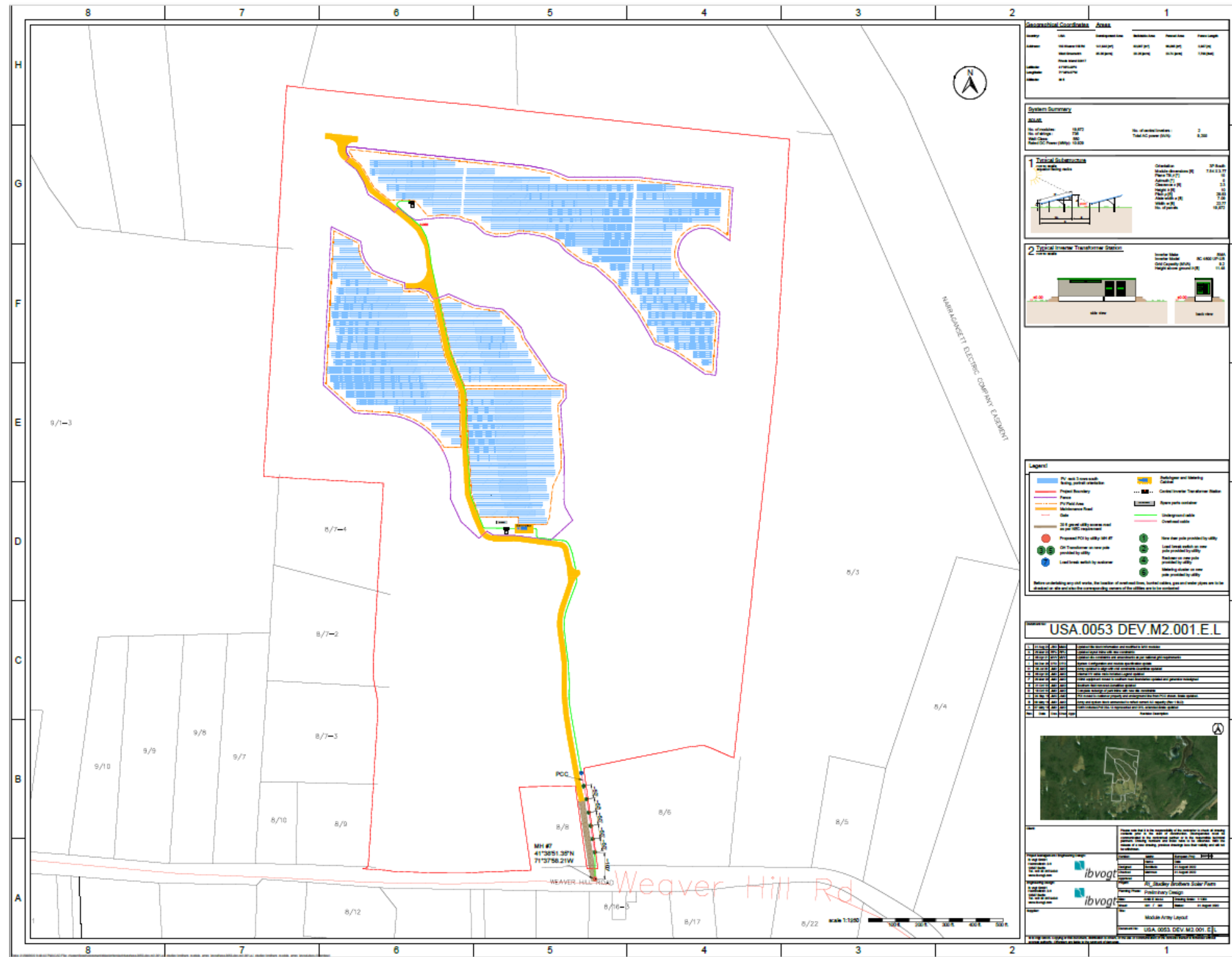


Figure C- 2: Project Site Plan

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The Narragansett Electric Company (d/b/a National Grid)

R.I.P.U.C. No. 2180

**Exhibit H – Interconnection Service Agreement**

1. **Parties.** This Interconnection Service Agreement (“Agreement”), dated as of July 22, 2020 (“Effective Date”) is for application number “27825278” and Case Number “206311” is entered into, by and between **The Narragansett Electric Company (doing business as National Grid)**, a Rhode Island corporation with a principal place of business at **280 Melrose St., Providence, RI 02907** (hereinafter referred to as the “Company”), and **GD West Greenwich Nooseneck I, a Limited Liability Corporation** with a principal place of business (or residence) at **2000 Chapel View Boulevard, Suite 500, Cranston, RI 02920**, (“Interconnecting Customer”). (The Company and Interconnecting Customer are collectively referred to as the “Parties”). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Tariff which is hereby incorporated by reference.
2. **Basic Understandings.** This Agreement provides for parallel operation of an Interconnecting Customer’s Facility with the Company EPS to be installed and operated by the Interconnecting Customer at **899 Nooseneck Hill Road, West Greenwich, RI 02817**. A description of the Facility is located in Attachment 1. If the Interconnecting Customer is not the Customer, an Agreement between the Company and the Company’s Retail Customer, attached as Exhibit I to the Interconnection Tariff, must be signed and included as an Attachment to this Agreement.

All capitalized terms not defined in this Agreement shall have the meaning as defined in Section 1.2 of the Interconnection Tariff, including but not limited to the following terms:

“Affected System” shall mean any neighboring transmission or distribution EPS not under the control of the Company (e.g., a municipal utility, or other regulated distribution or transmission utility, which may include Affiliates, or ISO-NE, as defined herein).

“Company EPS” shall mean the electric power system owned, controlled or operated by the Company used to provide distribution service to its Customers.

“System Modifications” shall mean modifications or additions to Company facilities that are integrated with the Company EPS for the benefit of the Interconnecting Customer.

By execution of this Agreement, Interconnecting Customer agrees to the extension of all System Modification construction timelines set forth in R.I. Gen. Laws Section 39-26.3-4.1(d), such that all applicable System Modification timelines set forth in R.I. Gen. Laws Section 39-26.3-4.1(d) shall commence after receipt of all completed Affected System operator(s) studies and approvals, any modified or additional Company studies necessitated as a result of the Affected System operator requirements, execution of any necessitated amendments to this Agreement, and payment of all costs in accordance with this Agreement.

The Interconnecting Customer has the right to operate its Facility in parallel with the Company EPS immediately upon successful completion of the protective relays testing as witnessed by the Company and receipt of written notice from the Company that interconnection with the Company EPS is authorized (“Authorization Date”).

3. **Term.** This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.
4. **Termination.**

4.1 This Agreement may be terminated under the following conditions.

4.1.1 The Parties agree in writing to terminate the Agreement.

4.1.2 The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Company.

4.1.3 The Company may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.

4.1.4 The Company may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the

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Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.

**4.1.5** The Company, upon 30 days notice, may terminate this Agreement if there are any changes in Commission regulations or state law that have a material adverse effect on the Company's ability to perform its obligations under the terms of this Agreement.

**4.2 Survival of Obligations.** The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.

**4.3 Related Agreements.** Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

**5.General Payment Terms.** The Interconnecting Customer shall be responsible for:

- a. the Company's System Modification costs pursuant to the Interconnection Tariff, subject to Section 5.1 below;
- b. any resulting Affected System operator(s) costs for its requirements, including, without limitation, modifications to the electric power system of the Affected System operator(s) and operation and maintenance costs;
- c. any costs for modified or additional Company studies and/or System Modifications necessitated as a result of the Affected System operator requirements.

With respect to any Affected System operator costs, the Interconnecting Customer shall be directly responsible to the Affected System operator provided, however, the Company may, in its sole discretion, elect to include the additional Affected System operator costs in the Company's agreements. Where the Company includes the Affected System operator(s) costs in its agreements, the costs will be collected by the Company and passed-through to the Affected System operator(s).

Attachments shall include additional terms and conditions associated with the Company's and, if applicable, Affected System operator costs and payment terms.

**5.1 Cost or Fee Adjustment Procedures.** The Company will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed up to a total amount of increase of 10% only. Any such changes to the Company's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Company's notice of increase, authorize such increase and make payment in the amount up to the 10% increase cap, or the Company will suspend the work and the corresponding agreement will terminate. The foregoing cost adjustment procedures shall only apply to the Company System Modification costs in Section 5(a) above, as detailed in the Impact Study, Detailed Study as necessary and/or ISRDG completed as of the date this Agreement is issued in executable form. The Interconnecting Customer shall be responsible for the actual Affected System operator costs, including operation and maintenance costs, and any additional Company costs necessitated as a result of the Affected System operator requirements, none of which shall be subject to any cost caps or limitations.

**5.2 Final Accounting.** The Company within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement and all Company work orders have been closed, shall provide Interconnecting Customer with a final accounting report of any difference between the (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications and for any Impact or Detailed Study performed by the Company, and (b) Interconnecting Customer's previous aggregate payments to the Company for such System Modifications and studies. Costs that are statutorily-based shall not be subject to either a final accounting or reconciliation under this provision (e.g. statutorily set study fees for the ISRDG), but may be reconciled at any time only if the costs exceed the statutory fee, and the Company seeks to collect actual costs in accordance with the applicable statute. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement for the System Modifications and in the Impact and/or Detailed Study Agreements (as applicable) for the studies performed by the Company exceeds Interconnecting Customer's previous aggregate payments, the Company shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Company within forty five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this applicable agreement, the Company shall refund to Interconnecting Customer an amount equal to the difference within forty five (45) days of the provision of such final accounting report.

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**6. Operating Requirements**

**6.1 General Operating Requirements.** Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Company's Interconnection Tariff. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Company has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Company EPS, the Company has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Company may require disconnection as outlined in Section 7.0 of the Interconnection Tariff. The cost of this testing will be borne by the Company unless the Company demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

**6.2 No Adverse Effects; Non-interference.** Company shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other Customers served from the same Company EPS or if operation of the Facility could cause damage to Company EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547-2003, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Company will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Company EPS, and such normal disturbances shall not constitute unreasonable interference unless the Company has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Company EPS, and outages on the Company EPS. If the Interconnecting Customer demonstrates that the Company EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Company deviation from Good Utility Practice, the Company shall take appropriate action to eliminate the adverse effect.

**6.3 Safe Operations and Maintenance.** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Company and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Company's EPS, personnel, and other persons from damage and injury.

**6.4 Access.** The Company shall have access to the disconnect switch of the Facility at all times.

**6.4.1 Company and Interconnecting Customer Representatives.** Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

**6.4.2 Company Right to Access Company-Owned Facilities and Equipment.** If necessary for the purposes of the Interconnection Tariff and in the manner it describes, the Interconnecting Customer shall allow the Company access to the Company's equipment and the Company's facilities located on the Interconnecting Customer's or Customer's premises. To the extent that the Interconnecting Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Tariff, the Interconnecting Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

**6.4.3 Right to Review Information.** The Company shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Company EPS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.4 in the Interconnection Tariff.

**7. Disconnection**

**7.1 Temporary Disconnection**

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**7.1.1 Emergency Conditions.** Company shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Company, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Company EPS or to the electric systems of others to which the Company EPS is directly connected. Company shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Company promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Company EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

**7.1.2 Routine Maintenance, Construction and Repair.** Company shall have the right to disconnect the Facility from the Company EPS when necessary for routine maintenance, construction and repairs on the Company EPS. The Company shall provide the Interconnecting Customer with a minimum of seven (7) calendar days planned outage notification consistent with the Company's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Company at the PCC, the Interconnecting Customer will provide a minimum of seven (7) days notice to the Company. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Company shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

**7.1.3 Forced Outages.** During any forced outage, Company shall have the right to suspend interconnection service to effect immediate repairs on the Company EPS; provided, however, Company shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Company may interrupt Interconnection Service and disconnect the Facility from the Company EPS without such notice.

**7.1.4 Non-Emergency Adverse Operating Effects.** The Company may disconnect the Facility if the Facility is having an adverse operating effect on the Company EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of forty five (45) days to correct such adverse operating effect has elapsed.

**7.1.5 Modification of the Facility.** Company shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Company.

**7.1.6 Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Company shall cooperate with each other to restore the Facility and the Company EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

**7.2 Permanent Disconnection.** The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Company.

**7.2.1** The Company may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

- 8. Metering.** Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Tariff.
- 9. Assignment.** Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without Company's written consent. Any assignment Interconnecting Customer purports to make without Company's written consent shall not be valid. Company shall not unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement. Notwithstanding the above, Company's consent will not be required for any assignment made by Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction. In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless, and until the assignee assumes in writing all obligations of this Agreement and notifies the Company of such assumption.

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**10. Confidentiality.** Company shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Tariff, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.

**11. Insurance Requirements.**

**11.1 General Liability.**

11.1(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:

- i. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.
- ii. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;
- iii. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;
- iv. Five hundred thousand dollars (\$500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for eligible net metered customers which are exempt from insurance requirements.

11.1(b) No insurance is required for a Facility with a Gross Nameplate Rating less than or equal to 50 kW that is eligible for net metering. However, the Company recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

11.1(c) Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

11.1(d) The general liability insurance required to be purchased in this Section may be purchased for the direct benefit of the Company and shall respond to third party claims asserted against the Company (hereinafter known as "Owners Protective Liability"). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Company and the Company will be designated as the primary and "Named Insured" under the policy.

11.1(e) The insurance hereunder is intended to provide coverage for the Company solely with respect to claims made by third parties against the Company.

11.1(f) In the event the State of Rhode Island and the Providence Plantations, or any other governmental subdivision thereof subject to the claims limits of R.I.G.L. Chapter 9-31 (hereinafter referred to as the "Governmental Entity") is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance company from interposing the claims limits of R.I.G.L. Chapter 9-31 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Company. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of R.I.G.L. Chapter 9-31 by the Governmental Entity.

**11.2 Insurer Requirements and Endorsements.** All required insurance shall be carried by reputable insurers qualified to underwrite insurance in RI having a Best Rating of "A-". In addition, all insurance shall, (a) include Company as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Company shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to

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Company prior to cancellation, termination, or material change of such insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (e) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Company as required above.

**11.3 Evidence of Insurance.** Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Company with evidence of insurance in compliance with the Interconnection Tariff on an annual basis.

Prior to the Company commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Company certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Company a certificate of insurance for any policy written on a "claims-made" basis. The Interconnecting Customer will maintain extended reporting coverage for three (3) years on all policies written on a "claims-made" basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Company.

**11.4** All insurance certificates, statements of self insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued, updated and submitted yearly to the following:

**National Grid**  
Attention: **Risk Management**  
300 Erie Blvd West  
Syracuse, NY 13202

- 12. Indemnification.** Except as precluded by the laws of the State of Rhode Island and the Providence Plantations, Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.
- 13. Limitation of Liability.** Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever. The Interconnecting Customer further understands and acknowledges that, consistent with Section 3.4(c) of the Interconnection Tariff, the Company will coordinate with the Affected System operator(s) to facilitate the interconnection of the Facility to the Company's EPS, however the Company does not represent the Affected System operator(s) and is not responsible for any action or inaction on the part of the Affected System operator(s). The Affected System operator(s) are not parties to this Agreement even though the Company may incorporate some Affected System operator(s) requirements herein. The Company disclaims any and all responsibility and liability in connection with any Affected System Operator(s) studies and upgrades and the Interconnecting Customer hereby waives recourse against and releases the Company, its directors, officers, employees and agents from any and all losses, penalties, claims, demands, fees, damages or other liabilities arising from or attributable to, either directly or indirectly, such Affected System Operator(s) studies and upgrades.
- 14. Amendments and Modifications.** No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.
- 15. Permits and Approvals.** Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the Interconnecting Customer will notify the Company that it has initiated the permitting process. Prior to the commercial operation of the Facility, the Customer will notify the Company that it has obtained all permits necessary. Upon request, the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Company.

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**16. Force Majeure.** For purposes of this Agreement, “Force Majeure Event” means any event:

- a. that is beyond the reasonable control of the affected Party; and
- b. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lighting, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.

**17. Notices.**

**17.1** Any written notice, demand, or request required or authorized in connection with this Agreement (“Notice”) shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person specified below:

If to Company: **The Narragansett Electric Company**  
Attention: **Distributed Generation**  
**40 Sylvan Road**  
**Waltham, MA 02451-1120**  
E-mail: **distributed.generation@nationalgrid.com**

If to Interconnecting Customer: **GD West Greenwich Nooseneck I, LLC**  
Attention: **Mark DePasquale**  
**2000 Chapel View Boulevard, Suite 500**  
**Cranston, RI 02920**  
Phone: **401-295-4998**  
E-mail: **md@green-ri.com**

**17.2** A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 17.1.

**17.3** The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party’s Notice to the other.


**18. Default and Remedies**

**18.1 Defaults.** Any one of the following shall constitute “An Event of Default.”

- (i) One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, any such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or
- (ii) One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.

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**Exhibit H – Interconnection Service Agreement**

- 18.2 Remedies.** Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:
- a. Continue to perform and enforce this Agreement;
  - b. Recover damages from the defaulting Party except as limited by this Agreement;
  - c. By written notice to the defaulting Party terminate this Agreement;
  - d. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.
- 19. Entire Agreement.** This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Tariff. Together the Agreement and the Interconnection Tariff represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Company’s Interconnection Tariff.
- 20. Supersedence.** In the event of a conflict between this Agreement, the Interconnection Tariff, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Tariff, as the same may be amended from time to time, shall control. In the event that the Company files a revised tariff related to interconnection for Commission approval after the effective date of this Agreement, the Company shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.
- 21. Governing Law.** This Agreement shall be interpreted, governed, and construed under the laws of the State of Rhode Island and the Providence Plantations without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.
- 22. Non-waiver.** None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.
- 23. Counterparts.** This Agreement may be signed in counterparts.
- 24. No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care with respect to, or any liability to, any person not a party to this Agreement.
- 25. Dispute Resolution.** Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Tariff.
- 26. Severability.** If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.
- 27. Signatures.** IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to be executed under seal by their duly authorized representatives.

GD West Greenwich Nooseneck I, LLC:

The Narragansett Electric Company (d/b/a National Grid):

Name: Mark DePasquale

Name: John C Kennedy

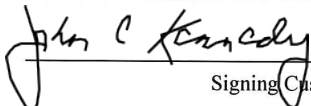
Title: CEO

Title: Manager

Date: 7/22/2020


Date: July 22, 2020

Signature: 

Signature: 

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The Narragansett Electric Company (d/b/a National Grid)

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**Exhibit H – Interconnection Service Agreement**

**Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling**

**Interconnecting Customer** has proposed a **10,000 kW** photovoltaic system located at **899 Nooseneck Hill Road, West Greenwich, RI 02817**. The proposed Facility is an **Independent Power Producer (“IPP”)**. Facilities will interconnect to the Company’s electric system via the **Kent County Substation, 34.5 kV distribution feeder 3310**, (“Point of Interconnection” or “POI”).

**a. Description of proposed design/configuration:**

Case 206311 (Southern Array)

- (i) Three (3) sets of four (4) paralleled Interconnecting Customer owned TMEIC Solarware Ninja PVU-L0880GR 880 kW / 880 kVA Inverters each de-rated to 833.33 kW / kVA for a total of 10,000 kW/kVA of inverter-based DG
- (ii) Three (3) Interconnecting Customer owned 3,392 kVA 34.5 kV Delta Primary and 660V Grounded-wye secondary interface transformers with impedances of  $Z=7.25\%$  and an X/R ratio of 10
- (iii) One (1) Interconnecting Customer owned recloser controlled by an SEL-651R relay assembly
- (iv) One (1) Interconnecting Customer owned 1200 A 1984X-45F Vector load break switch, accessible to the Utility 24/7

**b. Metering:** The Company will install (1) pole mounted primary meter, please refer to ESB 750 and ESB 756 Appendix D for service installation and primary meter installation.

**c. PCC:** The Company’s design personnel will determine the exact location of the Company’s equipment and the Interconnecting Customer’s gang operated disconnect. The Interconnecting Customer’s gang operated disconnect must be accessible by the Company’s personnel at all times, and be capable of being locked open and tagged by Company personnel. The Point of Common Coupling (PCC) will be designated as the Company’s primary meter. The Interconnecting Customer must install their Facilities up to the Company revenue meter. The Interconnecting Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Interconnecting Customer conductors to the Company meter.

The Narragansett Electric Company (d/b/a National Grid)

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**Exhibit H – Interconnection Service Agreement**

**Attachment 2a: Description of System Modifications (Distribution)**

Company System Modifications required for the interconnection of 10,000 kW (AC) application as identified in the Impact Study are as follows:

**On the Interconnecting Customer's property:**

Description is common to Case 206311- RI 27825278 and Case 206313 - 27888883

- Install approximately 900 circuit feet of 3-1/c-477 Al Bare conductor and associated equipment
- Install one (1) gang operated load break switch
- Install one (1) pole top recloser
- Install 2-10 kVA poles mounted transformers
- Install six (6) 50'-0" class 1 poles

Description is specific to Case 206311- RI 27825278

- Install one (1) set of disconnect switches
- Install one (1) primary revenue metering assembly
- Install one (1) 50'-0" class H1 pole
- Install two (2) 50'-0" class 1 poles

**On the Company's Distribution Circuit:**

- Extend the Kent County 3310, 34.5 kV circuit underground from proposed pole 23-26 Hopkins Hill Road, West Greenwich to the 3310 PCC-POI located at 899 Noosenck Hill Road, West Greenwich (approximately 5.3 miles)
- Provide engineering design support and supervision for underground civil construction.
- Approximately 34,100 circuit foot line extension from Hopkins Hill Road to the Facilities, which includes: (Section 2.2) o ~31,300 circuit feet of 3-1/C 1000 kcmil SCU EPR Cable (The Customer will only be responsible for costs associated with installing 3-1/C 500 kcmil SCU EPR)
- The Customer has agreed to the installation of the manhole and duct system associated with the 5.3 mile UG line extension. All Company owned underground facilities are to be installed in a concrete-encased duct & manhole system designed and built to Company Construction Standards and approved by the Company prior to construction and covering.
- Interconnecting Customer to develop civil design for underground man hole and duct sytem and provide (i) all survey work, (ii) pulling calculations and (iii) underground manhole and duct system civil design drawings in sufficient detail and taking into account the Company provided specifications and guidelines for review and approval by Company and Interconnection Customer adjusts as required any deliverables under (i) thru (iii) in a fashion that allows Company to approve the Interconnecting Customer provided underground civil drawings in order for the Company to start its portion of the underground design.
- The estimated schedule assumes standard tariff timeframe for both submittals and approvals. If submittal exceed tariff standars they may be extended accordingly.

Interconnecting Customer is responsible to obtain any necessary non-environmental permits from the relevant town(s) prior to beginning construction. Such non-environmental permits include, but are not limited to special permits, grants of location, height variances, and street opening permits. The Customer must provide proof of such permits prior to beginning construction.

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer will fully cooperate with the Company in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals

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in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Standards for Connecting Distributed Generation, R.I.P.U.C No. 2180, as amended from time to time.

**At the Company's substation:**

- Overcurrent setting change at the Kent County 3310 Station Breaker
- Add load encroachment to the Kent County T7 direction overcurrent relay

**Attachment 2b: Description and specific requirements of ASO (Affected System Operator) Upgrades (Transmission)**

- Replace all existing conductor, conductor hardware, and insulators on the G185N transmission line between Kent County and Drumrock substations. New conductor will be 1590 kcmil ACSS.
- Replace all insulators and conductor hardware on the K189 transmission line at the Kent County substation terminal structure, the Drumrock substation terminal structure, K189 structure #1, and K189 structure #1A.



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**Exhibit H – Interconnection Service Agreement**

**Attachment 3a: Costs of System Modifications Re-Study and Cost-Allocation, Third Party Costs, and Payment Terms (Distribution)**

This application (RI-27825278 ) is one of two Facilities for 10,000 kW (20,000 kW in the aggregate) that the Interconnecting Customer has agreed to being studied together for common System Modifications. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if either of the applications (RI-27825278 and RI 27888883) does not move forward with the interconnection of a Facility to the Company's electric power system, the total common System Modification costs will be re-estimated and reallocated to the remaining Facility, as determined by the Company in its sole discretion. Note that the Company will not proceed with construction unless it has received adequate payment for common System Modification costs from all applicable Interconnecting Customers.

At present, the total System Modification costs associated with these two Facilities is estimated to be **\$4,883,571**.

At present, System Modification costs associated with this application are estimated to be **\$2,445,536 +/- 25%** and itemized as follows:

- Cost of witness testing, engineering review, EMS Integration and implementation Total cost of common System Modifications on the Interconnecting Customer's (or other private) property as mentioned in Attachment 2a above: **\$239,602** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-27825278 and RI 27888883. RI 27825278 will be responsible for 50% or **\$127,301**.
- Total cost of common System Modifications on the Company's distribution system as mentioned in Attachment 2a above is \$4,008,123 (includes capital, removal, and O&M costs). The cost for these System Modification will be shared by RI-27825278 and RI 27888883 on a pro-rata basis . RI 27825278 will be responsible for 50% or **\$2,004,062**.
- Total cost of common System Modifications at the distribution side of the **Kent County** Substation as mentioned in Attachment 2a above is \$17,600 (includes capital, removal, and O&M costs). The cost for these System Modifications will be shared by RI-27825278 and RI 27888883 on a pro-rata basis. RI 27825278 will be responsible for 50% or **\$8,800**.
- Total cost of the donated property taxes associated with the civil construction is \$125,000. The cost for the donated property will be shared by RI-27825278 and RI 27888883. RI-27825278 will be responsible for 50% or **\$62,500**.
- Cost of witness testing, engineering review, EMS Integration an dimplementation of protective device settings: **\$7,500**.
- Tax gross-up adder on capital costs is or **\$235,373**. *(A 2020 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2020 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this Agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

**Re-Study and Cost Re-Allocation**

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if the other Facility does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for both Facilities as described in attachment 1 above as determined by the Company in its sole discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The System Modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

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**Exhibit H – Interconnection Service Agreement**

**Other Requirements Costs**

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer will fully cooperate with the Company in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Standards for Connecting Distributed Generation, R.I.P.U.C No. 2180, as amended from time to time.

The total cost of common System Modifications and the Facility's System Modification costs do not include any costs for third party rights and approvals, including without limitation any Verizon costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. Additional costs may be involved if the required pole work takes place in Verizon's maintenance areas. These costs will be billed directly to the Interconnecting Customer by Verizon.

Third party costs, to the extent applicable, are in addition to the total common System Modifications costs and the Facility's System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party.

**Payment Terms**

System Modifications costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (20%) of **\$489,108** is due when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer's signature. The invoice, including payment instructions, will be sent to the Interconnecting Customer. Proof of payment is required.
- The second payment (40%) of **\$978,214** is due within 15 business days from the receipt of the second payment invoice. The second payment invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or no later than 05/01/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer
- The final payment (40%) of **\$978,214** is due within 15 business days from the receipt of the final payment invoice. The final payment invoice will be sent when the Company reaches that point in construction in the pulling of the underground cable or no later than 08/01/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 06/25/2020.

The physical construction of System Modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

The Narragansett Electric Company (d/b/a National Grid)

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**Exhibit H – Interconnection Service Agreement**

**Attachment 3b: Cost of ASO Upgrades and DAF Charges (Transmission), Ongoing Cost Security, ISO-NE Study and Operating Requirements:**

This 10 MW project is one of the applications that required the ASO upgrades identified in the Western RI Area ASO Study. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any of the applications in the Western RI Area ASO Study does not move forward with the interconnection of a facility to the Company’s electric power system, the total Affected System operator (“ASO”) upgrade costs will be re-estimated and reallocated among the remaining Facilities, as determined by the Company in its sole discretion. Note the Company will not proceed with construction unless it has received adequate payment for ASO upgrade costs from all applicable customers.. All ASO upgrade costs are payable in full and fully reconcilable.

At present, the Western RI Area ASO Study upgrades associated with these projects is estimated to be **\$2,633,205**

At present, ASO upgrades associated with this application are estimated to be **\$287,019** and itemized as follows:

- Total cost of ASO upgrades, as referenced in Attachment 2b for the G185N transmission line is \$2,366,804. The cost for this ASO upgrade will be shared on a pro-rata basis with (all the projects in the study). RI 27825278 will be responsible for 10.7% or **\$233,478**.
- Total cost of ASO upgrades referenced in Attachment 2b for the K189 transmission line is \$266,401. The cost for this modification will be shared on a pro-rata basis with (all the projects in the study). RI 27825278 will be responsible for 10.7% or **\$26,160**.

ASO upgrade costs include without limitation, all costs associated with acquiring land, rights of way, easements, permitting, purchasing equipment and materials, installing, constructing, interconnecting, and testing the facilities, metering and telecommunications; O&M and engineering costs; all related overheads; and any and all associated taxes and government fees.

- Tax gross-up adder on transmission capital costs is **\$27,381** (*A 2020 tax rate of 13.07% is expected to apply to contributions in aid of construction (“CIAC”) payments received by The Narragansett Electric Company from the Interconnecting Customer. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this Agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company’s demand.*)

**Direct Assignment Facility (DAF) Charges**

In addition to the payment for the initial construction of the ASO upgrades, this application will be assessed on a monthly basis for the carrying charges for the actual costs of the ASO upgrades. These charges are calculated and charged to the Company by the ASO in accordance with Schedule 21-NEP, Attachment DAF, to the ISO-NE Open Access Transmission Tariff (“DAF Charges”). DAF Charges are calculated by multiplying actual total ASO Gross Plant Investment by the Annual Transmission Carrying Charge rate that is in effect at the time (adjusted annually). The Annual Transmission Carrying Charge rate shown below is provided for illustrative purposes only.

The estimated calculation for the DAF Charge is detailed below and will be recalculated based on the actual reconciled costs:

<b>Estimated Total ASO Gross Plant Investment</b>	<b>\$2,302,000</b>
<b>ASO (TNEC) Carrying Charge</b>	<b>7.89% (this is an annual charge, and is subject to change over time)</b>
<b>Annual Transmission Carrying Charge</b>	<b>\$181,628</b>
<b>Estimated Monthly billing</b>	<b>\$15,136</b>
<b>This application’s pro-rata share</b>	<b>\$1,650</b>

**Ongoing Costs Security**

On or before the date on which Interconnecting Customer pays the Company's final invoice, Interconnecting Customer shall deliver to the Company, at the Interconnecting Customer’s election, cash equal to the sum of the total of four (4) months of the DAF Charges for which Interconnecting Customer is responsible under this Agreement or a letter of credit, in form and substance complying with the requirements of this Attachment 3b and also acceptable to the Company, such acceptance not to be unreasonably withheld or delayed, having a face amount at least equal to the sum of the total of four (4) months of the DAF Charges for which Interconnecting Customer is responsible under this Agreement.

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Following the date as of which the Interconnecting Customer is no longer obligated to pay any DAF Charges pursuant to or in connection with this Agreement, Interconnecting Customer may cause a one-time reduction in the face amount of the Ongoing Costs Security by an amount equal to the DAF Charges. Interconnecting Customer shall maintain the Ongoing Costs Security, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, in full force and effect at all times, provided, however, that Interconnecting Customer may terminate the Ongoing Costs Security, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, only from and after the date as of which Interconnecting Customer is no longer obligated to pay any DAF Charges pursuant to or in connection with this Agreement.. The Company shall have the right to draw upon the Ongoing Costs Security provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, from time to time, in the event that the Interconnecting Customer fails to timely meet any of its obligations under this Agreement, including, without limitation, with respect to payment of DAF Charges, as well as any interest and penalties.

The Interconnecting Customer shall be solely responsible for all costs associated with each letter of credit (each, a “Letter of Credit”) provided pursuant to this Agreement, including, without limitation, the costs of obtaining, maintaining and replacing such Letter of Credit and reimbursement of each Letter of Credit Bank (as such terms are defined below). Each Letter of Credit shall be in a form and substance complying with the requirements of this Agreement and also acceptable to the Company, such acceptance not to be unreasonably withheld or delayed. Each Letter of Credit shall be an irrevocable, unconditional, and transferable standby letter of credit issued by a U.S. commercial bank or a U.S. branch of a foreign bank (the “Letter of Credit Bank”) provided that the Interconnecting Customer is not an affiliate of the Letter of Credit Bank, the Letter of Credit Bank has at least ten billion dollars (\$10,000,000,000) in assets and the Letter of Credit Bank’s lowest credit rating is at least A2 from Moody’s Investors Service or A from Standard and Poor’s Ratings Services (“Letter of Credit Bank Requirement(s)”). If at any time (i) the Letter of Credit Bank fails to satisfy any Letter of Credit Bank Requirement, or (ii) the Letter of Credit Bank advises that it will not renew the applicable Letter of Credit beyond its current expiration date (“Notice of Cancellation”), then, the Interconnecting Customer shall deliver a replacement letter of credit from a bank meeting the Letter of Credit Bank Requirements and the other requirements of this Agreement. Such replacement letter of credit shall be delivered to the Company promptly but in no event later than ten (10) Calendar Days following the date on which the Company notifies the Interconnecting Customer that the Letter of Credit Bank first fails to satisfy any Letter of Credit Bank Requirement or, in the case of a Notice of Cancellation, thirty (30) Calendar Days prior to the current expiration date of the applicable Letter of Credit. If Interconnecting Customer fails to provide such replacement Letter of Credit by the applicable date contemplated by this Agreement, the Company shall have the immediate right to draw the full amount remaining under the applicable existing Letter of Credit.

Any Letter of Credit delivered pursuant to this Agreement, as such Letter of Credit may be replaced, revised, modified, or amended, from time to time, as contemplated above, shall serve as security for Interconnecting Customer's obligations under this Agreement, including, without limitation and as applicable, capital cost payment responsibilities and obligations relating to design and installation of ASO upgrades and DAF Charge payment obligations.

Interconnecting Customer shall maintain each Letter of Credit provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Letter of Credit, in full force and effect at all times; provided, however, that any Letter of Credit, any revision, modification or amendment thereof, and any replacement for such Letter of Credit, may be terminated only if and when termination of the applicable Letter of Credit is expressly permitted by the terms of this Agreement. The Company shall have the right to draw upon each Letter of Credit provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Letter of Credit, from time to time, in the event the Interconnecting Customer fails to timely and fully meet any of its obligations under this Agreement or as otherwise permitted or contemplated by this Agreement.

If Interconnecting Customer fails to make any payments required under this Agreement or fails to provide and maintain the security contemplated above, each in the form, amounts, and at the times, required, the Company may exercise any rights, and pursue any remedies, available to it under this Agreement or the Interconnection Tariff. If any payment date or other due date specified in this Agreement falls on a weekend or a federal bank holiday, then such payment or due date shall be deemed to be the next business day. The face amount of any Letter of Credit represents an estimate only; the actual amount for which the Interconnecting Customer is responsible under this Agreement may be different than such estimates. For the avoidance of doubt, Interconnecting Customer shall be responsible for any tax obligations the Company may incur in drawing upon any Letter of Credit.

**ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW [This is a Facility whose export equals or exceeds 5 MW] and will be required to comply with ISO-NE’s requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional ASO upgrade costs.

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**Exhibit H – Interconnection Service Agreement**

**Payment Terms**

ASO upgrade costs :

- The first payment (20%) of **\$57,404** is due when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. The invoice, including payment instructions, will be sent to the Interconnecting Customer. Proof of payment is required.
- The second payment (40%) of **\$114,807** is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or no later than 5/01/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The final payment (40%) of **\$114,807** is due within 15 business days from the receipt of the final payment invoice. The final invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or no later than 08/01/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

DAF carrying charge

- Four months of DAF payments are required 30 days prior to the in-service date, which is anticipated May 2022 and is required in the form of a Letter of Credit.

**Attachment 4: Special Operating Requirements, if any**

The generating system may only normally generate onto the 3310 feeder and National Grid's Regional Control Center must first give permission to the Interconnecting Customer to allow the operation of their system. The generator may not be allowed to operate with the local electrical power system (EPS) in an abnormal state. To ensure the safe and reliable operation of the Company's EPS, the Company may choose to disconnect the Interconnecting Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.

1. The Interconnecting Customer is required to adhere to the following standards which are incorporated in their entirety by reference:
  - a. The Company's Standards for Interconnecting Distributed Generation (R.I.P.U.C. 2180), available at: [http://www.nationalgridus.com/non\\_html/RI\\_DG\\_Interconnection\\_Tariff.pdf](http://www.nationalgridus.com/non_html/RI_DG_Interconnection_Tariff.pdf)
  - b. Electric System Bulletin 750 "Specifications for Electrical Installations". ESB 750, available at: [http://www.nationalgridus.com/non\\_html/shared\\_constr\\_esb750.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb750.pdf)
  - c. Electric System Bulletin 756 "Requirements for Parallel Generation Connected to a National Grid-Owned EPS". ESB756D, available at: [www.nationalgridus.com/non\\_html/shared\\_constr\\_esb756.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb756.pdf)
2. The Interconnecting Customer is required to address any outstanding requirements (that are not explicitly addressed herein), which are described in the most recent application review memo and/or study report (which is hereby incorporated in its entirety) provided by the Company on or prior to the Effective Date of this Interconnection Service Agreement.
  - a. If the Effective Date of this Interconnection Service Agreement precedes the issuance of a required Detailed Study by the Company, the Interconnecting Customer is also required to address any outstanding requirements described in the Detailed Study Report upon its issuance.
3. Interconnecting Customer shall adhere to the requirements identified in the and/or Impact Study dated 06/25/2020
4. Interconnecting Customer shall provide Compliance Documentation, including photographs, as requested by, and to the satisfaction of, the Company.

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5. Interconnecting Customer may not be allowed to operate with the local EPS in an abnormal state. To ensure the safe and reliable operation of National Grid's EPS, National Grid may disconnect the Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.
6. Per section 6.4 of this Agreement, Interconnecting Customer shall provide an external AC UTILITY DISCONNECT, accessible at all times by Company personnel.
7. Interconnecting Customer's AC UTILITY DISCONNECT switch shall be labeled "AC UTILITY DISCONNECT".
8. The AC UTILITY DISCONNECT shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Company side by Company personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Company shall have the right to open this disconnect switch in accordance with the Interconnection Tariff. The switch has to be installed at the DR output on the current carrying lines. Shunt mechanisms are not permitted.
9. If the AC UTILITY DISCONNECT switch is not adjacent to the meter and/or PCC, Interconnecting Customer shall provide a permanent plaque locating the switch.
10. All plaques as described in NEC 705.10, 705.12 (7), 690.56, 692.4 and 705.70 shall be installed, as applicable.
11. All Interconnecting Customer-Owned meters shall be labeled "CUSTOMER-OWNED METER"
12. Interconnecting Customer shall install a permanent plaque or directory at the revenue meter and at the PCC with a warning about the generator(s) installed.
13. Interconnecting Customer shall be responsible for providing necessary easements and/or environmental and/or municipal permits, as requested by the Company.
14. For Facilities greater than 25kW, Interconnecting Customer shall provide a means of communication to the Company's revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or – in locations with suitable wireless service, a wireless meter. Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of the Company. If approved, a wireless-enabled meter will be installed, at the Interconnecting Customer's expense. If and when the Company's retail tariff provides a mechanism for monthly billing for this service, the Interconnecting Customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line the Company's revenue meter is provided.
15. For Facilities with redundant relaying, Company witness testing will be required. Interconnecting Customer shall develop, and provide for approval, a functional test procedure, including settings for relaying scheme. Witness test plan must be approved by Company prior to scheduling Company personnel for witness test.
16. Interconnecting Customer may only generate onto the feeder referenced in the Impact Study. The Company's Regional Control Center must first give permission to the Interconnecting Customer to allow the operation of their system.
17. Interconnecting Customer's protection scheme submitted for review must meet the Company's specific protection requirements. Interconnecting Customer shall submit a PE stamped one-line, including relay settings, that meets the requirements specified within this document to the Company for review and approval, before a Witness Test plan can be reviewed. Please refer to "Expedited/Standard Process Completion Documentation Checklist", per Company's website for additional required documentation.
18. In order to minimize the impact of the proposed generation on the EPS and area customers, the Company will require that the reactive contribution of the PV interconnection be maintained between a 99% leading and lagging power factor at the PCC during the normal operation of the PV array. In addition, the PV interconnection shall not contribute to greater than a 3.0% change in voltage on the Company's EPS under any conditions.
19. The Interconnecting Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements. The Interconnecting Customer shall provide

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unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Interconnecting Customer's locked gate. In those cases where Company equipment is required to be behind the Interconnecting Customer's locked gate, double locking, with both the Company's and Interconnecting Customer's locks shall be employed.

20. The Interconnecting Customer is responsible for coordinating with Verizon for any Verizon work. These costs will be billed directly to the Interconnecting Customer from Verizon. It will be the responsibility of the Interconnecting Customer to obtain any and all easements and required permitting for work that takes place on private property.

**Attachment 5: Agreement between the Company and the Company's Retail Customer**

If the Company's Retail Customer (account holder) is not the owner (and/or operator) of the Facility, then Exhibit I - Agreement Between the Company and the Company's Retail Customer - shall be signed by the Company's Retail Customer and executed by the Company, and shall be considered part of this Agreement. It shall be the responsibility of the Interconnecting Customer to notify the Company if the Exhibit I associated with this application changes.

**Attachment 6: System Modifications Construction Schedule**

Below is an estimated System Modification construction schedule. This schedule is conceptual, and shows the duration of the Facility's milestones from a "start-date" to an "in-service" date, in calendar days. This conceptual schedule is based upon assumptions and knowledge regarding the project, the site, and activities as of the date of the Impact Study. These estimations of construction time frames and total duration do not include any time that the Company's performance is on hold, delayed, or interrupted, including, without limitation, while waiting on information or on the performance of obligations by the Interconnecting Customer and/or third parties (including, without limitation, Verizon, ISO-NE, Railroad), as a result of unknown environmental and/or permitting issues, events of force majeure, and/or as a result of required transmission outages.

The start-date for this construction schedule is deemed to have occurred once : (1) the Interconnection Service Agreement ("ISA") has been executed (i.e., signed) by both the Company and the Interconnecting Customer; and (2) the first payment has been submitted by the Interconnecting Customer to the Company, provided , however, that the Company shall not be required to provide any services or order any equipment without receiving adequate payment therefore from the Interconnecting Customer nor will it be required to initiate any construction before it has received full payment from the Interconnecting Customer. The construction schedule does not include payment and other non construction milestones.

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**Attachment 6 - Appendix A: System Modifications and Transmission Upgrades Schedule**

Total estimated duration for the engineering, permitting, procurement, and construction of System Modifications: 74 weeks<sup>1</sup>

Milestone	Estimated Duration	Responsible Party
Company has received first payment & when the ASO upgrades have advanced to a point to allow System Modification to be complete in parallel with ASO upgrades.	Start	Company
Overhead and Underground Distribution System Modification Design (excluding underground man hole and duct system civil design provided by Interconnecting Customer which is required for Company to start its portion of the underground design)	31 weeks	Company
Secure and obtain any and all rights, consents environmental as well as non-environmental permits approvals and easement as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third party owned property <b>as well as for underground man hole and duct bank system on public way</b> )	10 weeks	Interconnecting Customer
Submit Final Payment	As per ISA	
Distribution System Construction phased approach (excluding construction of underground manhole and duct system on public way to be completed by Interconnecting Customer and supervised by Company appointed full -time civil inspector) <sup>2</sup>	12 weeks	Company

1 Distribution related schedule has been developed to align with ASO Upgrades schedule to optimize Interconnecting Customer payment plan and is subject to Company having received first payment in accordance with the payment terms and Interconnecting Customer providing required information described herein on time as well as sufficient detail and quality.

2 Construction completion for civil underground manhole and duct bank system to be performed by Interconnecting Customer to occur no later than receipt of final payment but not before Company was able to place riser poles in order for Interconnecting Customer to take into consideration the riser pole position(s) in respect to the construction of civil underground manhole and duct bank system. Further, all Interconnection Customer performed civil construction work shall be reviewed and approved by Company prior to back-filling by Interconnection Customer.



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Total estimated duration for the engineering, permitting, procurement, and construction of ASO upgrades: 91<sup>1</sup> weeks

To the extent possible, Company will complete the System Modifications in parallel with completion of the ASO upgrades since Customer project cannot be interconnected prior ASO upgrades have been implemented.

Milestone	Estimated Duration	Responsible Party
Company has received first payment & when the ASO upgrades have advanced to a point to allow System Modification to be complete in parallel with ASO upgrades.	Start	Company
ASO upgrades design (G185N & K189)	6 weeks	ASO
Secure and obtain any and all rights, consents, permits approvals and easement for ASO upgrades on any Company owned property or within any public roadway	62 weeks <sup>2</sup>	Company & ASO
Submit Final Payment	As per ISA	
ASO upgrades construction	9 weeks	ASO

1. The total estimated schedule includes other factors that are not represented as milestones in the table above, such as: outage planning and outage restriction
2. Including EFSB (90-day NOI) in respect to G185N transmission line

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**Exhibit H – Interconnection Service Agreement**

July 22, 2020

1. **Parties.** This Interconnection Service Agreement (“Agreement”), dated as of \_\_\_\_\_ (“Effective Date”) is for application number “27888883” and Case Number “206313” is entered into, by and between **The Narragansett Electric Company (doing business as National Grid)**, a Rhode Island corporation with a principal place of business at **280 Melrose St., Providence, RI 02907** (hereinafter referred to as the “Company”), and **GD West Greenwich Nooseneck I, a Limited Liability Corporation** with a principal place of business (or residence) at **2000 Chapel View Boulevard, Suite 500, Cranston, RI 02920**, (“Interconnecting Customer”). (The Company and Interconnecting Customer are collectively referred to as the “Parties”). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Tariff which is hereby incorporated by reference.
2. **Basic Understandings.** This Agreement provides for parallel operation of an Interconnecting Customer’s Facility with the Company EPS to be installed and operated by the Interconnecting Customer at **899 Nooseneck Hill Road, West Greenwich, RI 02817**. A description of the Facility is located in Attachment 1. If the Interconnecting Customer is not the Customer, an Agreement between the Company and the Company’s Retail Customer, attached as Exhibit I to the Interconnection Tariff, must be signed and included as an Attachment to this Agreement.

All capitalized terms not defined in this Agreement shall have the meaning as defined in Section 1.2 of the Interconnection Tariff., including but not limited to the following terms:

“Affected System” shall mean any neighboring transmission or distribution EPS not under the control of the Company (e.g., a municipal utility, or other regulated distribution or transmission utility, which may include Affiliates, or ISO-NE, as defined herein).

“Company EPS” shall mean the electric power system owned, controlled or operated by the Company used to provide distribution service to its Customers.

“System Modifications” shall mean modifications or additions to Company facilities that are integrated with the Company EPS for the benefit of the Interconnecting Customer.

By execution of this Agreement, Interconnecting Customer agrees to the extension of all System Modification construction timelines set forth in R.I. Gen. Laws Section 39-26.3-4.1(d), such that all applicable System Modification timelines set forth in R.I. Gen. Laws Section 39-26.3-4.1(d) shall commence after receipt of all completed Affected System operator(s) studies and approvals, any modified or additional Company studies necessitated as a result of the Affected System operator requirements, execution of any necessitated amendments to this Agreement, and payment of all costs in accordance with this Agreement.

The Interconnecting Customer has the right to operate its Facility in parallel with the Company EPS immediately upon successful completion of the protective relays testing as witnessed by the Company and receipt of written notice from the Company that interconnection with the Company EPS is authorized (“Authorization Date”).

3. **Term.** This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.

4. **Termination.**

4.1 This Agreement may be terminated under the following conditions.

4.1.1 The Parties agree in writing to terminate the Agreement.

4.1.2 The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Company.

4.1.3 The Company may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.

4.1.4 The Company may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the

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Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.

**4.1.5** The Company, upon 30 days notice, may terminate this Agreement if there are any changes in Commission regulations or state law that have a material adverse effect on the Company's ability to perform its obligations under the terms of this Agreement.

**4.2 Survival of Obligations.** The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.

**4.3 Related Agreements.** Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

**5. General Payment Terms.** The Interconnecting Customer shall be responsible for:

- a. the Company's System Modification costs pursuant to the Interconnection Tariff, subject to Section 5.1 below;
- b. any resulting Affected System operator(s) costs for its requirements, including, without limitation, modifications to the electric power system of the Affected System operator(s) and operation and maintenance costs;
- c. any costs for modified or additional Company studies and/or System Modifications necessitated as a result of the Affected System operator requirements.

With respect to any Affected System operator costs, the Interconnecting Customer shall be directly responsible to the Affected System operator provided, however, the Company may, in its sole discretion, elect to include the additional Affected System operator costs in the Company's agreements. Where the Company includes the Affected System operator(s) costs in its agreements, the costs will be collected by the Company and passed-through to the Affected System operator(s).

Attachments shall include additional terms and conditions associated with the Company's and, if applicable, Affected System operator costs and payment terms.

**5.1 Cost or Fee Adjustment Procedures.** The Company will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed up to a total amount of increase of 10% only. Any such changes to the Company's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Company's notice of increase, authorize such increase and make payment in the amount up to the 10% increase cap, or the Company will suspend the work and the corresponding agreement will terminate. The foregoing cost adjustment procedures shall only apply to the Company System Modification costs in Section 5(a) above, as detailed in the Impact Study, Detailed Study as necessary and/or ISRDG completed as of the date this Agreement is issued in executable form. The Interconnecting Customer shall be responsible for the actual Affected System operator costs, including operation and maintenance costs, and any additional Company costs necessitated as a result of the Affected System operator requirements, none of which shall be subject to any cost caps or limitations.

**5.2 Final Accounting.** The Company within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement and all Company work orders have been closed, shall provide Interconnecting Customer with a final accounting report of any difference between the (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications and for any Impact or Detailed Study performed by the Company, and (b) Interconnecting Customer's previous aggregate payments to the Company for such System Modifications and studies. Costs that are statutorily-based shall not be subject to either a final accounting or reconciliation under this provision (e.g. statutorily set study fees for the ISRDG), but may be reconciled at any time only if the costs exceed the statutory fee, and the Company seeks to collect actual costs in accordance with the applicable statute. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement for the System Modifications and in the Impact and/or Detailed Study Agreements (as applicable) for the studies performed by the Company exceeds Interconnecting Customer's previous aggregate payments, the Company shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Company within forty five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this applicable agreement, the Company shall refund to Interconnecting Customer an amount equal to the difference within forty five (45) days of the provision of such final accounting report.

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**6. Operating Requirements**

**6.1 General Operating Requirements.** Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Company's Interconnection Tariff. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Company has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Company EPS, the Company has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Company may require disconnection as outlined in Section 7.0 of the Interconnection Tariff. The cost of this testing will be borne by the Company unless the Company demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

**6.2 No Adverse Effects; Non-interference.** Company shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other Customers served from the same Company EPS or if operation of the Facility could cause damage to Company EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547-2003, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Company will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Company EPS, and such normal disturbances shall not constitute unreasonable interference unless the Company has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Company EPS, and outages on the Company EPS. If the Interconnecting Customer demonstrates that the Company EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Company deviation from Good Utility Practice, the Company shall take appropriate action to eliminate the adverse effect.

**6.3 Safe Operations and Maintenance.** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Company and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Company's EPS, personnel, and other persons from damage and injury.

**6.4 Access.** The Company shall have access to the disconnect switch of the Facility at all times.

**6.4.1 Company and Interconnecting Customer Representatives.** Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

**6.4.2 Company Right to Access Company-Owned Facilities and Equipment.** If necessary for the purposes of the Interconnection Tariff and in the manner it describes, the Interconnecting Customer shall allow the Company access to the Company's equipment and the Company's facilities located on the Interconnecting Customer's or Customer's premises. To the extent that the Interconnecting Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Tariff, the Interconnecting Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

**6.4.3 Right to Review Information.** The Company shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Company EPS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.4 in the Interconnection Tariff.

**7. Disconnection**

**7.1 Temporary Disconnection**

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**7.1.1 Emergency Conditions.** Company shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Company, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Company EPS or to the electric systems of others to which the Company EPS is directly connected. Company shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Company promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Company EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

**7.1.2 Routine Maintenance, Construction and Repair.** Company shall have the right to disconnect the Facility from the Company EPS when necessary for routine maintenance, construction and repairs on the Company EPS. The Company shall provide the Interconnecting Customer with a minimum of seven (7) calendar days planned outage notification consistent with the Company's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Company at the PCC, the Interconnecting Customer will provide a minimum of seven (7) days notice to the Company. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Company shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

**7.1.3 Forced Outages.** During any forced outage, Company shall have the right to suspend interconnection service to effect immediate repairs on the Company EPS; provided, however, Company shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Company may interrupt Interconnection Service and disconnect the Facility from the Company EPS without such notice.

**7.1.4 Non-Emergency Adverse Operating Effects.** The Company may disconnect the Facility if the Facility is having an adverse operating effect on the Company EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of forty five (45) days to correct such adverse operating effect has elapsed.

**7.1.5 Modification of the Facility.** Company shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Company.

**7.1.6 Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Company shall cooperate with each other to restore the Facility and the Company EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

**7.2 Permanent Disconnection.** The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Company.

**7.2.1** The Company may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

**8. Metering.** Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Tariff.

**9. Assignment.** Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without Company's written consent. Any assignment Interconnecting Customer purports to make without Company's written consent shall not be valid. Company shall not unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement. Notwithstanding the above, Company's consent will not be required for any assignment made by Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction. In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless, and until the assignee assumes in writing all obligations of this Agreement and notifies the Company of such assumption.

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**10. Confidentiality.** Company shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Tariff, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.

**11. Insurance Requirements.**

**11.1 General Liability.**

11.1(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:

- i. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.
- ii. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;
- iii. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;
- iv. Five hundred thousand dollars (\$500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for eligible net metered customers which are exempt from insurance requirements.

11.1(b) No insurance is required for a Facility with a Gross Nameplate Rating less than or equal to 50 kW that is eligible for net metering. However, the Company recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

11.1(c) Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

11.1(d) The general liability insurance required to be purchased in this Section may be purchased for the direct benefit of the Company and shall respond to third party claims asserted against the Company (hereinafter known as "Owners Protective Liability"). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Company and the Company will be designated as the primary and "Named Insured" under the policy.

11.1(e) The insurance hereunder is intended to provide coverage for the Company solely with respect to claims made by third parties against the Company.

11.1(f) In the event the State of Rhode Island and the Providence Plantations, or any other governmental subdivision thereof subject to the claims limits of R.I.G.L. Chapter 9-31 (hereinafter referred to as the "Governmental Entity") is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance company from interposing the claims limits of R.I.G.L. Chapter 9-31 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Company. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of R.I.G.L. Chapter 9-31 by the Governmental Entity.

**11.2 Insurer Requirements and Endorsements.** All required insurance shall be carried by reputable insurers qualified to underwrite insurance in RI having a Best Rating of "A-". In addition, all insurance shall, (a) include Company as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Company shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to

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Company prior to cancellation, termination, or material change of such insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (e) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Company as required above.

**11.3 Evidence of Insurance.** Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Company with evidence of insurance in compliance with the Interconnection Tariff on an annual basis.

Prior to the Company commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Company certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Company a certificate of insurance for any policy written on a "claims-made" basis. The Interconnecting Customer will maintain extended reporting coverage for three (3) years on all policies written on a "claims-made" basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Company.

**11.4** All insurance certificates, statements of self insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued, updated and submitted yearly to the following:

**National Grid**  
Attention: **Risk Management**  
**300 Erie Blvd West**  
**Syracuse, NY 13202**

**12. Indemnification.** Except as precluded by the laws of the State of Rhode Island and the Providence Plantations, Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.

**13. Limitation of Liability.** Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever. The Interconnecting Customer further understands and acknowledges that, consistent with Section 3.4(c) of the Interconnection Tariff, the Company will coordinate with the Affected System operator(s) to facilitate the interconnection of the Facility to the Company's EPS, however the Company does not represent the Affected System operator(s) and is not responsible for any action or inaction on the part of the Affected System operator(s). The Affected System operator(s) are not parties to this Agreement even though the Company may incorporate some Affected System operator(s) requirements herein. The Company disclaims any and all responsibility and liability in connection with any Affected System Operator(s) studies and upgrades and the Interconnecting Customer hereby waives recourse against and releases the Company, its directors, officers, employees and agents from any and all losses, penalties, claims, demands, fees, damages or other liabilities arising from or attributable to, either directly or indirectly, such Affected System Operator(s) studies and upgrades.

**14. Amendments and Modifications.** No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.

**15. Permits and Approvals.** Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the Interconnecting Customer will notify the Company that it has initiated the permitting process. Prior to the commercial operation of the Facility, the Customer will notify the Company that it has obtained all permits necessary. Upon request, the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Company.

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**16. Force Majeure.** For purposes of this Agreement, “Force Majeure Event” means any event:

- a. that is beyond the reasonable control of the affected Party; and
- b. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lighting, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.

**17. Notices.**

**17.1** Any written notice, demand, or request required or authorized in connection with this Agreement (“Notice”) shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person specified below:

If to Company: **The Narragansett Electric Company**  
**Attention: Distributed Generation**  
**40 Sylvan Road**  
**Waltham, MA 02451-1120**  
E-mail: **distributed.generation@nationalgrid.com**

If to Interconnecting Customer: **GD West Greenwich Nooseneck I, LLC**  
**Attention: Mark DePasquale**  
**2000 Chapel View Boulevard, Suite 500**  
**Cranston, RI 02920**  
Phone: **401-295-4998**  
E-mail: **md@green-ri.com**

**17.2** A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 17.1.

**17.3** The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party’s Notice to the other.

**18. Default and Remedies**

**18.1 Defaults.** Any one of the following shall constitute “An Event of Default.”

- (i) One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, any such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or
- (ii) One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.



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**18.2 Remedies.** Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:

- a. Continue to perform and enforce this Agreement;
- b. Recover damages from the defaulting Party except as limited by this Agreement;
- c. By written notice to the defaulting Party terminate this Agreement;
- d. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.

**19. Entire Agreement.** This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Tariff. Together the Agreement and the Interconnection Tariff represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Company's Interconnection Tariff.

**20. Supercedence.** In the event of a conflict between this Agreement, the Interconnection Tariff, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Tariff, as the same may be amended from time to time, shall control. In the event that the Company files a revised tariff related to interconnection for Commission approval after the effective date of this Agreement, the Company shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.

**21. Governing Law.** This Agreement shall be interpreted, governed, and construed under the laws of the State of Rhode Island and the Providence Plantations without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

**22. Non-waiver.** None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

**23. Counterparts.** This Agreement may be signed in counterparts.

**24. No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care with respect to, or any liability to, any person not a party to this Agreement.

**25. Dispute Resolution.** Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Tariff.

**26. Severability.** If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.

**27. Signatures.** IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to be executed under seal by their duly authorized representatives.

GD West Greenwich Nooseneck I, LLC:

The Narragansett Electric Company (d/b/a National Grid):

Name: Mark DePasquale

Name: John C Kennedy


Title: CEO

Title: Manager

Date: 7/22/2020

Date: July 22, 2020

Signature: 

Signature: 

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**Exhibit H – Interconnection Service Agreement**

**Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling**

**Interconnecting Customer** has proposed a 10,000 kW photovoltaic system located at 899 Nooseneck Hill Road, West Greenwich, RI 02817. The proposed Facility is an **Independent Power Producer (“IPP”)**. Facilities will interconnect to the Company’s electric system via the **Kent County** Substation, 34.5 kV distribution feeder 3310, (“Point of Interconnection” or “POI”).

**a. Description of proposed design/configuration:**

Case 206313 (Northern Array)

- (i) Three (3) sets of four (4) paralleled Interconnecting Customer owned TMEIC Solarware Ninja PVU-L0880GR 880 kW / 880 kVA Inverters each de-rated to 833.33 kW / kVA for a total of 10,000 kW/kVA of inverter-based DG
  - (ii) Three (3) Interconnecting Customer owned 3,392 kVA 34.5 kV Delta Primary and 660V Grounded-wye secondary interface transformers with impedances of  $Z=7.25\%$  and an X/R ratio of 10
  - (iii) One (1) Interconnecting Customer owned recloser controlled by an SEL-651R relay assembly
  - (iv) One (1) Interconnecting Customer owned 1200 A 1984X-45F Vector load break switch, accessible to the Utility 24/7
- b. Metering:** The Company will install (1) pole mounted primary meter, please refer to ESB 750 and ESB 756 Appendix D for service installation and primary meter installation.
- c. PCC:** The Company’s design personnel will determine the exact location of the Company’s equipment and the Interconnecting Customer’s gang operated disconnect. The Interconnecting Customer’s gang operated disconnect must be accessible by the Company’s personnel at all times, and be capable of being locked open and tagged by Company personnel. The Point of Common Coupling (PCC) will be designated as the Company’s primary meter. The Interconnecting Customer must install their Facilities up to the Company revenue meter. The Interconnecting Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Interconnecting Customer conductors to the Company meter.

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**Attachment 2a: Description of System Modifications (Distribution)**

Company System Modifications required for the interconnection of 10,000 kW (AC) application as identified in the Impact Study are as follows:

**On the Interconnecting Customer's property:**

Description is common to Case 206311- RI 27825278 and Case 206313 - 27888883

- Install approximately 900 circuit feet of 3-1/c-477 Al Bare conductor and associated equipment
- Install one (1) gang operated load break switch
- Install one (1) pole top recloser
- Install 2-10 kVA poles mounted transformers
- Install six (6) 50'-0" class 1 poles

Description is specific to Case 206311- RI 27825278

- Install one (1) set of disconnect switches
- Install one (1) primary revenue metering assembly
- Install one (1) 50'-0" class H1 pole
- Install one (1) 50'-0" class 1 poles

**On the Company's Distribution Circuit:**

- Extend the Kent County 3310, 34.5 kV circuit underground from proposed pole 23-26 Hopkins Hill Road, West Greenwich to the 3310 PCC-POI located at 899 Noosenck Hill Road, West Greenwich (approximately 5.3 miles)
- Provide engineering design support and supervision for underground civil construction.
- Approximately 34,100 circuit foot line extension from Hopkins Hill Road to the Facilities, which includes: (Section 2.2) o ~31,300 circuit feet of 3-1/C 1000 kcmil SCU EPR Cable (The Customer will only be responsible for costs associated with installing 3-1/C 500 kcmil SCU EPR)
- The Customer has agreed to the installation of the manhole and duct system associated with the 5.3 mile UG line extension. All Company owned underground facilities are to be installed in a concrete-encased duct & manhole system designed and built to Company Construction Standards and approved by the Company prior to construction and covering.
- Interconnecting Customer to develop civil design for underground man hole and duct system and provide (i) all survey work, (ii) pulling calculations and (iii) underground manhole and duct system civil design drawings in sufficient detail and taking into account the Company provided specifications and guidelines for review and approval by Company and Interconnection Customer adjusts as required any deliverables under (i) thru (iii) in a fashion that allows Company to approve the Interconnecting Customer provided underground civil drawings in order for the Company to start its portion of the underground design.
- The estimated schedule assumes standard tariff timeframe for both submittals and approvals. If submittal exceed tariff standars they may be extended accordingly.

Interconnecting Customer is responsible to obtain any necessary non-environmental permits from the relevant town(s) prior to beginning construction. Such non-environmental permits include, but are not limited to special permits, grants of location, height variances, and street opening permits. The Customer must provide proof of such permits prior to beginning construction.

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer will fully cooperate with the Company in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals

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in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Standards for Connecting Distributed Generation, R.I.P.U.C No. 2180, as amended from time to time.

**At the Company's substation:**

- Overcurrent setting change at the Kent County 3310 Station Breaker
- Add load encroachment to the Kent County T7 direction overcurrent relay

**Attachment 2b: Description and specific requirements of ASO (Affected System Operator) Upgrades (Transmission)**

- Replace all existing conductor, conductor hardware, and insulators on the G185N transmission line between Kent County and Drumrock substations. New conductor will be 1590 kcmil ACSS.
- Replace all insulators and conductor hardware on the K189 transmission line at the Kent County substation terminal structure, the Drumrock substation terminal structure, K189 structure #1, and K189 structure #1A.

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**Attachment 3a: Costs of System Modifications Re-Study and Cost-Allocation, Third Party Costs, and Payment Terms (Distribution)**

This application (RI-27888883) is one of two Facilities for 10,000 kW (20,000 kW in the aggregate) that the Interconnecting Customer has agreed to being studied together for common System Modifications. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if either of the applications (RI-27825278 and RI 27888883) does not move forward with the interconnection of a Facility to the Company's electric power system, the total common System Modification costs will be re-estimated and reallocated to the remaining Facility, as determined by the Company in its sole discretion. Note that the Company will not proceed with construction unless it has received adequate payment for common System Modification costs from all applicable Interconnecting Customers.

At present, the total System Modification costs associated with these two Facilities is estimated to be **\$4,883,571**.

At present, System Modification costs associated with this application are estimated to be **\$2,445,536 +/- 25%** and itemized as follows:

- Cost of witness testing, engineering review, EMS Integration and implementation Total cost of common System Modifications on the Interconnecting Customer's (or other private) property as mentioned in Attachment 2a above: **\$239,602** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-27825278 and RI 27888883. RI 27888883 will be responsible for 50% or **\$127,301**.
- Total cost of common System Modifications on the Company's distribution system as mentioned in Attachment 2a above is \$4,008,123 (includes capital, removal, and O&M costs). The cost for these System Modification will be shared by RI-27825278 and RI 27888883 on a pro-rata basis. RI 27888883 will be responsible for 50% or **\$2,004,062**.
- Total cost of common System Modifications at the distribution side of the **Kent County** Substation as mentioned in Attachment 2a above is \$17,600 (includes capital, removal, and O&M costs). The cost for these System Modifications will be shared by RI-27825278 and RI 27888883 on a pro-rata basis. RI 27888883 will be responsible for 50% or **\$8,800**.
- Total cost of the donated property taxes associated with the civil construction is \$125,000. The cost for the donated property will be shared by RI-27825278 and RI 27888883. RI-27888883 will be responsible for 50% or **\$62,500**.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: **\$7,500**.
- Tax gross-up adder on capital costs is or **\$235,373**. *(A 2020 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2020 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this Agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

**Re-Study and Cost Re-Allocation**

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if the other Facility does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for both Facilities as described in attachment 1 above as determined by the Company in its sole discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The System Modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

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**Other Requirements Costs**

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer will fully cooperate with the Company in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Standards for Connecting Distributed Generation, R.I.P.U.C No. 2180, as amended from time to time.

The total cost of common System Modifications and the Facility's System Modification costs do not include any costs for third party rights and approvals, including without limitation any Verizon costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. Additional costs may be involved if the required pole work takes place in Verizon's maintenance areas. These costs will be billed directly to the Interconnecting Customer by Verizon.

Third party costs, to the extent applicable, are in addition to the total common System Modifications costs and the Facility's System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party.

**Payment Terms**

System Modifications costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (20%) of **\$489,108** is due when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer's signature. The invoice, including payment instructions, will be sent to the Interconnecting Customer. Proof of payment is required.
- The second payment (40%) of **\$978,214** is due within 15 business days from the receipt of the second payment invoice. The second payment invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or no later than 05/01/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer
- The final payment (40%) of **\$978,214** is due within 15 business days from the receipt of the final payment invoice. The final payment invoice will be sent when the Company reaches that point in construction in the pulling of the underground cable or no later than 08/01/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 06/25/2020.

The physical construction of System Modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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**Attachment 3b: Cost of ASO Upgrades and DAF Charges (Transmission), Ongoing Cost Security, ISO-NE Study and Operating Requirements:**

This 10 MW project is one of the applications that required the ASO upgrades identified in the Western RI Area ASO Study. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any of the applications in the Western RI Area ASO Study does not move forward with the interconnection of a facility to the Company’s electric power system, the total Affected System operator (“ASO”) upgrade costs will be re-estimated and reallocated among the remaining Facilities, as determined by the Company in its sole discretion. Note the Company will not proceed with construction unless it has received adequate payment for ASO upgrade costs from all applicable customers. All ASO upgrade costs are payable in full and fully reconcilable.

At present, the Western RI Area ASO Study upgrades associated with these projects is estimated to be **\$2,633,205**

At present, ASO upgrades associated with this application are estimated to be **\$287,019** and itemized as follows:

- Total cost of ASO upgrades, as referenced in Attachment 2b for the G185N transmission line is \$2,366,804. The cost for this ASO upgrade will be shared on a pro-rata basis with (all the projects in the study). RI 27888883 will be responsible for 10.7% or **\$233,478**.
- Total cost of ASO upgrades referenced in Attachment 2b for the K189 transmission line is \$266,401. The cost for this modification will be shared on a pro-rata basis with (all the projects in the study). RI 27888883 will be responsible for 10.7% or **\$26,160**.

ASO upgrade costs include without limitation, all costs associated with acquiring land, rights of way, easements, permitting, purchasing equipment and materials, installing, constructing, interconnecting, and testing the facilities, metering and telecommunications; O&M and engineering costs; all related overheads; and any and all associated taxes and government fees.

- Tax gross-up adder on transmission capital costs is **\$27,381** (*A 2020 tax rate of 13.07% is expected to apply to contributions in aid of construction (“CIAC”) payments received by The Narragansett Electric Company from the Interconnecting Customer. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this Agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company’s demand.*)

**Direct Assignment Facility (DAF) Charges**

In addition to the payment for the initial construction of the ASO upgrades, this application will be assessed on a monthly basis for the carrying charges for the actual costs of the ASO upgrades. These charges are calculated and charged to the Company by the ASO in accordance with Schedule 21-NEP, Attachment DAF, to the ISO-NE Open Access Transmission Tariff (“DAF Charges”). DAF Charges are calculated by multiplying actual total ASO Gross Plant Investment by the Annual Transmission Carrying Charge rate that is in effect at the time (adjusted annually). The Annual Transmission Carrying Charge rate shown below is provided for illustrative purposes only.

The estimated calculation for the DAF Charge is detailed below and will be recalculated based on the actual reconciled costs:

<b>Estimated Total ASO Gross Plant Investment</b>	<b>\$2,302,000</b>
<b>ASO (TNEC) Carrying Charge</b>	<b>7.89% (this is an annual charge, and is subject to change over time)</b>
<b>Annual Transmission Carrying Charge</b>	<b>\$181,628</b>
<b>Estimated Monthly billing</b>	<b>\$15,136</b>
<b>This application’s pro-rata share</b>	<b>\$1,650</b>

**Ongoing Costs Security**

On or before the date on which Interconnecting Customer pays the Company's final invoice, Interconnecting Customer shall deliver to the Company, at the Interconnecting Customer’s election, cash equal to the sum of the total of four (4) months of the DAF Charges for which Interconnecting Customer is responsible under this Agreement or a letter of credit, in form and substance complying with the requirements of this Attachment 3b and also acceptable to the Company, such acceptance not to be unreasonably withheld or delayed, having a face amount at least equal to the sum of the total of four (4) months of the DAF Charges for which Interconnecting Customer is responsible under this Agreement.

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### **Exhibit H – Interconnection Service Agreement**

Following the date as of which the Interconnecting Customer is no longer obligated to pay any DAF Charges pursuant to or in connection with this Agreement, Interconnecting Customer may cause a one-time reduction in the face amount of the Ongoing Costs Security by an amount equal to the DAF Charges. Interconnecting Customer shall maintain the Ongoing Costs Security, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, in full force and effect at all times, provided, however, that Interconnecting Customer may terminate the Ongoing Costs Security, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, only from and after the date as of which Interconnecting Customer is no longer obligated to pay any DAF Charges pursuant to or in connection with this Agreement. The Company shall have the right to draw upon the Ongoing Costs Security provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, from time to time, in the event that the Interconnecting Customer fails to timely meet any of its obligations under this Agreement, including, without limitation, with respect to payment of DAF Charges, as well as any interest and penalties.

The Interconnecting Customer shall be solely responsible for all costs associated with each letter of credit (each, a "Letter of Credit") provided pursuant to this Agreement, including, without limitation, the costs of obtaining, maintaining and replacing such Letter of Credit and reimbursement of each Letter of Credit Bank (as such terms are defined below). Each Letter of Credit shall be in a form and substance complying with the requirements of this Agreement and also acceptable to the Company, such acceptance not to be unreasonably withheld or delayed. Each Letter of Credit shall be an irrevocable, unconditional, and transferable standby letter of credit issued by a U.S. commercial bank or a U.S. branch of a foreign bank (the "Letter of Credit Bank") provided that the Interconnecting Customer is not an affiliate of the Letter of Credit Bank, the Letter of Credit Bank has at least ten billion dollars (\$10,000,000,000) in assets and the Letter of Credit Bank's lowest credit rating is at least A2 from Moody's Investors Service or A from Standard and Poor's Ratings Services ("Letter of Credit Bank Requirement(s)"). If at any time (i) the Letter of Credit Bank fails to satisfy any Letter of Credit Bank Requirement, or (ii) the Letter of Credit Bank advises that it will not renew the applicable Letter of Credit beyond its current expiration date ("Notice of Cancellation"), then, the Interconnecting Customer shall deliver a replacement letter of credit from a bank meeting the Letter of Credit Bank Requirements and the other requirements of this Agreement. Such replacement letter of credit shall be delivered to the Company promptly but in no event later than ten (10) Calendar Days following the date on which the Company notifies the Interconnecting Customer that the Letter of Credit Bank first fails to satisfy any Letter of Credit Bank Requirement or, in the case of a Notice of Cancellation, thirty (30) Calendar Days prior to the current expiration date of the applicable Letter of Credit. If Interconnecting Customer fails to provide such replacement Letter of Credit by the applicable date contemplated by this Agreement, the Company shall have the immediate right to draw the full amount remaining under the applicable existing Letter of Credit.

Any Letter of Credit delivered pursuant to this Agreement, as such Letter of Credit may be replaced, revised, modified, or amended, from time to time, as contemplated above, shall serve as security for Interconnecting Customer's obligations under this Agreement, including, without limitation and as applicable, capital cost payment responsibilities and obligations relating to design and installation of ASO upgrades and DAF Charge payment obligations.

Interconnecting Customer shall maintain each Letter of Credit provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Letter of Credit, in full force and effect at all times; provided, however, that any Letter of Credit, any revision, modification or amendment thereof, and any replacement for such Letter of Credit, may be terminated only if and when termination of the applicable Letter of Credit is expressly permitted by the terms of this Agreement. The Company shall have the right to draw upon each Letter of Credit provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Letter of Credit, from time to time, in the event the Interconnecting Customer fails to timely and fully meet any of its obligations under this Agreement or as otherwise permitted or contemplated by this Agreement.

If Interconnecting Customer fails to make any payments required under this Agreement or fails to provide and maintain the security contemplated above, each in the form, amounts, and at the times, required, the Company may exercise any rights, and pursue any remedies, available to it under this Agreement or the Interconnection Tariff. If any payment date or other due date specified in this Agreement falls on a weekend or a federal bank holiday, then such payment or due date shall be deemed to be the next business day. The face amount of any Letter of Credit represents an estimate only; the actual amount for which the Interconnecting Customer is responsible under this Agreement may be different than such estimates. For the avoidance of doubt, Interconnecting Customer shall be responsible for any tax obligations the Company may incur in drawing upon any Letter of Credit.

#### **ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW [This is a Facility whose export equals or exceeds 5 MW] and will be required to comply with ISO-NE's requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional ASO upgrade costs.

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Signing Customer Initials: MP



The Narragansett Electric Company (d/b/a National Grid)

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**Exhibit H – Interconnection Service Agreement**

**Payment Terms**

ASO upgrade costs :

- The first payment (20%) of **\$57,404** is due when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. The invoice, including payment instructions, will be sent to the Interconnecting Customer. Proof of payment is required.
- The second payment (40%) of **\$114,807** is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or no later than 05/01/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The final payment (40%) of **\$114,807** is due within 15 business days from the receipt of the final payment invoice. The final invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or no later than 08/01/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

DAF carrying charge:

- Four months of DAF payments are required 30 days prior to the in-service date, which is anticipated May 2022 and is required in the form of a Letter of Credit.

**Attachment 4: Special Operating Requirements, if any**

The generating system may only normally generate onto the 3310 feeder and National Grid's Regional Control Center must first give permission to the Interconnecting Customer to allow the operation of their system. The generator may not be allowed to operate with the local electrical power system (EPS) in an abnormal state. To ensure the safe and reliable operation of the Company's EPS, the Company may choose to disconnect the Interconnecting Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.

1. The Interconnecting Customer is required to adhere to the following standards which are incorporated in their entirety by reference:
  - a. The Company's Standards for Interconnecting Distributed Generation (R.I.P.U.C. 2180), available at: [http://www.nationalgridus.com/non\\_html/RI\\_DG\\_Interconnection\\_Tariff.pdf](http://www.nationalgridus.com/non_html/RI_DG_Interconnection_Tariff.pdf)
  - b. Electric System Bulletin 750 "Specifications for Electrical Installations". ESB 750, available at: [http://www.nationalgridus.com/non\\_html/shared\\_constr\\_esb750.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb750.pdf)
  - c. Electric System Bulletin 756 "Requirements for Parallel Generation Connected to a National Grid-Owned EPS". ESB756D, available at: [www.nationalgridus.com/non\\_html/shared\\_constr\\_esb756.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb756.pdf)
2. The Interconnecting Customer is required to address any outstanding requirements (that are not explicitly addressed herein), which are described in the most recent application review memo and/or study report (which is hereby incorporated in its entirety) provided by the Company on or prior to the Effective Date of this Interconnection Service Agreement.
  - a. If the Effective Date of this Interconnection Service Agreement precedes the issuance of a required Detailed Study by the Company, the Interconnecting Customer is also required to address any outstanding requirements described in the Detailed Study Report upon its issuance.
3. Interconnecting Customer shall adhere to the requirements identified in the and/or Impact Study dated 06/25/2020
4. Interconnecting Customer shall provide Compliance Documentation, including photographs, as requested by, and to the satisfaction of, the Company.

The Narragansett Electric Company (d/b/a National Grid)

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**Exhibit H – Interconnection Service Agreement**

5. Interconnecting Customer may not be allowed to operate with the local EPS in an abnormal state. To ensure the safe and reliable operation of National Grid's EPS, National Grid may disconnect the Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.
6. Per section 6.4 of this Agreement, Interconnecting Customer shall provide an external AC UTILITY DISCONNECT, accessible at all times by Company personnel.
7. Interconnecting Customer's AC UTILITY DISCONNECT switch shall be labeled "AC UTILITY DISCONNECT".
8. The AC UTILITY DISCONNECT shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Company side by Company personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Company shall have the right to open this disconnect switch in accordance with the Interconnection Tariff. The switch has to be installed at the DR output on the current carrying lines. Shunt mechanisms are not permitted.
9. If the AC UTILITY DISCONNECT switch is not adjacent to the meter and/or PCC, Interconnecting Customer shall provide a permanent plaque locating the switch.
10. All plaques as described in NEC 705.10, 705.12 (7), 690.56, 692.4 and 705.70 shall be installed, as applicable.
11. All Interconnecting Customer-Owned meters shall be labeled "CUSTOMER-OWNED METER"
12. Interconnecting Customer shall install a permanent plaque or directory at the revenue meter and at the PCC with a warning about the generator(s) installed.
13. Interconnecting Customer shall be responsible for providing necessary easements and/or environmental and/or municipal permits, as requested by the Company.
14. For Facilities greater than 25kW, Interconnecting Customer shall provide a means of communication to the Company's revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or – in locations with suitable wireless service, a wireless meter. Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of the Company. If approved, a wireless-enabled meter will be installed, at the Interconnecting Customer's expense. If and when the Company's retail tariff provides a mechanism for monthly billing for this service, the Interconnecting Customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line the Company's revenue meter is provided.
15. For Facilities with redundant relaying, Company witness testing will be required. Interconnecting Customer shall develop, and provide for approval, a functional test procedure, including settings for relaying scheme. Witness test plan must be approved by Company prior to scheduling Company personnel for witness test.
16. Interconnecting Customer may only generate onto the feeder referenced in the Impact Study. The Company's Regional Control Center must first give permission to the Interconnecting Customer to allow the operation of their system.
17. Interconnecting Customer's protection scheme submitted for review must meet the Company's specific protection requirements. Interconnecting Customer shall submit a PE stamped one-line, including relay settings, that meets the requirements specified within this document to the Company for review and approval, before a Witness Test plan can be reviewed. Please refer to "Expedited/Standard Process Completion Documentation Checklist", per Company's website for additional required documentation.
18. In order to minimize the impact of the proposed generation on the EPS and area customers, the Company will require that the reactive contribution of the PV interconnection be maintained between a 99% leading and lagging power factor at the PCC during the normal operation of the PV array. In addition, the PV interconnection shall not contribute to greater than a 3.0% change in voltage on the Company's EPS under any conditions.

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**Exhibit H – Interconnection Service Agreement**

19. The Interconnecting Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements. The Interconnecting Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Interconnecting Customer's locked gate. In those cases where Company equipment is required to be behind the Interconnecting Customer's locked gate, double locking, with both the Company's and Interconnecting Customer's locks shall be employed.
20. The Interconnecting Customer is responsible for coordinating with Verizon for any Verizon work. These costs will be billed directly to the Interconnecting Customer from Verizon. It will be the responsibility of the Interconnecting Customer to obtain any and all easements and required permitting for work that takes place on private property.

**Attachment 5: Agreement between the Company and the Company's Retail Customer**

If the Company's Retail Customer (account holder) is not the owner (and/or operator) of the Facility, then Exhibit I - Agreement Between the Company and the Company's Retail Customer - shall be signed by the Company's Retail Customer and executed by the Company, and shall be considered part of this Agreement. It shall be the responsibility of the Interconnecting Customer to notify the Company if the Exhibit I associated with this application changes.

**Attachment 6: System Modifications Construction Schedule**

Below is an estimated System Modification construction schedule. This schedule is conceptual, and shows the duration of the Facility's milestones from a "start-date" to an "in-service" date, in calendar days. This conceptual schedule is based upon assumptions and knowledge regarding the project, the site, and activities as of the date of the Impact Study. These estimations of construction time frames and total duration do not include any time that the Company's performance is on hold, delayed, or interrupted, including, without limitation, while waiting on information or on the performance of obligations by the Interconnecting Customer and/or third parties (including, without limitation, Verizon, ISO-NE, Railroad), as a result of unknown environmental and/or permitting issues, events of force majeure, and/or as a result of required transmission outages.

The start-date for this construction schedule is deemed to have occurred once : (1) the Interconnection Service Agreement ("ISA") has been executed (i.e., signed) by both the Company and the Interconnecting Customer; and (2) the first payment has been submitted by the Interconnecting Customer to the Company, provided , however, that the Company shall not be required to provide any services or order any equipment without receiving adequate payment therefore from the Interconnecting Customer nor will it be required to initiate any construction before it has received full payment from the Interconnecting Customer. The construction schedule does not include payment and other non construction milestones.

The Narragansett Electric Company (d/b/a National Grid)

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**Exhibit H – Interconnection Service Agreement**

**Attachment 6 - Appendix A: System Modifications and Transmission Upgrades Schedule**

Total estimated duration for the engineering, permitting, procurement, and construction of System Modifications: 74 weeks<sup>1</sup>

Milestone	Estimated Duration	Responsible Party
Company has received first payment & when the ASO upgrades have advanced to a point to allow System Modification to be complete in parallel with ASO upgrades.	Start	Company
Overhead and Underground Distribution System Modification Design (excluding underground man hole and duct system civil design provided by Interconnecting Customer which is required for Company to start its portion of the underground design)	31 weeks	Company
Secure and obtain any and all rights, consents environmental as well as non-environmental permits approvals and easement as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third party owned property <b>as well as for underground man hole and duct bank system on public way</b>	10 weeks	Interconnecting Customer
Submit Final Payment	As per ISA	
Distribution System Construction phased approach (excluding construction of underground manhole and duct system on public way to be completed by Interconnecting Customer and supervised by Company appointed full -time civil inspector) <sup>2</sup>	12 weeks	Company

1 Distribution related schedule has been developed to align with ASO Upgrades schedule to optimize Interconnecting Customer payment plan and is subject to Company having received first payment in accordance with the payment terms and Interconnecting Customer providing required information described herein on time as well as sufficient detail and quality.

2 Construction completion for civil underground manhole and duct bank system to be performed by Interconnecting Customer to occur no later than receipt of final payment but not before Company was able to place riser poles in order for Interconnecting Customer to take into consideration the riser pole position(s) in respect to the construction of civil underground manhole and duct bank system. Further, all Interconnection Customer performed civil construction work shall be reviewed and approved by Company prior to back-filling by Interconnection Customer.

The Narragansett Electric Company (d/b/a National Grid)

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**Exhibit H – Interconnection Service Agreement**

Total estimated duration for the engineering, permitting, procurement, and construction of ASO upgrades: 91<sup>1</sup> weeks

To the extent possible, Company will complete the System Modifications in parallel with completion of the ASO upgrades since Customer project cannot be interconnected prior ASO upgrades have been implemented.

Milestone	Estimated Duration	Responsible Party
Company has received first payment & when the ASO upgrades have advanced to a point to allow System Modification to be complete in parallel with ASO upgrades.	Start	Company
ASO upgrades design (G185N & K189)	6 weeks	ASO
Secure and obtain any and all rights, consents, permits approvals and easement for ASO upgrades on any Company owned property or within any public roadway	62 weeks <sup>2</sup>	Company & ASO
Submit Final Payment	As per ISA	
ASO upgrades construction	9 weeks	ASO

1. The total estimated schedule includes other factors that are not represented as milestones in the table above, such as: outage planning and outage restriction
2. Including EFSB (90-day NOI) in respect to G185N transmission line

FIRST AMENDMENT TO  
INTERCONNECTION SERVICE AGREEMENT

THIS FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT (this “Amendment”) dated 08/16/2021 (“Effective Date”) amends the Interconnection Service Agreement dated 07/22/2020 for application RI-27825278 by and between The Narragansett Electric Company d/b/a National Grid (the “Company”) and GD West Greenwich Nooseneck I, LLC covering a distributed generation facility located at 899 Nooseneck Hill Road, West Greenwich, RI 02817 (“Agreement”).

\*WHEREAS, Customer and the Company both desire to modify the System Modifications Costs and/or Payment Terms (Attachment 3);

NOW, THEREFORE, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

1. **Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
2. **Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s Standards for Interconnection of Distributed Generation tariff R.I.P.U.C. No. 2180 (“Interconnection Tariff”), as the same may be amended.
3. **Amendment to Agreement.** The Agreement is hereby amended as follows:  
\*Insert amended content. Example:\*(ol style="list-style-type: none;">- (a) By striking Attachment 3 “Cost of System Modifications” in its’ entirety, and replacing it with Attachment 3 attached hereto.

**Attachment 3a: Costs of System Modifications Re-Study and Cost-Allocation, Third Party Costs, and Payment Terms (Distribution)**

This application (RI-27825278 ) is one of two Facilities for 10,000 kW (20,000 kW in the aggregate) that the Interconnecting Customer has agreed to being studied together for common System Modifications. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if either of the applications (RI-27825278 and RI 27888883) does not move forward with the interconnection of a Facility to the Company’s electric power system, the total common System Modification costs will be re-estimated and reallocated to the remaining Facility, as determined by the Company in its sole discretion. Note that the Company will not proceed with construction unless it has received adequate payment for common System Modification costs from all applicable Interconnecting Customers.

At present, the total System Modification costs associated with these two Facilities is estimated to be \$4,883,571.

At present, System Modification costs associated with this application are estimated to be \$2,445,536 +/- 25% and itemized as follows:

- Cost of witness testing, engineering review, EMS Integration and implementation Total cost of common System Modifications on the Interconnecting Customer’s (or other private) property as mentioned in Attachment 2a above: \$239,602 (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-27825278 and RI 27888883. RI 27825278 will be responsible for 50% or \$127,301.
- Total cost of common System Modifications on the Company’s distribution system as mentioned in Attachment 2a above is \$4,008,123 (includes capital, removal, and O&M costs). The cost for these System Modification will be shared by RI-27825278 and RI 27888883 on a pro-rata basis. RI 27825278 will be responsible for 50% or \$2,004,062.
- Total cost of common System Modifications at the distribution side of the **Kent County** Substation as mentioned in Attachment 2a above is \$17,600 (includes capital, removal, and O&M costs). The cost for these System Modifications will be shared by RI-27825278 and RI 27888883 on a pro-rata basis. RI

27825278 will be responsible for 50% or \$8,800.

- Total cost of the donated property taxes associated with the civil construction is \$125,000. The cost for the donated property will be shared by RI-27825278 and RI 27888883. RI-27825278 will be responsible for 50% or \$62,500.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: \$7,500.
- Tax gross-up adder on capital costs is or \$235,373. *(A 2020 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2020 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this Agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.)*

#### Re-Study and Cost Re-Allocation

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if the other Facility does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for both Facilities as described in attachment 1 above as determined by the Company in its sole discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The System Modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

#### Other Requirements Costs

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer will fully cooperate with the Company in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Standards for Connecting Distributed Generation, R.I.P.U.C No. 2180, as amended from time to time.

The total cost of common System Modifications and the Facility's System Modification costs do not include any costs for third party rights and approvals, including without limitation any Verizon costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. Additional costs may be involved if the required pole work takes place in Verizon's maintenance areas. These costs will be billed directly to the Interconnecting Customer by Verizon.

Third party costs, to the extent applicable, are in addition to the total common System Modifications costs and the Facility's System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party.

### Payment Terms

System Modifications costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (20%) of **\$489,108** is due when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer's signature. This payment was processed on 8/24/2020.
- The second payment (40%) of **\$978,214** is due within 15 business days from the receipt of the second payment invoice. The second payment invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or around the date of 12/15/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer
- The final payment (40%) of **\$978,214** is due within 15 business days from the receipt of the final payment invoice. The final payment invoice will be sent when the Company reaches that point in construction in the pulling of the underground cable or around the date of 04/15/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 06/25/2020.

The physical construction of System Modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

### Attachment 3b: Cost of ASO Upgrades and DAF Charges (Transmission), Ongoing Cost Security, ISO-NE Study and Operating Requirements:

This 10 MW project is one of the applications that required the ASO upgrades identified in the Western RI Area ASO Study. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any of the applications in the Western RI Area ASO Study does not move forward with the interconnection of a facility to the Company's electric power system, the total Affected System operator ("ASO") upgrade costs will be re-estimated and reallocated among the remaining Facilities, as determined by the Company in its sole discretion. Note the Company will not proceed with construction unless it has received a adequate payment for ASO upgrade costs from all applicable customers.. All ASO upgrade costs are payable in full and fully reconcilable.

At present, the Western RI Area ASO Study upgrades associated with these projects is estimated to be **\$2,633,205**

At present, ASO upgrades associated with this application are estimated to be **\$287,019** and itemized as follows:

- Total cost of ASO upgrades, as referenced in Attachment 2b for the G185N transmission line is \$2,366,804. The cost for this ASO upgrade will be shared on a pro-rata basis with (all the projects in the study). RI 27825278 will be responsible for 10.7% or **\$233,478**.
- Total cost of ASO upgrades referenced in Attachment 2b for the K189 transmission line is \$266,401. The cost for this modification will be shared on a pro-rata basis with (all the projects in the study). RI 27825278 will be responsible for 10.7% or **\$26,160**.

ASO upgrade costs include without limitation, all costs associated with acquiring land, rights of way, easements, permitting, purchasing equipment and materials, installing, constructing, interconnecting, and testing the facilities, metering and telecommunications; O&M and engineering costs; all related overheads; and any and all associated taxes and government fees.

- Tax gross-up adder on transmission capital costs is **\$27,381** (A 2020 tax rate of 13.07% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this Agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the



*Company's demand.*

**Direct Assignment Facility (DAF) Charges**

In addition to the payment for the initial construction of the ASO upgrades, this application will be assessed on a monthly basis for the carrying charges for the actual costs of the ASO upgrades. These charges are calculated and charged to the Company by the ASO in accordance with Schedule 21-NEP, Attachment DAF, to the ISO-NE Open Access Transmission Tariff (“DAF Charges”). DAF Charges are calculated by multiplying a total ASO Gross Plant Investment by the Annual Transmission Carrying Charge rate that is in effect at the time (adjusted annually). The Annual Transmission Carrying Charge rate shown below is provided for illustrative purposes only.

The estimated calculation for the DAF Charge is detailed below and will be recalculated based on the actual reconciled costs:

<b>Estimated Total ASO Gross Plant Investment</b>	<b>\$2,302,000</b>
<b>ASO (TNEC) Carrying Charge</b>	<b>7.89% (this is an annual charge, and is subject to change over time)</b>
<b>Annual Transmission Carrying Charge</b>	<b>\$181,628</b>
<b>Estimated Monthly billing</b>	<b>\$15,136</b>
<b>This application's pro-rata share</b>	<b>\$1,650</b>

**Ongoing Costs Security**

Thirty days prior to the in-service date, Interconnecting Customer shall deliver to the Company, at the Interconnecting Customer's election, cash equal to the sum of the total of four (4) months of the DAF Charges for which Interconnecting Customer is responsible under this Agreement or a letter of credit, in form and substance complying with the requirements of this Attachment 3b and also acceptable to the Company, such acceptance not to be unreasonably withheld or delayed, having a face amount at least equal to the sum of the total of four (4) months of the DAF Charges for which Interconnecting Customer is responsible under this Agreement.

Following the date as of which the Interconnecting Customer is no longer obligated to pay any DAF Charges pursuant to or in connection with this Agreement, Interconnecting Customer may cause a one-time reduction in the face amount of the Ongoing Costs Security by an amount equal to the DAF Charges. Interconnecting Customer shall maintain the Ongoing Costs Security, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, in full force and effect at all times, provided, however, that Interconnecting Customer may terminate the Ongoing Costs Security, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, only from and after the date as of which Interconnecting Customer is no longer obligated to pay any DAF Charges pursuant to or in connection with this Agreement. The Company shall have the right to draw upon the Ongoing Costs Security provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, from time to time, in the event that the Interconnecting Customer fails to timely meet any of its obligations under this Agreement, including, without limitation, with respect to payment of DAF Charges, as well as any interest and penalties.

The Interconnecting Customer shall be solely responsible for all costs associated with each letter of credit (each, a “Letter of Credit”) provided pursuant to this Agreement, including, without limitation, the costs of obtaining, maintaining and replacing such Letter of Credit and reimbursement of each Letter of Credit Bank (as such terms are defined below). Each Letter of Credit shall be in a form and substance complying with the requirements of this Agreement and also acceptable to the Company, such acceptance not to be unreasonably withheld or delayed. Each Letter of Credit shall be an irrevocable, unconditional, and transferable standby letter of credit issued by a U.S. commercial bank or a U.S. branch of a foreign bank (the “Letter of Credit Bank”) provided that the Interconnecting Customer is not an affiliate of the Letter of Credit Bank, the Letter of Credit Bank has at least ten billion dollars (\$10,000,000,000) in assets and the Letter of Credit Bank's lowest credit rating is at least A2 from Moody's Investors Service or A from Standard and Poor's Ratings Services (“Letter of Credit Bank Requirement(s)"). If at any time (i) the Letter of Credit Bank fails to satisfy any Letter of Credit Bank Requirement, or (ii) the Letter of Credit Bank advises that it will not renew the applicable Letter of Credit beyond its current expiration date (“Notice of Cancellation”), then, the Interconnecting Customer shall deliver a replacement letter of credit from a bank meeting the Letter of Credit Bank Requirements and the other requirements of this Agreement. Such replacement letter of credit shall be delivered to the Company promptly but in no event later than ten (10) Calendar Days following the date on which the Company notifies the Interconnecting Customer that the Letter of Credit Bank first fails to satisfy any Letter of Credit Bank Requirement or, in the case of a Notice of Cancellation, thirty (30) Calendar Days prior to the current expiration date of the applicable Letter of Credit. If Interconnecting Customer fails to provide such replacement Letter of Credit by the applicable date contemplated by this Agreement, the Company shall have the immediate right to draw the full amount remaining under the applicable existing Letter of Credit.

Any Letter of Credit delivered pursuant to this Agreement, as such Letter of Credit may be replaced, revised, modified, or amended, from time to time, as contemplated above, shall serve as security for Interconnecting Customer's obligations under this Agreement, including, without limitation and as applicable, capital cost payment responsibilities and obligations relating to design and installation of ASO upgrades and DAF Charge payment obligations.

Interconnecting Customer shall maintain each Letter of Credit provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Letter of Credit, in full force and effect at all times; provided, however, that any Letter of Credit, any revision, modification or amendment thereof, and any replacement for such Letter of Credit, may be terminated only if and when termination of the applicable Letter of Credit is expressly permitted by the terms of this Agreement. The Company shall have the right to draw upon each Letter of Credit provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Letter of Credit, from time to time, in the event the Interconnecting Customer fails to timely and fully meet any of its obligations under this Agreement or as otherwise permitted or contemplated by this Agreement.

If Interconnecting Customer fails to make any payments required under this Agreement or fails to provide and maintain the security contemplated above, each in the form, amounts, and at the times, required, the Company may exercise any rights, and pursue any remedies, available to it under this Agreement or the Interconnection Tariff. If any payment date or other due date specified in this Agreement falls on a weekend or a federal bank holiday, then such payment or due date shall be deemed to be the next business day. The face amount of any Letter of Credit represents an estimate only; the actual amount for which the Interconnecting Customer is responsible under this Agreement may be different than such estimates. For the avoidance of doubt, Interconnecting Customer shall be responsible for any tax obligations the Company may incur in drawing upon any Letter of Credit.

#### **ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW/[This is a Facility whose export equals or exceeds 5 MW] and will be required to comply with ISO-NE's requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional ASO upgrade costs.

#### **Payment Terms**

ASO upgrade costs:

- The first payment (20%) of \$57,404 is due when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. This payment was processed on 8/24/2020.
- The second payment (40%) of \$114,807 is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or around the date of 12/15/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The final payment (40%) of \$114,807 is due within 15 business days from the receipt of the final payment invoice. The final invoice will be sent when the Company finishes design and before the commencement of construction, or around the date of 04/15/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

#### **DAF carrying charge**

- Four months of DAF payments are required 30 days prior to the in-service date, which is anticipated October 2022 and is required in the form of a Letter of Credit.

4. **Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
5. **Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a “.pdf” format data file) shall constitute effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.
6. **Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not fully executed and returned to each Party on or before 08/25/2021.

IN WITNESS WHEREOF, the Parties hereto execute this **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:

COMPANY:

GD West Greenwich Nooseneck I, LLC

The Narragansett Electric Company, d/b/a  
National Grid

By: 

By: 

Name:

Mark DePasquale

Name:

Its:

CEO

Its: Lead Energy Integration Consultant

Duly authorized

Duly authorized

Date:

8/16/2021

Date:

08/16/2021

FIRST AMENDMENT TO  
INTERCONNECTION SERVICE AGREEMENT

THIS FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT (this “Amendment”) dated 08/16/21 (“Effective Date”) amends the Interconnection Service Agreement dated 07/22/2020 for application RI-27888883 by and between The Narragansett Electric Company d/b/a National Grid (the “Company”) and GD West Greenwich Nooseneck I, LLC covering a distributed generation facility located at 899 Nooseneck Hill Road, West Greenwich, RI 02817 (“Agreement”).

\*WHEREAS, Customer and the Company both desire to modify the System Modifications Costs and/or Payment Terms (Attachment 3);

NOW, THEREFORE, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

1. **Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
2. **Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s Standards for Interconnection of Distributed Generation tariff R.I.P.U.C. No. 2180 (“Interconnection Tariff”), as the same may be amended.
3. **Amendment to Agreement.** The Agreement is hereby amended as follows:
  - (a) By striking Attachment 3 “Cost of System Modifications” in its’ entirety and replacing it with Attachment 3 attached hereto.

**Attachment 3a: Costs of System Modifications Re-Study and Cost-Allocation, Third Party Costs, and Payment Terms (Distribution)**

This application (RI-27888883 ) is one of two Facilities for 10,000 kW (20,000 kW in the aggregate) that the Interconnecting Customer has agreed to being studied together for common System Modifications. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if either of the applications (RI-27825278 and RI 27888883) does not move forward with the interconnection of a Facility to the Company’s electric power system, the total common System Modification costs will be re-estimated and reallocated to the remaining Facility, as determined by the Company in its sole discretion. Note that the Company will not proceed with construction unless it has received a adequate payment for common System Modification costs from all applicable Interconnecting Customers.

At present, the total System Modification costs associated with these two Facilities is estimated to be \$4,883,571.

At present, System Modification costs associated with this application are estimated to be \$2,445,536 +/- 25% and itemized as follows:

- Cost of witness testing, engineering review, EMS Integration and implementation Total cost of common System Modifications on the Interconnecting Customer’s (or other private) property as mentioned in Attachment 2a above: **\$239,602** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-27825278 and RI 27888883. RI 27888883 will be responsible for 50% or **\$127,301**.
- Total cost of common System Modifications on the Company’s distribution system as mentioned in Attachment 2a above is \$4,008,123 (includes capital, removal, and O&M costs). The cost for these System Modification will be shared by RI-27825278 and RI 27888883 on a pro-rata basis. RI 27888883 will be responsible for 50% or **\$2,004,062**.
- Total cost of common System Modifications at the distribution side of the **Kent County** Substation as mentioned in Attachment 2a above is \$17,600 (includes capital, removal, and O&M costs). The cost for these System Modifications will be shared by RI-27825278 and RI 27888883 on a pro-rata basis. RI 27888883 will be responsible for 50% or **\$8,800**.

- Total cost of the donated property taxes associated with the civil construction is \$125,000. The cost for the donated property will be shared by RI-27825278 and RI 27888883. RI-2788883 will be responsible for 50% or \$62,500.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: \$7,500.
- Tax gross-up adder on capital costs is or \$235,373. *(A 2020 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2020 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this Agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.)*

#### Re-Study and Cost Re-Allocation

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if the other Facility does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for both Facilities as described in attachment 1 above as determined by the Company in its sole discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The System Modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

#### Other Requirements Costs

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approvals, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer will fully cooperate with the Company in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Standards for Connecting Distributed Generation, R.I.P.U.C No. 2180, as amended from time to time.

The total cost of common System Modifications and the Facility's System Modification costs do not include any costs for third party rights and approvals, including without limitation any Verizon costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. Additional costs may be involved if the required pole work takes place in Verizon's maintenance areas. These costs will be billed directly to the Interconnecting Customer by Verizon.

Third party costs, to the extent applicable, are in addition to the total common System Modifications costs and the Facility's System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party.

### Payment Terms

System Modifications costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (20%) of **\$489,108** is due when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer's signature. This payment was processed on 08/24/2020.
- The second payment (40%) of **\$978,214** is due within 15 business days from the receipt of the second payment invoice. The second payment invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or around the date of 12/15/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer
- The final payment (40%) of **\$978,214** is due within 15 business days from the receipt of the final payment invoice. The final payment invoice will be sent when the Company reaches that point in construction in the pulling of the underground cable or around the date of 04/15/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 06/25/2020.

The physical construction of System Modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

### Attachment 3b: Cost of ASO Upgrades and DAF Charges (Transmission), Ongoing Cost Security, ISO-NE Study and Operating Requirements:

This 10 MW project is one of the applications that required the ASO upgrades identified in the Western RI Area ASO Study. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any of the applications in the Western RI Area ASO Study does not move forward with the interconnection of a facility to the Company's electric power system, the total Affected System operator ("ASO") upgrade costs will be re-estimated and reallocated among the remaining Facilities, as determined by the Company in its sole discretion. Note the Company will not proceed with construction unless it has received a adequate payment for ASO upgrade costs from all applicable customers. All ASO upgrade costs are payable in full and fully reconcilable.

At present, the Western RI Area ASO Study upgrades associated with these projects is estimated to be **\$2,633,205**

At present, ASO upgrades associated with this application are estimated to be **\$287,019** and itemized as follows:

- Total cost of ASO upgrades, as referenced in Attachment 2b for the G185N transmission line is \$2,366,804. The cost for this ASO upgrade will be shared on a pro-rata basis with (all the projects in the study). RI 27888883 will be responsible for 10.7% or **\$233,478**.
- Total cost of ASO upgrades referenced in Attachment 2b for the K189 transmission line is \$266,401. The cost for this modification will be shared on a pro-rata basis with (all the projects in the study). RI 27888883 will be responsible for 10.7% or **\$26,160**.

ASO upgrade costs include without limitation, all costs associated with acquiring land, rights of way, easements, permitting, purchasing equipment and materials, installing, constructing, interconnecting, and testing the facilities, metering and telecommunications; O&M and engineering costs; all related overheads; and any and all associated taxes and government fees.

- Tax gross-up adder on transmission capital costs is **\$27,381** (A 2020 tax rate of 13.07% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this Agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.

**Direct Assignment Facility (DAF) Charges**

In addition to the payment for the initial construction of the ASO upgrades, this application will be assessed on a monthly basis for the carrying charges for the actual costs of the ASO upgrades. These charges are calculated and charged to the Company by the ASO in accordance with Schedule 21 -NEP, Attachment DAF, to the ISO-NE Open Access Transmission Tariff (“DAF Charges”). DAF Charges are calculated by multiplying a actual total ASO Gross Plant Investment by the Annual Transmission Carrying Charge rate that is in effect at the time (adjusted annually). The Annual Transmission Carrying Charge rate shown below is provided for illustrative purposes only.

The estimated calculation for the DAF Charge is detailed below and will be recalculated based on the actual reconciled costs:

<b>Estimated Total ASO Gross Plant Investment</b>	<b>\$2,302,000</b>
<b>ASO (TNEC) Carrying Charge</b>	<b>7.89% (this is an annual charge, and is subject to change over time)</b>
<b>Annual Transmission Carrying Charge</b>	<b>\$181,628</b>
<b>Estimated Monthly billing</b>	<b>\$15,136</b>
<b>This application’s pro-rata share</b>	<b>\$1,650</b>

**Ongoing Costs Security**

Thirty days prior to the in-service date, Interconnecting Customer shall deliver to the Company, at the Interconnecting Customer’s election, cash equal to the sum of the total of four (4) months of the DAF Charges for which Interconnecting Customer is responsible under this Agreement or a letter of credit, in form and substance complying with the requirements of this Attachment 3b and also acceptable to the Company, such acceptance not to be unreasonably withheld or delayed, having a face amount at least equal to the sum of the total of four (4) months of the DAF Charges for which Interconnecting Customer is responsible under this Agreement.

Following the date as of which the Interconnecting Customer is no longer obligated to pay any DAF Charges pursuant to or in connection with this Agreement, Interconnecting Customer may cause a one-time reduction in the face amount of the Ongoing Costs Security by an amount equal to the DAF Charges. Interconnecting Customer shall maintain the Ongoing Costs Security, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, in full force and effect at all times, provided, however, that Interconnecting Customer may terminate the Ongoing Costs Security, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, only from and after the date as of which Interconnecting Customer is no longer obligated to pay any DAF Charges pursuant to or in connection with this Agreement. The Company shall have the right to draw upon the Ongoing Costs Security provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Ongoing Costs Security, from time to time, in the event that the Interconnecting Customer fails to timely meet any of its obligations under this Agreement, including, without limitation, with respect to payment of DAF Charges, as well as any interest and penalties.

The Interconnecting Customer shall be solely responsible for all costs associated with each letter of credit (each, a “Letter of Credit”) provided pursuant to this Agreement, including, without limitation, the costs of obtaining, maintaining and replacing such Letter of Credit and reimbursement of each Letter of Credit Bank (as such terms are defined below). Each Letter of Credit shall be in a form and substance complying with the requirements of this Agreement and also acceptable to the Company, such acceptance not to be unreasonably withheld or delayed. Each Letter of Credit shall be an irrevocable, unconditional, and transferable standby letter of credit issued by a U.S. commercial bank or a U.S. branch of a foreign bank (the “Letter of Credit Bank”) provided that the Interconnecting Customer is not an affiliate of the Letter of Credit Bank, the Letter of Credit Bank has at least ten billion dollars (\$10,000,000,000) in assets and the Letter of Credit Bank’s lowest credit rating is at least A2 from Moody’s Investors Service or A from Standard and Poor’s Ratings Services (“Letter of Credit Bank Requirement(s)”). If at any time (i) the Letter of Credit Bank fails to satisfy any Letter of Credit Bank Requirement, or (ii) the Letter of Credit Bank advises that it will not renew the applicable Letter of Credit beyond its current expiration date (“Notice of Cancellation”), then, the Interconnecting Customer shall deliver a replacement letter of credit from a bank meeting the Letter of Credit Bank Requirements and the other requirements of this Agreement. Such replacement letter of credit shall be delivered to the Company promptly but in no event later than ten (10) Calendar Days following the date on which the Company notifies the Interconnecting Customer that the Letter of Credit Bank first fails to satisfy any Letter of Credit Bank Requirement or, in the case of a Notice of Cancellation, thirty (30) Calendar Days prior to the current expiration date of the applicable Letter of Credit. If Interconnecting Customer fails to provide such replacement Letter of Credit by the applicable date contemplated by this Agreement, the Company shall have the immediate right to draw the full amount remaining under the applicable existing Letter of Credit.

Any Letter of Credit delivered pursuant to this Agreement, as such Letter of Credit may be replaced, revised, modified, or amended, from time to time, as contemplated above, shall serve as security for Interconnecting Customer’s obligations under this Agreement, including, without limitation and as applicable, capital cost payment

responsibilities and obligations relating to design and installation of ASO upgrades and DAF Charge payment obligations.

Interconnecting Customer shall maintain each Letter of Credit provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Letter of Credit, in full force and effect at all times; provided, however, that any Letter of Credit, any revision, modification or amendment thereof, and any replacement for such Letter of Credit, may be terminated only if and when termination of the applicable Letter of Credit is expressly permitted by the terms of this Agreement. The Company shall have the right to draw upon each Letter of Credit provided under this Agreement, any revisions, modification or amendment thereof, and any replacement for such Letter of Credit, from time to time, in the event the Interconnecting Customer fails to timely and fully meet any of its obligations under this Agreement or as otherwise permitted or contemplated by this Agreement.

If Interconnecting Customer fails to make any payments required under this Agreement or fails to provide and maintain the security contemplated above, each in the form, amounts, and at the times, required, the Company may exercise any rights, and pursue any remedies, available to it under this Agreement or the Interconnection Tariff. If any payment date or other due date specified in this Agreement falls on a weekend or a federal bank holiday, then such payment or due date shall be deemed to be the next business day. The face amount of any Letter of Credit represents an estimate only; the actual amount for which the Interconnecting Customer is responsible under this Agreement may be different than such estimates. For the avoidance of doubt, Interconnecting Customer shall be responsible for any tax obligations the Company may incur in drawing upon any Letter of Credit.

#### **ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW/[This is a Facility whose export equals or exceeds 5 MW] and will be required to comply with ISO-NE's requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional ASO upgrade costs.

#### **Payment Terms**

ASO upgrade costs:

- The first payment (20%) of \$57,404 is due when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. This payment was processed on 08/24/2020.
- The second payment (40%) of \$114,807 is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when the Company reaches that point in design when long-lead time material items are ready to be ordered, or around the date of 12/15/2021. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The final payment (40%) of \$114,807 is due within 15 business days from the receipt of the final payment invoice. The final invoice will be sent when the Company finishes design and before the commencement of construction, or around the date of 04/15/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

DAF carrying charge:

- Four months of DAF payments are required 30 days prior to the in-service date, which is anticipated October 2022 and is required in the form of a Letter of Credit.

4. **Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
5. **Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a “.pdf” format data file) shall constitute



effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.

6. **Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not fully executed and returned to each Party on or before 08/25/2021 (15 business days from day letter is sent).

IN WITNESS WHEREOF, the Parties hereto execute this **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:

COMPANY:

GD West Greenwich Nooseneck I, LLC

The Narragansett Electric Company, d/b/a  
National Grid

By: 

By: 

Name: Mark DePasquale

Name:

Its: CEO

Its: Lead Energy Integration Consultant

Duly authorized

Duly authorized

Date: 8/16/2021

Date: 08/16/2021

**FIRST AMENDMENT TO  
INTERCONNECTION SERVICE AGREEMENT**

**THIS FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** (this “Amendment”) dated \_\_\_\_\_ (“Effective Date”) amends the **Interconnection Service Agreement** dated **05/16/2022** for application RI-29048593 by and between The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) and **Robin Hollow Solar, LLC** covering a distributed generation facility located at **18 Weaver-Hill Road, West Greenwich RI** (“Agreement”).

**\*WHEREAS**, on **05/16/2022**, Company consented to the Assignment of Interest in the Interconnection Service Agreement;

**\*WHEREAS**, Customer and the Company both desire to modify the **Description of System Modifications (Attachment 2)** and **System Modifications Costs (Attachment 3)**;

**\*Choose one statement or create one that applies to the particular reason the amendment is needed.**

**NOW, THEREFORE**, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

1. **Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
2. **Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s **Standards for Interconnection of Distributed Generation** tariff R.I.P.U.C. No. 2180 (“**Interconnection Tariff**”), as the same may be amended.
3. **Amendment to Agreement.** The Agreement is hereby amended as follows:
  - (a) By striking Attachment 2 “**Description of System Modifications**” in its’ entirety, and replacing it with Attachment 2 attached hereto.
  - (b) By striking Attachment 3 “**Cost of System Modifications**” in its’ entirety, and replacing it with Attachment 3 attached hereto.

**Attachment 2: Description of System Modifications**

Rhode Island Energy System Modifications required for the interconnection 7500kw (AC) application as identified in the impact study are as follows:

**On the Customer’s property:**

- Install ~1,100 circuit feet of 3-477 AAC,
- One (1) 35 kv load break switch
- One (1) 35 kv recloser
- Two disconnect switches
- Six (6) primary meters along with six (6) disconnect switches at the PCC.
- Install Twenty three (23) poles include project numbers for the 6 sites

**On the Company’s distribution system:**

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kv cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kv cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 2-way MH on Weaver Hill

- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kv cable from 2-way MH on Customer property to proposed riser pole on Customer property.
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
- Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kv recloser, one (1) disconnect switch, one (1) 35 kv load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI

**Civil construction (designed and installed by others) (“Third Party Ductbank”):**

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.

**Civil construction (work anticipated to be completed by Revity) (“Revity Ductbank”)**

- Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road (Revity Energy POI).
- Install duct system (~600 feet) between previously constructed 3-way MH on Hopkins Hill Road and previous constructed 3-way MH at the intersection of Hopkins Hill Road and Division Road. Rhode Island Energy to provide civil design including drawings to Customer to construct this portion.
- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Revity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer). Customer to provide civil design including drawings per Distributed Generation: Minimum Self-Performance Requirements to construct this portion.
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self-built by Customer). Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance.
- Install MH and duct system (~3000 feet) from proposed riser pole on Hopkins Hill Road to 3-way MH on Hopkins Hill Road. Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance Requirements.
- The Interconnecting Customer will perform the civil construction for the manhole / duct system consistent with civil design plans provided by the Customer and approved by the Company per the per Distributed Generation: Minimum Self-Performance Requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company’s civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer civil construction. The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company provided civil design plans.

**At the Company’s substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System

discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

### **Attachment 3: Costs of System Modifications and Payment Terms**

This application is one of seven projects studied together with total system size of 40,700 kw (the "related projects"). This application's size is 7,500kw and is 18.43% of the total aggregated related project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if one of the related project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company's electric power system, the total common modification costs on the Company's system will be re-estimated and reallocated among the remaining related projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the related projects group.

The total Company system modification costs (excluding the third party ductbank and Revery ductbank) that will be performed by the Company and are associated with all related project applications are: \$9,602,158 (+/- 25%). As of the isa execution date, the system modification cost responsibility for this isa is \$1,675,883.

In order to safely and reliably interconnect the related projects, the third party ductbank and Revery ductbank must also be constructed. The total third party estimate provided to construct the third party ductbank is \$11,761,595 as of the date of this agreement. The Company will facilitate the sharing of costs of the third party ductbank with all parties that occupy a common path of the third party ductbank based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the third party ductbank is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated \$6,116,029. The pro rata megawatt share of this amount for all related project applications referenced herein is 67.05% of this figure or \$4,555,167 including tax. This application's cost responsibility for the third party ductbank will be \$838,151 (such amount, the "Interconnecting Customer's cost share amount").

Upon completion of construction of the third party ductbank, Company will request the entity constructing the third party ductbank to provide a cost summary (including a detailed accounting ledger for each line item presented on the cost summary) with the following supporting information: vendor name, date/dates of service, detailed description of service, copy of the cancelled check(s), and associated contract/purchase order/timeslip/certified payroll/etc. Documents. Upon the receipt of all required documentation, the Company will audit and verify the proposed costs incurred by the third party, and will adjust the Interconnecting Customer cost share amount to reflect such reconciliation (which adjustment shall be reflected in an amended interconnection service agreement) for cost line items that, in whole or in part, do not qualify as an approved costs.

The Company will audit and verify the actual costs incurred to construct the Revery ductbank, and agrees that it will facilitate the sharing of such costs with all future parties (excluding the related projects) that occupy a common path of the Revery ductbank based on the distance of the common path and a pro rata megawatt share, and that any such cost sharing amount that is collected by the Company shall be disbursed to Revery energy llc. The parties acknowledge and agree that the ability of the Company to assign and collect from an Interconnecting Customer any costs incurred by a third party in connection with its self-performance of interconnection work has been challenged in docket no. 5235 (the "petition"), which currently is pending before the rhode island public utilities commission ("RIPUC"). Accordingly, the Company and Interconnecting Customer agree that interconnection customer's payment of the Interconnecting Customer cost share amount, and any collection of costs from a third party by the Company of the Revery ductbank costs, is expressly subject to any final ruling by the RIPUC on the petition, and that the Company shall refund to interconnection customer any interconnection customer cost sharing amount if and to the extent required by the RIPUC.

The Company system modification costs associated with this application (which do not include the third party ductbank) are: \$1,675,883 (+/- 25%) and itemized as follows:

modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 21.2% share or **\$166,239**.

- Total cost of common system modifications on the Company's **distribution** System, specifically 3309 cable pulling as mentioned in Attachment 2 above is **\$6,106,255** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 21.2% share or **\$1,294,526**.
- Total cost of common system modifications (**NECO**) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment ) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 18.4% share or **\$3,238**.
- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$69,554**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 18.4% or **\$12,798**.
- Total cost of Rhode Island Energy Supervision associated with the REVITY DUCTBANK construction self-performed by Customer is **\$165,000**. The cost for the Supervision will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 18.4% share or **\$30,360**.
- Total cost of common system modifications on the Company's **distribution System, specifically protective** device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 18.4% share or **\$295**.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: **\$2,990**.
- Tax gross-up adder on capital costs is or **\$165,437**. *(A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if any other related project does not move forward with its interconnection to the Company's **electric power system, the facility's interconnection may need to be restudied**, and the system modification costs will be re-estimated for the facility and for the related projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and **increase in the costs in order to continue with the facility's interconnection under this agreement, including its pro-rata share of any re-estimated and re-allocated costs.**

The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the impact /group study, the Company reserves the right to adjust those estimated costs as authorized under this agreement, the tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The total system modifications costs and the facility system modification costs do not include any costs for third party rights and approvals (as defined in attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the total system modifications costs and the facility system

Rhode Island Energy transmission planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) planning procedure 5-6 **“scope of study for system impact studies under the generation interconnection procedures”** and Rhode Island Energy **tg28 “transmission planning guide.”** Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

#### ISO-NE operating requirement

This is part of a group of generating facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5mw and will be required to comply with ISO-NE’s requirements, including operating procedure no. 14. Prior to the Company providing authorization to interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in telephone Company maintenance areas. These costs will be billed directly to the Interconnecting Customer from the telephone Company.

**Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (5%) of **\$83,794** is due within 90 business days from when the Exhibit H- Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. Proof of payment is required.
- The second payment (20%) of **\$335,177** is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around 08/29/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The third payment (75%) of **\$1,256,912** is due within 15 business days from the receipt of the third payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project, estimated to be on or around 01/05/2023. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The fourth payment of **\$838,151** that is associated with this application's cost sharing responsibility for the THIRD PARTY DUCTBANK will be due prior to the Witness Test for this application being conducted.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021.

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

4. **Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
5. **Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a ".pdf" format data file) shall constitute effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.
6. **Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not fully executed and returned to each Party on or before 08/01/2022.

IN WITNESS WHEREOF, the Parties hereto execute this **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:  
*Robin Hollow Solar*  
Revity Energy LLC *RP*

COMPANY:  
The Narragansett Electric Company, d/b/a  
Rhode Island Energy

By: *[Signature]*

By: *Erica Russell Salk*

Name: *Ryan Palumbo*

Name: Erica Russell Salk

Its: *Vice President*

Its: Manager

Duly authorized

Duly authorized

Date: *7/21/22*

Date: 07-29-2022



The Narragansett Electric Company (d/b/a Rhode Island Energy)

R.I.P.U.C. No. 2180

**Exhibit H – Interconnection Service Agreement**

1. **Parties.** This Interconnection Service Agreement (“Agreement”), dated as of \_\_\_\_\_ (“Effective Date”) is for application number “29048574” and Case Number “246609” is entered into, by and between **The Narragansett Electric Company (doing business as Rhode Island Energy)**, a Rhode Island corporation with a principal place of business at **280 Melrose St., Providence, RI 02907** (hereinafter referred to as the “Company”), and **Robin Hollow Solar, LLC**, a Rhode Island limited liability company with a principal place of business (or residence) at **117 Metro Center Boulevard, Suite 1007, Wariwck, RI 02886** (“Interconnecting Customer” or “Customer”). (The Company and Interconnecting Customer are collectively referred to as the “Parties”). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Tariff which is hereby incorporated by reference.

2. **Basic Understandings.** This Agreement provides for parallel operation of an Interconnecting Customer’s Facility with the Company EPS to be installed and operated by the Interconnecting Customer at **18 Weaver Hill Road, West Greenwich, RI 02817**. A description of the Facility is located in Attachment 1. If the Interconnecting Customer is not the Retail Customer, an Agreement between the Company and the Company’s Retail Customer, attached as Exhibit I to the Interconnection Tariff, must be signed and included as an Attachment to this Agreement.

The Interconnecting Customer has the right to operate its Facility in parallel with the Company EPS immediately upon successful completion of the protective relays testing as witnessed by the Company and receipt of written notice from the Company that interconnection with the Company EPS is authorized (“Authorization Date”).

3. **Term.** This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.

4. **Termination.**

4.1 This Agreement may be terminated under the following conditions.

4.1.1 The Parties agree in writing to terminate the Agreement.

4.1.2 The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Company.

4.1.3 The Company may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.

4.1.4 The Company may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.

4.1.5 The Company, upon 30 days notice, may terminate this Agreement if there are any changes in Commission regulations or state law that have a material adverse effect on the Company’s ability to perform its obligations under the terms of this Agreement.

4.2 **Survival of Obligations.** The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.

4.3 **Related Agreements.** Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. **General Payment Terms.** The Interconnecting Customer shall be responsible for the System Modification costs and payment terms identified in Attachment 3 of this Agreement and any approved cost increases pursuant to the terms of the Interconnection Tariff. If the system modifications exceed \$25,000, Attachment 3 will include a payment and construction schedule for both parties.

5.1 **Cost or Fee Adjustment Procedures.** The Company will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed up to a total amount of increase of 10% only. Any such changes to the

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### **Exhibit H – Interconnection Service Agreement**

Company's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Company's notice of increase, authorize such increase and make payment in the amount up to the 10% increase cap, or the Company will suspend the work and the corresponding agreement will terminate.

**5.2 Final Accounting.** The Company within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement and all Company work orders have been closed, shall provide Interconnecting Customer with a final accounting report of any difference between the (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications and for any Impact or Detailed Study performed by the Company, and (b) Interconnecting Customer's previous aggregate payments to the Company for such System Modifications and studies. Costs that are statutorily-based shall not be subject to either a final accounting or reconciliation under this provision (e.g. statutorily set study fees for the ISRDG), but may be reconciled at any time only if the costs exceed the statutory fee, and the Company seeks to collect actual costs in accordance with the applicable statute. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement for the System Modifications and in the Impact and/or Detailed Study Agreements (as applicable) for the studies performed by the Company exceeds Interconnecting Customer's previous aggregate payments, the Company shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Company within forty five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this applicable agreement, the Company shall refund to Interconnecting Customer an amount equal to the difference within forty five (45) days of the provision of such final accounting report.

## **6. Operating Requirements**

**6.1 General Operating Requirements.** Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Company's Interconnection Tariff. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Company has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Company EPS, the Company has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Company may require disconnection as outlined in Section 7.0 of the Interconnection Tariff. The cost of this testing will be borne by the Company unless the Company demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

**6.2 No Adverse Effects; Non-interference.** Company shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other customers served from the same Company EPS or if operation of the Facility could cause damage to Company EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547-2003, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Company will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Company EPS, and such normal disturbances shall not constitute unreasonable interference unless the Company has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Company EPS, and outages on the Company EPS. If the Interconnecting Customer demonstrates that the Company EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Company deviation from Good Utility Practice, the Company shall take appropriate action to eliminate the adverse effect.

**6.3 Safe Operations and Maintenance.** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Company and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Company's EPS, personnel, and other persons from damage and injury.

**6.4 Access.** The Company shall have access to the disconnect switch of the Facility at all times.

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### Exhibit H – Interconnection Service Agreement

**6.4.1 Company and Interconnecting Customer Representatives.** Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

**6.4.2 Company Right to Access Company-Owned Facilities and Equipment.** If necessary for the purposes of the Interconnection Tariff and in the manner it describes, the Interconnecting Customer shall allow the Company access to the Company's equipment and the Company's facilities located on the Interconnecting Customer's or Customer's premises. To the extent that the Interconnecting Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Tariff, the Interconnecting Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

**6.4.3 Right to Review Information.** The Company shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Company EPS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.4 in the Interconnection Tariff.

## 7. Disconnection

### 7.1 Temporary Disconnection

**7.1.1 Emergency Conditions.** Company shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Company, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Company EPS or to the electric systems of others to which the Company EPS is directly connected. Company shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Company promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Company EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

**7.1.2 Routine Maintenance, Construction and Repair.** Company shall have the right to disconnect the Facility from the Company EPS when necessary for routine maintenance, construction and repairs on the Company EPS. The Company shall provide the Interconnecting Customer with a minimum of seven (7) calendar days planned outage notification consistent with the Company's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Company at the PCC, the Interconnecting Customer will provide a minimum of seven (7) days notice to the Company. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Company shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

**7.1.3 Forced Outages.** During any forced outage, Company shall have the right to suspend interconnection service to effect immediate repairs on the Company EPS; provided, however, Company shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Company may interrupt Interconnection Service and disconnect the Facility from the Company EPS without such notice.

**7.1.4 Non-Emergency Adverse Operating Effects.** The Company may disconnect the Facility if the Facility is having an adverse operating effect on the Company EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of forty five (45) days to correct such adverse operating effect has elapsed.

**7.1.5 Modification of the Facility.** Company shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Company.

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**Exhibit H – Interconnection Service Agreement**

**7.1.6 Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Company shall cooperate with each other to restore the Facility and the Company EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

**7.2 Permanent Disconnection.** The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Company.

**7.2.1** The Company may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

**8. Metering.** Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Tariff.

**9. Assignment.** Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without Company's written consent. Any assignment Interconnecting Customer purports to make without Company's written consent shall not be valid. Company shall not unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement. Notwithstanding the above, Company's consent will not be required for any assignment made by Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction. In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless, and until the assignee assumes in writing all obligations of this Agreement and notifies the Company of such assumption.

**10. Confidentiality.** Company shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Tariff, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.

**11. Insurance Requirements.**

**11.1 General Liability.**

11.1(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:

i. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.

ii. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;

iii. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;

iv. Five hundred thousand dollars (\$500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for eligible net metered customers which are exempt from insurance requirements.

11.1(b) No insurance is required for a Facility with a Gross Nameplate Rating less than or equal to 50 kW that is eligible for net metering. However, the Company recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

11.1(c) Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

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11.1(d) The general liability insurance required to be purchased in this Section may be purchased for the direct benefit of the Company and shall respond to third party claims asserted against the Company (hereinafter known as “Owners Protective Liability”). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Company and the Company will be designated as the primary and “Named Insured” under the policy.

11.1(e) The insurance hereunder is intended to provide coverage for the Company solely with respect to claims made by third parties against the Company.

11.1(f) In the event the State of Rhode Island and the Providence Plantations, or any other governmental subdivision thereof subject to the claims limits of R.I.G.L. Chapter 9-31 (hereinafter referred to as the “Governmental Entity”) is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance company from interposing the claims limits of R.I.G.L. Chapter 9-31 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Company. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of R.I.G.L. Chapter 9-31 by the Governmental Entity.

**11.2 Insurer Requirements and Endorsements.** All required insurance shall be carried by reputable insurers qualified to underwrite insurance in RI having a Best Rating of “A-”. In addition, all insurance shall, (a) include Company as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Company shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days’ written notice to Company prior to cancellation, termination, or material change of such insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (e) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Company as required above.

**11.3 Evidence of Insurance.** Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Company with evidence of insurance in compliance with the Interconnection Tariff on an annual basis.

Prior to the Company commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Company certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Company a certificate of insurance for any policy written on a "claims-made" basis. The Interconnecting Customer will maintain extended reporting coverage for three (3) years on all policies written on a "claims-made" basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Company.

11.4 All insurance certificates, statements of self insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued, updated and submitted yearly to the following:

**Rhode Island Energy**  
Attention: **Risk Management**  
**280 Melrose Street**  
**Providence RI, 02907**

12. **Indemnification.** Except as precluded by the laws of the State of Rhode Island and the Providence Plantations, Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.

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13. **Limitation of Liability.** Each Party’s liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and reasonable attorney’s fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.

14. **Amendments and Modifications.** No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.

15. **Permits and Approvals.** Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the Interconnecting Customer will notify the Company that it has initiated the permitting process. Prior to the commercial operation of the Facility, the Customer will notify the Company that it has obtained all permits necessary. Upon request, the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Company.

16. **Force Majeure.** For purposes of this Agreement, “Force Majeure Event” means any event:

- a. that is beyond the reasonable control of the affected Party; and
- b. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lighting, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.

17. **Notices.**

17.1 Any written notice, demand, or request required or authorized in connection with this Agreement (“Notice”) shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person specified below:

If to Company: **Rhode Island Energy**  
Attention: **Distributed Generation**  
**280 Melrose Street**  
**Providence RI, 02907**  
E-mail: **CAP@rienergy.com**

If to Interconnecting Customer: **Robin Hollow Solar, LLC**  
Attention: **Ryan Palumbo**  
**117 Metro Center Boulevard, Suite 1007**  
**Warwick, RI 02886**  
Phone: **401-829-0893**  
E-mail: **ryan@revityenergy.com**

17.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 17.1.

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17.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.

**18. Default and Remedies**

18.1 Defaults. Any one of the following shall constitute "An Event of Default."

- i. One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, any such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or
- ii. One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.

18.2 Remedies. Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:

- a. Continue to perform and enforce this Agreement;
- b. Recover damages from the defaulting Party except as limited by this Agreement;
- c. By written notice to the defaulting Party terminate this Agreement;
- d. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.

19. **Entire Agreement.** This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Tariff. Together the Agreement and the Interconnection Tariff represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Company's Interconnection Tariff.

20. **Supercedence.** In the event of a conflict between this Agreement, the Interconnection Tariff, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Tariff, as the same may be amended from time to time, shall control. In the event that the Company files a revised tariff related to interconnection for Commission approval after the effective date of this Agreement, the Company shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.

21. **Governing Law.** This Agreement shall be interpreted, governed, and construed under the laws of the State of Rhode Island and the Providence Plantations without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

22. **Non-waiver.** None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

23. **Counterparts.** This Agreement may be signed in counterparts.

24. **No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care with respect to, or any liability to, any person not a party to this Agreement.

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25. **Dispute Resolution.** Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Tariff.
26. **Severability.** If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.
27. **Signatures.** IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to be executed under seal by their duly authorized representatives.

Robin Hollow Solar, LLC:

Name: Ryan Palumbo  
Title: Vice President  
Date: 7/20/22  
Signature: [Handwritten Signature]

The Narragansett Electric Company (d/b/a Rhode Island Energy):

Name: Erica Russell Salk  
Title: Manager, CEI  
Date: 07-29-2022  
Signature: Erica Russell Salk



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**Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling**

Interconnecting Customer has proposed a 8,750 kW photovoltaic system located at 18 Weaver Hill Road, West Greenwich, RI 02817. The proposed Facility is an Independent Power Producer (“IPP”). Facilities will interconnect to the Rhode Island Energy electric system via the Kent County Substation, 34.5 kV distribution feeder 3309, (“Point of Interconnection” or “POI”).

**a. Description of proposed design/configuration:**

- i. Thirty-five (35) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 8,7500 kW / kVA of inverter-based PV.
- ii. Three (3) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 7.1.
- iii. One (1) Customer owned 1,500kVA, 34.5 kV Delta primary, 800V wye-ungrounded secondary padmounted interface transfromer with an impedance of  $Z=5.75$  along with X/R ration of 7.1
- iv. One (1) Customer owned padmounted switchgear VFI 38kV, 600A, 12.5KA-ISC, with SEL-751 relay assembly.
- v. One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- vi. One (1) Customer owned three phase 125E, 38kV cutout fused.

**b. Metering:** The company will install (1) pole-mounted primary meter, please refer to ESB 750 and ESB 756 Appendix D for service installation and primary/secondary meter installation.

**c. PCC:** The Company’s Design Personnel will determine the exact location of the Company’s facilities and the Customer’s gang operated disconnect. The Customer’s gang operated disconnect must be accessible by the Company’s personnel at all times, and be capable of being locked open and tagged by Company personnel. The Point of Common Coupling (PCC) will be designated as the Customer’s side of the Company’s primary meter. The Interconnecting Customer must install their Facilities up to the Company revenue meter. The Interconnecting Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Interconnecting Customer conductors to the Company meter.

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**Attachment 2: Description of System Modifications**

Rhode Island Energy System Modifications required for the interconnection of 8750 kW (AC) application as identified in the impact study are as follows:

**On the Customer's property:**

- Install ~1,100 circuit feet of 3-477 AAC,
- One (1) 35 kV load break switch
- One (1) 35 kV recloser
- Two disconnect switches
- Six (6) primary meters along with six (6) disconnect switches at the PCC.
- Install Twenty three (23) poles include project numbers for the 6 sites

**On the Company's distribution system:**

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Reivity Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed riser pole on Customer property.
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
- Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI

**Civil construction (designed and installed by others) ("Third Party Ductbank"):**

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.

**Civil construction (work anticipated to be completed by Reivity) ("Reivity Ductbank")**

- Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install duct system (~600 feet) between previously constructed 3-way MH on Hopkins Hill Road and previous constructed 3-way MH at the intersection of Hopkins Hill Road and Division Road. Rhode Island Energy to provide civil design including drawings to Customer to construct this portion.
- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Reivity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer). Customer to provide civil design including drawings per Distributed Generation: Minimum Self-Performance Requirements to construct this portion.
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self built by Customer) . Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance.
- Install MH and duct system (~3000 feet) from proposed riser pole on Hopkins Hill Road to 3-way MH on Hopkins Hill Road. Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance Requirements.
- The Interconnecting Customer will perform the civil construction for the manhole / duct system consistent with civil design plans provided by the Customer and approved by the Company per the per Distributed Generation: Minimum Self-Performance Requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company's civil design parameters and requirements, and 2) coordinate the schedule

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for the Interconnecting Customer civil construction . The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company provided civil design plans.

**At the Company’s substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company’s Terms and Conditions for Distribution Service, tariff R.I.P.U.C. No. 2180, as amended from time to time.

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**Attachment 3: Costs of System Modifications and Payment Terms**

This application is one of **seven projects** studied together with total system size of 40,700 kW (the “Related Projects”). This application’s size is 8,750kW and is 21.5% of the total aggregated Related Project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if one of the Related Project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company’s electric power System, the total common modification costs on the Company’s System will be re-estimated and reallocated among the remaining Related Projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the Related Projects group.

The total Company System Modification Costs (excluding the THIRD PARTY DUCTBANK and REVITY DUCTBANK) that will be performed by the Company and are associated with all Related Project applications are: **\$9,602,158 (+/- 25%)**. As of the ISA execution date, the System modification cost responsibility for this ISA is **\$1,952,743**.

In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is **\$11,761,595** as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated **\$6,116,029**. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 67.05% of this figure or **\$4,555,167** including tax. This application’s cost responsibility for the THIRD PARTY DUCTBANK will be **\$979,361** (such amount, the “Interconnecting Customer’s Cost Share Amount”).

Upon completion of construction of the THIRD PARTY DUCTBANK, Company will request the entity constructing the THIRD PARTY DUCTBANK to provide a cost summary (including a detailed accounting ledger for each line item presented on the cost summary) with the following supporting information: vendor name, date/dates of service, detailed description of service, copy of the cancelled check(s), and associated contract/purchase order/timeslip/certified payroll/etc. documents. Upon the receipt of all required documentation, the Company will audit and verify the proposed costs incurred by the third party and will adjust the Interconnecting Customer Cost Share Amount to reflect such reconciliation (which adjustment shall be reflected in an amended interconnection service agreement) for cost line items that, in whole or in part, do not qualify as an approved cost.

The Company will audit and verify the actual costs incurred to construct the REVITY DUCTBANK, and agrees that it will facilitate the sharing of such costs with all future parties (excluding the Related Projects) that occupy a common path of the REVITY DUCTBANK based on the distance of the common path and a pro rata megawatt share, and that any such cost sharing amount that is collected by the Company shall be disbursed to Revity Energy LLC.

The parties acknowledge and agree that the ability of the Company to assign and collect from an interconnecting customer any costs incurred by a third party in connection with its self-performance of interconnection work has been challenged in Docket No. 5235 (the “Petition”), which currently is pending before the Rhode Island Public Utilities Commission (“RIPUC”). Accordingly, the Company and Interconnecting Customer agree that Interconnection Customer’s payment of the Interconnecting Customer Cost Share Amount, and any collection of costs from a third party by the Company of the REVITY DUCTBANK costs, is expressly subject to any final ruling by the RIPUC on the Petition, and that the Company shall refund to Interconnection Customer any Interconnection Customer Cost Sharing Amount if and to the extent required by the RIPUC.

The Company System Modification Costs associated with this application (which do not include the THIRD PARTY DUCTBANK) are: **\$1,952,743 (+/- 25%)** and itemized as follows:

- Total cost of common system modifications on the Interconnecting Customer’s (or other private) property as mentioned in Attachment 2 above: **\$784,147** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048593, and the Interconnecting Customer will be responsible for 24.7% share or **\$193,684**.
- Total cost of common system modifications on the Company’s distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above is **\$6,106,255** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048593, and the Interconnecting Customer will be responsible for 24.7% share or **\$1,508,245**.
- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment ) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification

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Signing Customer Initials: RP

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will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 21.5% share or **\$3,784**.

- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$69,554**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 21.5% or **\$14,594**.
- Total cost of Rhode Island Energy Supervision associated with the REVITY DUCTBANK construction self-performed by Customer is **\$165,000**. The cost for the Supervision will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 21.5% share or **\$35,475**.
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 21.5% share or **\$344**.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: **\$3,494**.
- Tax gross-up adder on capital costs is or **\$193,123**. *(A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any other Related Project does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for the Facility and for the Related Projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The System modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The Total System Modifications Costs and the Facility System Modification Costs do not include any costs for Third Party Rights and Approvals (as defined in Attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the Total System Modifications Costs and the Facility System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party

**ISO-NE Planning Study**

Rhode Island Energy Transmission Planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) Planning Procedure 5-6 "Scope of Study for System Impact Studies under the Generation Interconnection Procedures" and Rhode Island Energy TGP28 "Transmission Planning Guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

**ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW and will be required to comply with ISO-NE's requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with

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all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in Telephone Company Maintenance Areas. These costs will be billed directly to the Interconnecting Customer from the Telephone Company.

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**Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (5%) of \$97,637 is due within 90 business days from when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. Proof of payment is required.
- The second payment (20%) of \$390,549 is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around 08/29/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The third payment (75%) of \$1,464,557 is due within 15 business days from the receipt of the third payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project, estimated to be on or around 01/05/2023. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The fourth payment of \$979,361 that is associated with this application's cost sharing responsibility for the THIRD PARTY DUCTBANK will be due prior to the Witness Test for this application being conducted.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021.

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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**Attachment 4: Special Operating Requirements, if any**

The generating system may only normally generate onto the 3309 feeder and Rhode Island Energy's Regional Control Center must first give permission to the Interconnecting Customer to allow the operation of their system. The generator may not be allowed to operate with the local electrical power system (EPS) in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may choose to disconnect the customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.

1. The Interconnecting Customer is required to adhere to the following standards which are incorporated in their entirety by reference:
  - a. Rhode Island Energy's Standards for Interconnecting Distributed Generation (R.I.P.U.C. 2180), available at: [http://www.nationalgridus.com/non\\_html/RJ\\_DG\\_Interconnection\\_Tariff.pdf](http://www.nationalgridus.com/non_html/RJ_DG_Interconnection_Tariff.pdf)
  - b. Electric System Bulletin 750 "Specifications for Electrical Installations". ESB 750, available at: [http://www.nationalgridus.com/non\\_html/shared\\_constr\\_esb750.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb750.pdf)
  - c. Electric System Bulletin 756 "Requirements for Parallel Generation Connected to a Rhode Island Energy -Owned EPS". ESB756D, available at: [www.nationalgridus.com/non\\_html/shared\\_constr\\_esb756.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb756.pdf)
  - d. Distributed Generation: Minimum Self-Performance Requirements
2. The Interconnecting Customer is required to address any outstanding requirements (that are not explicitly addressed herein), which are described in the most recent application review memo and/or study report (which is hereby incorporated in its entirety) provided by the Company on or prior to the Effective Date of this Interconnection Service Agreement.
  - a. If the Effective Date of this Interconnection Service Agreement precedes the issuance of a required Detailed Study by the Company, the Interconnecting Customer is also required to address any outstanding requirements described in the Detailed Study Report upon its issuance.
3. Interconnecting Customer shall adhere to the requirements identified in the Impact Study dated 4/21/2021
4. Interconnecting Customer shall provide Compliance Documentation, including photographs, as requested by, and to the satisfaction of, the Company.
5. Interconnecting Customer may not be allowed to operate with the local EPS in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may disconnect the Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.
6. Per section 6.4 of this agreement, Interconnecting Customer shall provide an external AC UTILITY DISCONNECT, accessible at all times by Rhode Island Energy personnel.
7. Interconnecting Customer's AC UTILITY DISCONNECT switch shall be labeled "AC UTILITY DISCONNECT".
8. The AC UTILITY DISCONNECT shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Company side by Company personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Company shall have the right to open this disconnect switch in accordance with the Interconnection Tariff. The switch has to be installed at the DR output on the current carrying lines. Shunt mechanisms are not permitted.
9. If the AC UTILITY DISCONNECT switch is not adjacent to the meter and/or PCC, Interconnecting Customer shall provide a permanent plaque locating the switch.
10. All plaques as described in NEC 705.10, 705.12 (7), 690.56, 692.4 and 705.70 shall be installed, as applicable.
11. All Interconnecting Customer-Owned meters shall be labeled "CUSTOMER-OWNED METER"



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12. Interconnecting Customer shall install a permanent plaque or directory at the revenue meter and at the PCC with a warning about the generator(s) installed.
13. Interconnecting Customer shall be responsible for providing necessary easements and/or environmental and/or municipal permits, as requested by the Company.
14. For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the Rhode Island Energy revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or – in locations with suitable wireless service, a wireless meter. Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of Rhode Island Energy . If approved, a wireless-enabled meter will be installed, at the customer's expense. If and when Rhode Island Energy 's retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to Rhode Island Energy 's revenue meter is provided.
15. For systems with redundant relaying, Company witness testing will be required. Customer shall develop, and provide for approval, a functional test procedure, including settings for relaying scheme. Witness test plan must be approved by Company prior to scheduling Company personnel for witness test.
16. Interconnecting Customer may only generate onto the feeder referenced in the Impact Study. Rhode Island Energy 's Regional Control Center must first give permission to the customer to allow the operation of their system.
17. Interconnecting Customer's protection scheme submitted for review must meet Rhode Island Energy 's specific protection requirements. Interconnecting Customer shall submit a PE stamped one-line, including relay settings, that meets the requirements specified within this document to Rhode Island Energy for review and approval, before a Witness Test plan can be reviewed. Please refer to "Expedited/Standard Process Completion Documentation Checklist", per Company's website for additional required documentation.
18. In order to minimize the impact of the proposed generation on the EPS and area customers, Rhode Island Energy will require that the reactive contribution of the PV interconnection be maintained between a 99% leading and lagging power factor at the PCC during the normal operation of the PV array. In addition, the PV interconnection shall not contribute to greater than a 3.0% change in voltage on the Rhode Island Energy EPS under any conditions.
19. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements. The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.
20. The Interconnecting Customer is responsible for coordinating with Verizon for any Verizon work. These costs will be billed directly to the customer from Verizon. It will be the responsibility of the customer to obtain any and all easements and required permitting for work that takes place on private property.

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**Attachment 5: Agreement between the Company and the Company's Retail Customer**

If the Company's Retail Customer (account holder) is not the owner (and/or operator) of the Facility, then Exhibit I - Agreement Between the Company and the Company's Retail Customer - shall be signed by the Company's Retail Customer and executed by the Company, and shall be considered part of this Interconnection Service Agreement. It shall be the responsibility of the Interconnecting Customer to notify the Company if the Exhibit I associated with this application changes.

**Attachment 6: System Modifications Construction Schedule**

Below is an estimated construction schedule. This schedule is conceptual, and shows the duration of the facility's milestones from a "start-date" to an "in-service" date, in calendar days. This conceptual schedule is based upon assumptions and knowledge regarding the project, the site, and activities as of the date of the impact study. These estimations of construction time frames and total duration do not include any time that the Company's performance is on hold, delayed, or interrupted, including, without limitation, while waiting on information or on the performance of obligations by the Interconnecting Customer and/or third parties (including, without limitation, Verizon, ISO-NE, Railroad), as a result of unknown environmental and/or permitting issues, events of force majeure, and/or as a result of required transmission outages.

The start-date for this construction schedule is deemed to have occurred once : (1) the Interconnection Service Agreement ("ISA") has been executed (i.e., signed) by both Rhode Island Energy ("Company") and the Interconnecting Customer ("Customer"); and (2) the first payment has been submitted by the Customer to the Company, provided , however, that the Company shall not be required to provide any services or order any equipment without receiving adequate payment therefore from the Interconnecting Customer nor will it be required to initiate any construction before it has received full payment from the Interconnecting Customer.

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**Attachment 6 - Appendix A: System Modifications Construction Schedule**

Total Duration for engineering, permitting,— procurement and construction of Distribution System Modification: 63 weeks to provide back-feed power to Customer

Milestone	Estimated Duration	Responsible Party
Company has received first payment	Start	Customer
Overhead and Underground Distribution System Modification Design	7 weeks	Customer/Company
2nd Payment Due	As per ISA	
Secure and obtain any and all rights, consents environmental permits approval and easement as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third party owned property (as well as for underground civil scope of public way)	16 weeks	Customer/Company
Submit Final Payment	As per ISA	
Distribution system Schedule Coordination and Construction (excluding construction of underground civil scope on public way to be completed by Interconnecting Customer, and supervised by Company appointed full-time civil inspectors, which is required Company to start construction)	27 weeks	Company
Construction Construction (Customer construction can be done in parallel with company construction)	13 weeks	Customer

Project schedule is dependent, among other things, on Interconnecting Customer construction of civil scope on time and to the satisfaction of Rhode Island Energy and for required cable size in respect to this project to be installed per the applicable third-party project schedule.

1 Construction for underground civil scope to be performed by Customer. Further, all Customer performed civil construction work shall be reviewed and approved by Company prior to backfilling by Customer.

The estimated schedule assumes standard tariff timeframe for both submittals and approvals. If submittal exceed tariff standards they may be extended accordingly.

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**Exhibit H – Interconnection Service Agreement**

1. **Parties.** This Interconnection Service Agreement (“Agreement”), dated as of 08-04-2022 (“Effective Date”) is for application number “29048568” and Case Number “281651” is entered into, by and between The Narragansett Electric Company (doing business as Rhode Island Energy ), a Rhode Island corporation with a principal place of business at 280 Melrose St., Providence, RI 02907 (hereinafter referred to as the “Company”), and Robin Hollow Solar, LLC, a Rhode Island limited liability company with a principal place of business (or residence) at 117 Metro Center Boulevard, Suite 1007, Wariwck, RI 02886 (“Interconnecting Customer” or “Customer”). (The Company and Interconnecting Customer are collectively referred to as the “Parties”). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Tariff which is hereby incorporated by reference.

2. **Basic Understandings.** This Agreement provides for parallel operation of an Interconnecting Customer’s Facility with the Company EPS to be installed and operated by the Interconnecting Customer at 18 Weaver Hill Road, West Greenwich, RI 02817. A description of the Facility is located in Attachment 1. If the Interconnecting Customer is not the Retail Customer, an Agreement between the Company and the Company’s Retail Customer, attached as Exhibit I to the Interconnection Tariff, must be signed and included as an Attachment to this Agreement.

The Interconnecting Customer has the right to operate its Facility in parallel with the Company EPS immediately upon successful completion of the protective relays testing as witnessed by the Company and receipt of written notice from the Company that interconnection with the Company EPS is authorized (“Authorization Date”).

3. **Term.** This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.

4. **Termination.**

4.1 This Agreement may be terminated under the following conditions.

4.1.1 The Parties agree in writing to terminate the Agreement.

4.1.2 The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Company.

4.1.3 The Company may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.

4.1.4 The Company may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.

4.1.5 The Company, upon 30 days notice, may terminate this Agreement if there are any changes in Commission regulations or state law that have a material adverse effect on the Company’s ability to perform its obligations under the terms of this Agreement.

4.2 **Survival of Obligations.** The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.

4.3 **Related Agreements.** Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. **General Payment Terms.** The Interconnecting Customer shall be responsible for the System Modification costs and payment terms identified in Attachment 3 of this Agreement and any approved cost increases pursuant to the terms of the Interconnection Tariff. If the system modifications exceed \$25,000, Attachment 3 will include a payment and construction schedule for both parties.

5.1 **Cost or Fee Adjustment Procedures.** The Company will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed up to a total amount of increase of 10% only. Any such changes to the

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Company's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Company's notice of increase, authorize such increase and make payment in the amount up to the 10% increase cap, or the Company will suspend the work and the corresponding agreement will terminate.

**5.2 Final Accounting.** The Company within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement and all Company work orders have been closed, shall provide Interconnecting Customer with a final accounting report of any difference between the (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications and for any Impact or Detailed Study performed by the Company, and (b) Interconnecting Customer's previous aggregate payments to the Company for such System Modifications and studies. Costs that are statutorily-based shall not be subject to either a final accounting or reconciliation under this provision (e.g. statutorily set study fees for the ISR DG), but may be reconciled at any time only if the costs exceed the statutory fee, and the Company seeks to collect actual costs in accordance with the applicable statute. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement for the System Modifications and in the Impact and/or Detailed Study Agreements (as applicable) for the studies performed by the Company exceeds Interconnecting Customer's previous aggregate payments, the Company shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Company within forty five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this applicable agreement, the Company shall refund to Interconnecting Customer an amount equal to the difference within forty five (45) days of the provision of such final accounting report.

## 6. Operating Requirements

**6.1 General Operating Requirements.** Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Company's Interconnection Tariff. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Company has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Company EPS, the Company has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Company may require disconnection as outlined in Section 7.0 of the Interconnection Tariff. The cost of this testing will be borne by the Company unless the Company demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

**6.2 No Adverse Effects; Non-interference.** Company shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other customers served from the same Company EPS or if operation of the Facility could cause damage to Company EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547-2003, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Company will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Company EPS, and such normal disturbances shall not constitute unreasonable interference unless the Company has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Company EPS, and outages on the Company EPS. If the Interconnecting Customer demonstrates that the Company EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Company deviation from Good Utility Practice, the Company shall take appropriate action to eliminate the adverse effect.

**6.3 Safe Operations and Maintenance.** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Company and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Company's EPS, personnel, and other persons from damage and injury.

**6.4 Access.** The Company shall have access to the disconnect switch of the Facility at all times.

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**6.4.1 Company and Interconnecting Customer Representatives.** Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

**6.4.2 Company Right to Access Company-Owned Facilities and Equipment.** If necessary for the purposes of the Interconnection Tariff and in the manner it describes, the Interconnecting Customer shall allow the Company access to **the Company's equipment and the Company's facilities located on the Interconnecting Customer's or Customer's premises.** To the extent that the Interconnecting Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Tariff, the Interconnecting Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

**6.4.3 Right to Review Information.** The Company shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Company EPS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.4 in the Interconnection Tariff.

**7.1 Temporary Disconnection**

**7.1.1 Emergency Conditions.** Company shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Company, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Company EPS or to the electric systems of others to which the Company EPS is directly connected. Company shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Company promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Company EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

**7.1.2 Routine Maintenance, Construction and Repair.** Company shall have the right to disconnect the Facility from the Company EPS when necessary for routine maintenance, construction and repairs on the Company EPS. The Company shall provide the Interconnecting Customer with a minimum of seven (7) calendar days planned outage notification consistent with the Company's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Company at the PCC, the Interconnecting Customer will provide a minimum of seven (7) days notice to the Company. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Company shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

**7.1.3 Forced Outages.** During any forced outage, Company shall have the right to suspend interconnection service to effect immediate repairs on the Company EPS; provided, however, Company shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Company may interrupt Interconnection Service and disconnect the Facility from the Company EPS without such notice.

**7.1.4 Non-Emergency Adverse Operating Effects.** The Company may disconnect the Facility if the Facility is having an adverse operating effect on the Company EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of forty five (45) days to correct such adverse operating effect has elapsed.

**7.1.5 Modification of the Facility.** Company shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Company.

**7.1.6 Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Company shall cooperate with each other to restore the Facility and

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the Company EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

**7.2 Permanent Disconnection.** The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Company.

**7.2.1** The Company may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

**8. Metering.** Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Tariff.

**9. Assignment.** Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without Company's written consent. Any assignment Interconnecting Customer purports to make without Company's written consent shall not be valid. Company shall not unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement. Notwithstanding the above, Company's consent will not be required for any assignment made by Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction. In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless, and until the assignee assumes in writing all obligations of this Agreement and notifies the Company of such assumption.

**10. Confidentiality.** Company shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Tariff, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.

**11. Insurance Requirements.**

**11.1 General Liability.**

**11.1(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:**

- i. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.
- ii. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;
- iii. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;
- iv. Five hundred thousand dollars (\$500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for eligible net metered customers which are exempt from insurance requirements.

**11.1(b)** No insurance is required for a Facility with a Gross Nameplate Rating less than or equal to 50 kW that is eligible for net metering. However, the Company recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

**11.1(c)** Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

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11.1(d) The general liability insurance required to be purchased in this Section may be purchased for the direct benefit of the Company and shall respond to third party claims asserted against the Company (hereinafter known as “Owners Protective Liability”). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Company and the Company will be designated as the primary and “Named Insured” under the policy.

11.1(e) The insurance hereunder is intended to provide coverage for the Company solely with respect to claims made by third parties against the Company.

11.1(f) In the event the State of Rhode Island and the Providence Plantations, or any other governmental subdivision thereof subject to the claims limits of R.I.G.L. Chapter 9-31 (hereinafter referred to as the “Governmental Entity”) is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance company from interposing the claims limits of R.I.G.L. Chapter 9-31 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Company. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of R.I.G.L. Chapter 9-31 by the Governmental Entity.

**11.2 Insurer Requirements and Endorsements.** All required insurance shall be carried by reputable insurers qualified to underwrite insurance in RI having a Best Rating of “A-”. In addition, all insurance shall, (a) include Company as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Company shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days’ written notice to Company prior to cancellation, termination, or material change of such insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (e) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Company as required above.

**11.3 Evidence of Insurance.** Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Company with evidence of insurance in compliance with the Interconnection Tariff on an annual basis.

Prior to the Company commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Company certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Company a certificate of insurance for any policy written on a “claims-made” basis. The Interconnecting Customer will maintain extended reporting coverage for three (3) years on all policies written on a “claims-made” basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Company.

11.4 All insurance certificates, statements of self insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued, updated and submitted yearly to the following:

**Rhode Island Energy**  
Attention: **Risk Management**  
**280 Melrose Street**  
**Providence RI, 02907**

12. **Indemnification.** Except as precluded by the laws of the State of Rhode Island and the Providence Plantations, Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.



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13. **Limitation of Liability.** Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.

14. **Amendments and Modifications.** No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.

15. **Permits and Approvals.** Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the Interconnecting Customer will notify the Company that it has initiated the permitting process. Prior to the commercial operation of the Facility, the Customer will notify the Company that it has obtained all permits necessary. Upon request, the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Company.

16. **Force Majeure.** For purposes of this Agreement, "Force Majeure Event" means any event:

- a. that is beyond the reasonable control of the affected Party; and
- b. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lighting, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.

17. **Notices.**

17.1 Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person specified below:

If to Company: **Rhode Island Energy**

Attention: **Distributed Generation**  
**280 Melrose Street**  
**Providence RI, 02907**  
E-mail: **CAP@rienergy.com**

If to Interconnecting Customer: **Robin Hollow Solar, LLC**

Attention: **Ryan Palumbo**  
**117 Metro Center Boulevard, Suite 1007**  
**Warwick, RI 02886**  
Phone: **401-829-0893**  
E-mail: **ryan@revityenergy.com**

17.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 17.1.

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17.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.

**18. Default and Remedies**

**18.1 Defaults.** Any one of the following shall constitute "An Event of Default."

- i. One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, any such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or
- ii. One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.

**18.2 Remedies.** Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:

- a. Continue to perform and enforce this Agreement;
- b. Recover damages from the defaulting Party except as limited by this Agreement;
- c. By written notice to the defaulting Party terminate this Agreement;
- d. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.

19. **Entire Agreement.** This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Tariff. Together the Agreement and the Interconnection Tariff represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Company's Interconnection Tariff.

20. **Supercedence.** In the event of a conflict between this Agreement, the Interconnection Tariff, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Tariff, as the same may be amended from time to time, shall control. In the event that the Company files a revised tariff related to interconnection for Commission approval after the effective date of this Agreement, the Company shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.

21. **Governing Law.** This Agreement shall be interpreted, governed, and construed under the laws of the State of Rhode Island and the Providence Plantations without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

22. **Non-waiver.** None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

23. **Counterparts.** This Agreement may be signed in counterparts.

24. **No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care with respect to, or any liability to, any person not a party to this Agreement.

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25. **Dispute Resolution.** Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Tariff.

26. **Severability.** If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.

27. **Signatures.** IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to be executed under seal by their duly authorized representatives.

Robin Hollow Solar, LLC:

Name: Ryan Palumbo

Title: Vice President

Date: 8/02/2022

Signature: Ryan Palumbo

The Narragansett Electric Company (d/b/a Rhode Island Energy):

Name: Erica Russell Salk

Title: Manager, CEI

Date: 08-04-2022

Signature: Erica Russell Salk

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**Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling**

Interconnecting Customer has proposed a 200 kW photovoltaic system located at 18 Weaver Hill Road, West Greenwich, RI 02817. The proposed Facility is an Independent Power Producer (“IPP”). Facilities will interconnect to the Rhode Island Energy electric system via the Kent County Substation, 34.5 kV distribution feeder 3309, (“Point of Interconnection” or “POI”).

**a. Description of proposed design/configuration:**

- i. One (1) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters derated to 200kW / kVA for a total of 200kW / kVA of inverter-based PV.
- ii. One (1) Customer owned 250 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 3.5.
- iii. One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- iv. One (1) Customer owned three phase 5E, 38kV cutout fused.

**b. Metering:** The company will install (1) pole-mounted primary meter, please refer to ESB 750 and ESB 756 Appendix D for service installation and primary/secondary meter installation.

**c. PCC:** The Company’s Design Personnel will determine the exact location of the Company’s facilities and the Customer’s gang operated disconnect. The Customer’s gang operated disconnect must be accessible by the Company’s personnel at all times, and be capable of being locked open and tagged by Company personnel. The Point of Common Coupling (PCC) will be designated as the Customer’s side of the Company’s primary meter. The Interconnecting Customer must install their Facilities up to the Company revenue meter. The Interconnecting Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Interconnecting Customer conductors to the Company meter.

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**Attachment 2: Description of System Modifications**

Rhode Island Energy System Modifications required for the interconnection of 200kW (AC) application as identified in the impact study are as follows:

**On the Customer's property:**

- Install ~1,100 circuit feet of 3-477 AAC,
- One (1) 35 kV load break switch
- One (1) 35 kV recloser
- Two disconnect switches
- Six (6) primary meters along with six (6) disconnect switches at the PCC.
- Install Twenty three (23) poles include project numbers for the 6 sites

**On the Company's distribution system:**

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road. .
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revy Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revy Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed riser pole on Customer property.
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
- Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI

**Civil construction (designed and installed by others) ("Third Party Ductbank"):**

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.

**Civil construction (work anticipated to be completed by Revity) ("Revity Ductbank")**

- Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road (Revy Energy POI).
- Install duct system (~600 feet) between previously constructed 3-way MH on Hopkins Hill Road and previous constructed 3-way MH at the intersection of Hopkins Hill Road and Division Road. Rhode Island Energy to provide civil design including drawings to Customer to construct this portion.
- a. Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Revy Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer). Customer to provide civil design including drawings per Distributed Generation: Minimum Self-Performance Requirements to construct this portion.
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self built by Customer) . Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance.
- Install MH and duct system (~3000 feet) from proposed riser pole on Hopkins Hill Road to 3-way MH on Hopkins Hill Road. Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance Requirements.
- The Interconnecting Customer will perform the civil construction for the manhole / duct system consistent with civil design plans provided by the Customer and approved by the Company per the per Distributed Generation: Minimum Self-Performance Requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company's civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer civil construction . The Interconnecting Customer agrees that 1) civil installation

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work performed and 2) all materials provided will be in strict conformance with the Company provided civil design plans.

**At the Company’s substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company’s Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

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**Attachment 3: Costs of System Modifications and Payment Terms**

This application is one of seven projects studied together with total system size of 40,700 kW (the “Related Projects”). This application’s size is 200kW and is 0.5% of the total aggregated Related Project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if one of the Related Project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company’s electric power System, the total common modification costs on the Company’s System will be re-estimated and reallocated among the remaining Related Projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the Related Projects group.

The total Company System Modification Costs (excluding the THIRD PARTY DUCTBANK and REVITY DUCTBANK) that will be performed by the Company and are associated with all Related Project applications are: **\$9,602,158** (+/- 25%). As of the ISA execution date, the System modification cost responsibility for this ISA is **\$47,371**.

In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is **\$11,761,595** as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated **\$6,116,029**. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 67.05% of this figure or **\$4,555,167** including tax. This application’s cost responsibility for the THIRD PARTY DUCTBANK will be **\$22,776** (such amount, the “Interconnecting Customer’s Cost Share Amount”).

Upon completion of construction of the THIRD PARTY DUCTBANK, Company will request the entity constructing the THIRD PARTY DUCTBANK to provide a cost summary (including a detailed accounting ledger for each line item presented on the cost summary) with the following supporting information: vendor name, date/dates of service, detailed description of service, copy of the cancelled check(s), and associated contract/purchase order/timeslip/certified payroll/etc. documents. Upon the receipt of all required documentation, the Company will audit and verify the proposed costs incurred by the third party, and will adjust the Interconnecting Customer Cost Share Amount to reflect such reconciliation (which adjustment shall be reflected in an amended interconnection service agreement) for cost line items that, in whole or in part, do not qualify as an approved costs.

The Company will audit and verify the actual costs incurred to construct the REVITY DUCTBANK, and agrees that it will facilitate the sharing of such costs with all future parties (excluding the Related Projects) that occupy a common path of the REVITY DUCTBANK based on the distance of the common path and a pro rata megawatt share, and that any such cost sharing amount that is collected by the Company shall be disbursed to Revity Energy LLC.

The parties acknowledge and agree that the ability of the Company to assign and collect from an interconnecting customer any costs incurred by a third party in connection with its self-performance of interconnection work has been challenged in Docket No. 5235 (the “Petition”), which currently is pending before the Rhode Island Public Utilities Commission (“RIPUC”). Accordingly, the Company and Interconnecting Customer agree that Interconnection Customer’s payment of the Interconnecting Customer Cost Share Amount, and any collection of costs from a third party by the Company of the REVITY DUCTBANK costs, is expressly subject to any final ruling by the RIPUC on the Petition, and that the Company shall refund to Interconnection Customer any Interconnection Customer Cost Sharing Amount if and to the extent required by the RIPUC.

The Company System Modification Costs associated with this application (which do not include the THIRD PARTY DUCTBANK) are: **\$47,371** (+/- 25%) and itemized as follows:

- Total cost of common system modifications on the Interconnecting Customer’s (or other private) property as mentioned in Attachment 2 above: **\$784,147** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048593, and the Interconnecting Customer will be responsible for 0.6% share or **\$4,705**.
- Total cost of common system modifications on the Company’s distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above is **\$6,106,255** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048593, and the Interconnecting Customer will be responsible for 0.6% share or **\$36,638**.
- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment ) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification

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will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 0.5% share or **\$88.00**.

- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$69,554**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 0.5% or **\$348**.
- Total cost of Rhode Island Energy Supervision associated with the REVITY DUCTBANK construction self-performed by Customer is **\$165,000**. The cost for the Supervision will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 0.5% share or **\$825**.
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 0.5% share or **\$8.00**.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: **\$81.00**.
- Tax gross-up adder on capital costs is or **\$4,678**. *(A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any other Related Project does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for the Facility and for the Related Projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The System modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The Total System Modifications Costs and the Facility System Modification Costs do not include any costs for Third Party Rights and Approvals (as defined in Attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the Total System Modifications Costs and the Facility System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party

**ISO-NE Planning Study**

Rhode Island Energy Transmission Planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) Planning Procedure 5-6 "Scope of Study for System Impact Studies under the Generation Interconnection Procedures" and Rhode Island Energy TGP28 "Transmission Planning Guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

**ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW and will be required to comply with ISO-NE's requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

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Additional costs may be involved if the required pole work takes place in Telephone Company Maintenance Areas. These costs will be billed directly to the Interconnecting Customer from the Telephone Company.

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**Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (5%) of **\$2,369** is due within 90 business days from when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. Proof of payment is required.
- The second payment (20%) of **\$9,474** is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around 08/29/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The third payment (75%) of **\$35,528** is due within 15 business days from the receipt of the third payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project, estimated to be on or around 01/05/2023. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The fourth payment of **\$22,776** that is associated with this application's cost sharing responsibility for the THIRD PARTY DUCTBANK will be due prior to the Witness Test for this application being conducted.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021.

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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**Exhibit H – Interconnection Service Agreement**

**Attachment 4: Special Operating Requirements, if any**

The generating system may only normally generate onto the 3309 feeder and Rhode Island Energy 's Regional Control Center must first give permission to the Interconnecting Customer to allow the operation of their system. The generator may not be allowed to operate with the local electrical power system (EPS) in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy 's EPS, Rhode Island Energy may choose to disconnect the customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.

2. The Interconnecting Customer is required to adhere to the following standards which are incorporated in their entirety by reference:
  - a. Rhode Island Energy 's Standards for Interconnecting Distributed Generation (R.I.P.U.C. 2180), available at: [http://www.nationalgridus.com/non\\_html/RI\\_DG\\_Interconnection\\_Tariff.pdf](http://www.nationalgridus.com/non_html/RI_DG_Interconnection_Tariff.pdf)
  - b. Electric System Bulletin 750 "Specifications for Electrical Installations". ESB 750, available at: [http://www.nationalgridus.com/non\\_html/shared\\_constr\\_esb750.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb750.pdf)
  - c. Electric System Bulletin 756 "Requirements for Parallel Generation Connected to a Rhode Island Energy -Owned EPS". ESB756D, available at: [www.nationalgridus.com/non\\_html/shared\\_constr\\_esb756.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb756.pdf)
  - d. Distributed Generation: Minimum Self-Performance Requirements
3. The Interconnecting Customer is required to address any outstanding requirements (that are not explicitly addressed herein), which are described in the most recent application review memo and/or study report (which is hereby incorporated in its entirety) provided by the Company on or prior to the Effective Date of this Interconnection Service Agreement.
  - a. If the Effective Date of this Interconnection Service Agreement precedes the issuance of a required Detailed Study by the Company, the Interconnecting Customer is also required to address any outstanding requirements described in the Detailed Study Report upon its issuance.
4. Interconnecting Customer shall adhere to the requirements identified in the Impact Study dated 4/21/2021
5. Interconnecting Customer shall provide Compliance Documentation, including photographs, as requested by, and to the satisfaction of, the Company.
6. Interconnecting Customer may not be allowed to operate with the local EPS in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy 's EPS, Rhode Island Energy may disconnect the Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.
7. Per section 6.4 of this agreement, Interconnecting Customer shall provide an external AC UTILITY DISCONNECT, accessible at all times by Rhode Island Energy personnel.
8. Interconnecting Customer's AC UTILITY DISCONNECT switch shall be labeled "AC UTILITY DISCONNECT".
9. The AC UTILITY DISCONNECT shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Company side by Company personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Company shall have the right to open this disconnect switch in accordance with the Interconnection Tariff. The switch has to be installed at the DR output on the current carrying lines. Shunt mechanisms are not permitted.
10. If the AC UTILITY DISCONNECT switch is not adjacent to the meter and/or PCC, Interconnecting Customer shall provide a permanent plaque locating the switch.
11. All plaques as described in NEC 705.10, 705.12 (7), 690.56, 692.4 and 705.70 shall be installed, as applicable.
12. All Interconnecting Customer-Owned meters shall be labeled "CUSTOMER-OWNED METER"

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13. Interconnecting Customer shall install a permanent plaque or directory at the revenue meter and at the PCC with a warning about the generator(s) installed.
14. Interconnecting Customer shall be responsible for providing necessary easements and/or environmental and/or municipal permits, as requested by the Company.
15. For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the Rhode Island Energy revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or – in locations with suitable wireless service, a wireless meter. Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of Rhode Island Energy . If approved, a wireless-enabled meter will be installed, at the customer's expense. If and when Rhode Island Energy 's retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to Rhode Island Energy 's revenue meter is provided.
16. For systems with redundant relaying, Company witness testing will be required. Customer shall develop, and provide for approval, a functional test procedure, including settings for relaying scheme. Witness test plan must be approved by Company prior to scheduling Company personnel for witness test.
17. Interconnecting Customer may only generate onto the feeder referenced in the Impact Study. Rhode Island Energy 's Regional Control Center must first give permission to the customer to allow the operation of their system.
18. **Interconnecting Customer's protection scheme submitted for review must meet Rhode Island Energy 's specific protection requirements.** Interconnecting Customer shall submit a PE stamped one-line, including relay settings, that meets the requirements specified within this document to Rhode Island Energy for review and approval, before a Witness Test plan can be reviewed. Please refer to "Expedited/Standard Process Completion Documentation Checklist", per Company's website for additional required documentation.
19. In order to minimize the impact of the proposed generation on the EPS and area customers, Rhode Island Energy will require that the reactive contribution of the PV interconnection be maintained between a 99% leading and lagging power factor at the PCC during the normal operation of the PV array. In addition, the PV interconnection shall not contribute to greater than a 3.0% change in voltage on the Rhode Island Energy EPS under any conditions.
20. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements. The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.
21. The Interconnecting Customer is responsible for coordinating with Verizon for any Verizon work. These costs will be billed directly to the customer from Verizon. It will be the responsibility of the customer to obtain any and all easements and required permitting for work that takes place on private property.

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**Exhibit H – Interconnection Service Agreement**

**Attachment 5: Agreement between the Company and the Company's Retail Customer**

If the Company's Retail Customer (account holder) is not the owner (and/or operator) of the Facility, then Exhibit I - Agreement Between the Company and the Company's Retail Customer - shall be signed by the Company's Retail Customer and executed by the Company, and shall be considered part of this Interconnection Service Agreement. It shall be the responsibility of the Interconnecting Customer to notify the Company if the Exhibit I associated with this application changes.

**Attachment 6: System Modifications Construction Schedule**

Below is an estimated construction schedule. This schedule is conceptual, and shows the duration of the facility's milestones from a "start-date" to an "in-service" date, in calendar days. This conceptual schedule is based upon assumptions and knowledge regarding the project, the site, and activities as of the date of the impact study. These estimations of construction time frames and total duration do not include any time that the Company's performance is on hold, delayed, or interrupted, including, without limitation, while waiting on information or on the performance of obligations by the Interconnecting Customer and/or third parties (including, without limitation, Verizon, ISO-NE, Railroad), as a result of unknown environmental and/or permitting issues, events of force majeure, and/or as a result of required transmission outages.

The start-date for this construction schedule is deemed to have occurred once : (1) the Interconnection Service Agreement ("ISA") has been executed (i.e., signed) by both Rhode Island Energy ("Company") and the Interconnecting Customer ("Customer"); and (2) the first payment has been submitted by the Customer to the Company, provided , however, that the Company shall not be required to provide any services or order any equipment without receiving adequate payment therefore from the Interconnecting Customer nor will it be required to initiate any construction before it has received full payment from the Interconnecting Customer.

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**Attachment 6 - Appendix A: System Modifications Construction Schedule**

Total Duration for engineering, permitting,— procurement and construction of Distribution System Modification: 63 weeks to provide back-feed power to Customer

Milestone	Estimated Duration	Responsible Party
Company has received first payment	Start	Customer
Overhead and Underground Distribution System Modification Design	7 weeks	Customer/Company
2nd Payment Due	As per ISA	
Secure and obtain any and all rights, consents environmental permits approval and easement as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third party owned property (as well as for underground civil scope of public way)	16 weeks	Customer/Company
Submit Final Payment	As per ISA	
Distribution system Schedule Coordination and Construction (excluding construction of underground civil scope on public way to be completed by Interconnecting Customer, and supervised by Company appointed full-time civil inspectors, which is required Company to start construction)	27 weeks	Company
Construction Construction (Customer construction can be done in parallel with company construction)	13 weeks	Customer

Project schedule is dependent, among other things, on Interconnecting Customer construction of civil scope on time and to the satisfaction of Rhode Island Energy and for required cable size in respect to this project to be installed per the applicable third-party project schedule.

1 Construction for underground civil scope to be performed by Customer. Further, all Customer performed civil construction work shall be reviewed and approved by Company prior to backfilling by Customer.

The estimated schedule assumes standard tariff timeframe for both submittals and approvals. If submittal exceed tariff standards they may be extended accordingly.

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**Exhibit H – Interconnection Service Agreement**

1. **Parties.** This Interconnection Service Agreement (“Agreement”), dated as of \_\_\_\_\_ (“Effective Date”) is for application number “29048531” and Case Number “246610” is entered into, by and between The Narragansett Electric Company (doing business as Rhode Island Energy), a Rhode Island corporation with a principal place of business at 280 Melrose St., Providence, RI 02907 (hereinafter referred to as the “Company”), and Robin Hollow Solar, LLC, a Rhode Island limited liability company with a principal place of business (or residence) at 117 Metro Center Boulevard, Suite 1007, Wariwck, RI 02886 (“Interconnecting Customer” or “Customer”). (The Company and Interconnecting Customer are collectively referred to as the “Parties”). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Tariff which is hereby incorporated by reference.

2. **Basic Understandings.** This Agreement provides for parallel operation of an Interconnecting Customer’s Facility with the Company EPS to be installed and operated by the Interconnecting Customer at 18 Weaver Hill Road, West Greenwich, RI 02817. A description of the Facility is located in Attachment 1. If the Interconnecting Customer is not the Retail Customer, an Agreement between the Company and the Company’s Retail Customer, attached as Exhibit I to the Interconnection Tariff, must be signed and included as an Attachment to this Agreement.

The Interconnecting Customer has the right to operate its Facility in parallel with the Company EPS immediately upon successful completion of the protective relays testing as witnessed by the Company and receipt of written notice from the Company that interconnection with the Company EPS is authorized (“Authorization Date”).

3. **Term.** This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.

4. **Termination.**

4.1 This Agreement may be terminated under the following conditions.

4.1.1 The Parties agree in writing to terminate the Agreement.

4.1.2 The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Company.

4.1.3 The Company may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.

4.1.4 The Company may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.

4.1.5 The Company, upon 30 days notice, may terminate this Agreement if there are any changes in Commission regulations or state law that have a material adverse effect on the Company’s ability to perform its obligations under the terms of this Agreement.

4.2 **Survival of Obligations.** The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.

4.3 **Related Agreements.** Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. **General Payment Terms.** The Interconnecting Customer shall be responsible for the System Modification costs and payment terms identified in Attachment 3 of this Agreement and any approved cost increases pursuant to the terms of the Interconnection Tariff. If the system modifications exceed \$25,000, Attachment 3 will include a payment and construction schedule for both parties.

5.1 **Cost or Fee Adjustment Procedures.** The Company will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed up to a total amount of increase of 10% only. Any such changes to the

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### Exhibit H – Interconnection Service Agreement

Company's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Company's notice of increase, authorize such increase and make payment in the amount up to the 10% increase cap, or the Company will suspend the work and the corresponding agreement will terminate.

**5.2 Final Accounting.** The Company within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement and all Company work orders have been closed, shall provide Interconnecting Customer with a final accounting report of any difference between the (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications and for any Impact or Detailed Study performed by the Company, and (b) Interconnecting Customer's previous aggregate payments to the Company for such System Modifications and studies. Costs that are statutorily-based shall not be subject to either a final accounting or reconciliation under this provision (e.g. statutorily set study fees for the ISRDC), but may be reconciled at any time only if the costs exceed the statutory fee, and the Company seeks to collect actual costs in accordance with the applicable statute. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement for the System Modifications and in the Impact and/or Detailed Study Agreements (as applicable) for the studies performed by the Company exceeds Interconnecting Customer's previous aggregate payments, the Company shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Company within forty five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this applicable agreement, the Company shall refund to Interconnecting Customer an amount equal to the difference within forty five (45) days of the provision of such final accounting report.

## 6. Operating Requirements

**6.1 General Operating Requirements.** Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Company's Interconnection Tariff. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Company has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Company EPS, the Company has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Company may require disconnection as outlined in Section 7.0 of the Interconnection Tariff. The cost of this testing will be borne by the Company unless the Company demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

**6.2 No Adverse Effects; Non-interference.** Company shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other customers served from the same Company EPS or if operation of the Facility could cause damage to Company EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547-2003, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Company will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Company EPS, and such normal disturbances shall not constitute unreasonable interference unless the Company has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Company EPS, and outages on the Company EPS. If the Interconnecting Customer demonstrates that the Company EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Company deviation from Good Utility Practice, the Company shall take appropriate action to eliminate the adverse effect.

**6.3 Safe Operations and Maintenance.** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Company and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Company's EPS, personnel, and other persons from damage and injury.

**6.4 Access.** The Company shall have access to the disconnect switch of the Facility at all times.



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**6.4.1 Company and Interconnecting Customer Representatives.** Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

**6.4.2 Company Right to Access Company-Owned Facilities and Equipment.** If necessary for the purposes of the Interconnection Tariff and in the manner it describes, the Interconnecting Customer shall allow the Company access to the Company's equipment and the Company's facilities located on the Interconnecting Customer's or Customer's premises. To the extent that the Interconnecting Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Tariff, the Interconnecting Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

**6.4.3 Right to Review Information.** The Company shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Company EPS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.4 in the Interconnection Tariff.

**7. Disconnection**

**7.1 Temporary Disconnection**

**7.1.1 Emergency Conditions.** Company shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Company, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Company EPS or to the electric systems of others to which the Company EPS is directly connected. Company shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Company promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Company EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

**7.1.2 Routine Maintenance, Construction and Repair.** Company shall have the right to disconnect the Facility from the Company EPS when necessary for routine maintenance, construction and repairs on the Company EPS. The Company shall provide the Interconnecting Customer with a minimum of seven (7) calendar days planned outage notification consistent with the Company's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Company at the PCC, the Interconnecting Customer will provide a minimum of seven (7) days notice to the Company. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Company shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

**7.1.3 Forced Outages.** During any forced outage, Company shall have the right to suspend interconnection service to effect immediate repairs on the Company EPS; provided, however, Company shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Company may interrupt Interconnection Service and disconnect the Facility from the Company EPS without such notice.

**7.1.4 Non-Emergency Adverse Operating Effects.** The Company may disconnect the Facility if the Facility is having an adverse operating effect on the Company EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of forty five (45) days to correct such adverse operating effect has elapsed.

**7.1.5 Modification of the Facility.** Company shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Company.

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**7.1.6 Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Company shall cooperate with each other to restore the Facility and the Company EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

**7.2 Permanent Disconnection.** The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Company.

**7.2.1** The Company may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

**8. Metering.** Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Tariff.

**9. Assignment.** Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without Company's written consent. Any assignment Interconnecting Customer purports to make without Company's written consent shall not be valid. Company shall not unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement. Notwithstanding the above, Company's consent will not be required for any assignment made by Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction. In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless, and until the assignee assumes in writing all obligations of this Agreement and notifies the Company of such assumption.

**10. Confidentiality.** Company shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Tariff, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.

**11. Insurance Requirements.**

**11.1 General Liability.**

**11.1(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:**

i. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.

ii. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;

iii. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;

iv. Five hundred thousand dollars (\$500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for eligible net metered customers which are exempt from insurance requirements.

**11.1(b)** No insurance is required for a Facility with a Gross Nameplate Rating less than or equal to 50 kW that is eligible for net metering. However, the Company recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

**11.1(c)** Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

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11.1(d) The general liability insurance required to be purchased in this Section may be purchased for the direct benefit of the Company and shall respond to third party claims asserted against the Company (hereinafter known as “Owners Protective Liability”). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Company and the Company will be designated as the primary and “Named Insured” under the policy.

11.1(e) The insurance hereunder is intended to provide coverage for the Company solely with respect to claims made by third parties against the Company.

11.1(f) In the event the State of Rhode Island and the Providence Plantations, or any other governmental subdivision thereof subject to the claims limits of R.I.G.L. Chapter 9-31 (hereinafter referred to as the “Governmental Entity”) is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance company from interposing the claims limits of R.I.G.L. Chapter 9-31 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Company. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of R.I.G.L. Chapter 9-31 by the Governmental Entity.

**11.2 Insurer Requirements and Endorsements.** All required insurance shall be carried by reputable insurers qualified to underwrite insurance in RI having a Best Rating of “A-”. In addition, all insurance shall, (a) include Company as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Company shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days’ written notice to Company prior to cancellation, termination, or material change of such insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (e) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Company as required above.

**11.3 Evidence of Insurance.** Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Company with evidence of insurance in compliance with the Interconnection Tariff on an annual basis.

Prior to the Company commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Company certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Company a certificate of insurance for any policy written on a “claims-made” basis. The Interconnecting Customer will maintain extended reporting coverage for three (3) years on all policies written on a “claims-made” basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Company.

11.4 All insurance certificates, statements of self insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued, updated and submitted yearly to the following:

**Rhode Island Energy**  
Attention: **Risk Management**  
300 Erie Blvd West  
Syracuse, NY 13202

12. **Indemnification.** Except as precluded by the laws of the State of Rhode Island and the Providence Plantations, Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.

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13. **Limitation of Liability.** Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.

14. **Amendments and Modifications.** No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.

15. **Permits and Approvals.** Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the Interconnecting Customer will notify the Company that it has initiated the permitting process. Prior to the commercial operation of the Facility, the Customer will notify the Company that it has obtained all permits necessary. Upon request, the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Company.

16. **Force Majeure.** For purposes of this Agreement, "Force Majeure Event" means any event:

- a. that is beyond the reasonable control of the affected Party; and
- b. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.

17. **Notices.**

17.1 Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person specified below:

If to Company: **Rhode Island Energy**  
Attention: **Distributed Generation**  
**280 Melrose Street**  
**Providence RI 02907**  
E-mail: **CAP@rienergy.com**

If to Interconnecting Customer: **Robin Hollow Solar, LLC**  
Attention: **Ryan Palumbo**  
**117 Metro Center Boulevard, Suite 1007**  
**Warwick, RI 02886**  
Phone: **401-829-0893**  
E-mail: **ryan@revityenergy.com**

17.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 17.1.

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**Exhibit H – Interconnection Service Agreement**

17.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.

**18. Default and Remedies**

**18.1 Defaults.** Any one of the following shall constitute "An Event of Default."

i. One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, any such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or

ii. One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.

**18.2 Remedies.** Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:

- a. Continue to perform and enforce this Agreement;
- b. Recover damages from the defaulting Party except as limited by this Agreement;
- c. By written notice to the defaulting Party terminate this Agreement;
- d. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.

19. **Entire Agreement.** This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Tariff. Together the Agreement and the Interconnection Tariff represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Company's Interconnection Tariff.

20. **Supercedence.** In the event of a conflict between this Agreement, the Interconnection Tariff, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Tariff, as the same may be amended from time to time, shall control. In the event that the Company files a revised tariff related to interconnection for Commission approval after the effective date of this Agreement, the Company shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.

21. **Governing Law.** This Agreement shall be interpreted, governed, and construed under the laws of the State of Rhode Island and the Providence Plantations without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

22. **Non-waiver.** None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

23. **Counterparts.** This Agreement may be signed in counterparts.

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24. **No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care with respect to, or any liability to, any person not a party to this Agreement.

25. **Dispute Resolution.** Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Tariff.

26. **Severability.** If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.

27. **Signatures.** IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to be executed under seal by their duly authorized representatives.

Robin Hollow Solar, LLC:

Name: Ryan Palumbo

Title: Vice President

Date: 7/21/22

Signature: [Handwritten Signature]

The Narragansett Electric Company (d/b/a Rhode Island Energy):

Name: Erica Russell Salk

Title: Manager, CEI

Date: 07-29-2022

Signature: Erica Russell Salk

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**Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling**

Interconnecting Customer has proposed a 8,500 kW photovoltaic system located at 18 Weaver Hill Road, West Greenwich, RI 02817. The proposed Facility is an Independent Power Producer (“IPP”). Facilities will interconnect to the Rhode Island Energy electric system via the Kent County Substation, 34.5 kV distribution feeder 3310, (“Point of Interconnection” or “POP”).

**a. Description of proposed design/configuration:**

- i. Thirty-four (34) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 8,500 kW / kVA of inverter-based PV.
- ii. Two (2) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 6.3.
- iii. One (1) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 6.8.
- iv. One (1) Customer owned padmounted switchgear VFI 38kV, 600A, 12.5KAISC, with SEL-751 relay assembly.
- v. One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- vi. One (1) Customer owned three phase 100E, 38kV cutout fused.

**a. Metering:** The company will install (1) pole-mounted primary meter, please refer to ESB 750 and ESB 756 Appendix D for service installation and primary/secondary meter installation.

**b. PCC:** The Company’s Design Personnel will determine the exact location of the Company’s facilities and the Customer’s gang operated disconnect. The Customer’s gang operated disconnect must be accessible by the Company’s personnel at all times, and be capable of being locked open and tagged by Company personnel. The Point of Common Coupling (PCC) will be designated as the Customer’s side of the Company’s primary meter. The Interconnecting Customer must install their Facilities up to the Company revenue meter. The Interconnecting Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Interconnecting Customer conductors to the Company meter.

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**Attachment 2: Description of System Modifications**

Rhode Island Energy System Modifications required for the interconnection of 8,500 kW (AC) application as identified in the impact study are as follows:

**On the Customer's property:**

- Install ~1,100 circuit feet of 3-477 AAC,
- One (1) 35 kV load break switch
- One (1) 35 kV recloser
- Two disconnect switches
- Six (6) primary meters along with six (6) disconnect switches at the PCC.
- Install Twenty three (23) poles include project numbers for the 6 sites

**On the Company's distribution system:**

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road. .
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Reivity Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed riser pole on Customer property.
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
- Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI

**Civil construction (designed and installed by others) ("Third Party Ductbank"):**

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.

**Civil construction (work anticipated to be completed by Reivity) ("Reivity Ductbank")**

- Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install duct system (~600 feet) between previously constructed 3-way MH on Hopkins Hill Road and previous constructed 3-way MH at the intersection of Hopkins Hill Road and Division Road. Rhode Island Energy to provide civil design including drawings to Customer to construct this portion.
- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Reivity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer). Customer to provide civil design including drawings per Distributed Generation: Minimum Self-Performance Requirements to construct this portion.
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self built by Customer) . Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance.
- Install MH and duct system (~3000 feet) from proposed riser pole on Hopkins Hill Road to 3-way MH on Hopkins Hill Road. Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance Requirements.
- The Interconnecting Customer will perform the civil construction for the manhole / duct system consistent with civil design plans provided by the Customer and approved by the Company per the per Distributed Generation: Minimum Self-Performance Requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company's civil design parameters and requirements, and 2) coordinate the schedule.



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for the Interconnecting Customer civil construction . The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company provided civil design plans.

**At the Company's substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

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**Attachment 3: Costs of System Modifications and Payment Terms**

This application is one of seven projects studied together with total system size of 40,700 kW (the “Related Projects”). This application’s size is 8,500kW and is 20.9% of the total aggregated Related Project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if one of the Related Project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company’s electric power System, the total common modification costs on the Company’s System will be re-estimated and reallocated among the remaining Related Projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the Related Projects group.

The total Company System Modification Costs (excluding the THIRD PARTY DUCTBANK and REVITY DUCTBANK) that will be performed by the Company and are associated with all Related Project applications are: \$9,602,158 (+/- 25%). As of the ISA execution date, the System modification cost responsibility for this ISA is \$1,897,429.

In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is \$11,761,595 as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated \$6,116,029. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 67.05% of this figure or \$4,555,167 including tax. This application’s cost responsibility for the THIRD PARTY DUCTBANK will be \$952,030 (such amount, the “Interconnecting Customer’s Cost Share Amount”).

Upon completion of construction of the THIRD PARTY DUCTBANK, Company will request the entity constructing the THIRD PARTY DUCTBANK to provide a cost summary (including a detailed accounting ledger for each line item presented on the cost summary) with the following supporting information: vendor name, date/dates of service, detailed description of service, copy of the cancelled check(s), and associated contract/purchase order/timeslip/certified payroll/etc. documents. Upon the receipt of all required documentation, the Company will audit and verify the proposed costs incurred by the third party, and will adjust the Interconnecting Customer Cost Share Amount to reflect such reconciliation (which adjustment shall be reflected in an amended interconnection service agreement) for cost line items that, in whole or in part, do not qualify as an approved costs.

The Company will audit and verify the actual costs incurred to construct the REVITY DUCTBANK, and agrees that it will facilitate the sharing of such costs with all future parties (excluding the Related Projects) that occupy a common path of the REVITY DUCTBANK based on the distance of the common path and a pro rata megawatt share, and that any such cost sharing amount that is collected by the Company shall be disbursed to Revity Energy LLC.

The parties acknowledge and agree that the ability of the Company to assign and collect from an interconnecting customer any costs incurred by a third party in connection with its self-performance of interconnection work has been challenged in Docket No. 5235 (the “Petition”), which currently is pending before the Rhode Island Public Utilities Commission (“RIPUC”). Accordingly, the Company and Interconnecting Customer agree that Interconnection Customer’s payment of the Interconnecting Customer Cost Share Amount, and any collection of costs from a third party by the Company of the REVITY DUCTBANK costs, is expressly subject to any final ruling by the RIPUC on the Petition, and that the Company shall refund to Interconnection Customer any Interconnection Customer Cost Sharing Amount if and to the extent required by the RIPUC.

The Company System Modification Costs associated with this application (which do not include the THIRD PARTY DUCTBANK) are: \$1,897,429 (+/- 25%) and itemized as follows:

- Total cost of common system modifications on the Interconnecting Customer’s (or other private) property as mentioned in Attachment 2 above: \$784,147 (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 24.0% share or \$188,195.
- Total cost of common system modifications on the Company’s distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above is \$6,106,255 (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 24.0% share or \$1,465,501.
- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment ) above is \$17,600 (includes capital, removal, and O&M costs). The cost for this modification

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will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 20.9% share or **\$3,678**.

- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$69,554**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 20.9% or **\$14,537**
- Total cost of Rhode Island Energy Supervision associated with the REVITY DUCTBANK construction self-performed by Customer is **\$165,000**. The cost for the Supervision will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 20.9% share or **\$34,485**.
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 20.9% share or **\$334**.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: **\$3,396**.
- Tax gross-up adder on capital costs is or **\$187,303**. *(A 2022 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any other Related Project does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for the Facility and for the Related Projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The System modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The Total System Modifications Costs and the Facility System Modification Costs do not include any costs for Third Party Rights and Approvals (as defined in Attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the Total System Modifications Costs and the Facility System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party

**ISO-NE Planning Study**

Rhode Island Energy Transmission Planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) Planning Procedure 5-6 "Scope of Study for System Impact Studies under the Generation Interconnection Procedures" and Rhode Island Energy TGP28 "Transmission Planning Guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

**ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW and will be required to comply with ISO-NE's requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with

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all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in Telephone Company Maintenance Areas. These costs will be billed directly to the Interconnecting Customer from the Telephone Company.

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**Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (5%) of **\$94,871** is due within 90 business days from when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. Proof of payment is required.
- The second payment (20%) of **\$379,486** is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around 08/29/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The third payment (75%) of **\$1,423,072** is due within 15 business days from the receipt of the third payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project, estimated to be on or around 01/05/2023. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The fourth payment of **\$952,030** that is associated with this application's cost sharing responsibility for the THIRD PARTY DUCTBANK will be due prior to the Witness Test for this application being conducted.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021.

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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**Attachment 4: Special Operating Requirements, if any**

The generating system may only normally generate onto the 3309 feeder and Rhode Island Energy's Regional Control Center must first give permission to the Interconnecting Customer to allow the operation of their system. The generator may not be allowed to operate with the local electrical power system (EPS) in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may choose to disconnect the customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.

1. The Interconnecting Customer is required to adhere to the following standards which are incorporated in their entirety by reference:
  - a. Rhode Island Energy's Standards for Interconnecting Distributed Generation (R.I.P.U.C. 2180), available at: [http://www.nationalgridus.com/non\\_html/RI\\_DG\\_Interconnection\\_Tariff.pdf](http://www.nationalgridus.com/non_html/RI_DG_Interconnection_Tariff.pdf)
  - b. Electric System Bulletin 750 "Specifications for Electrical Installations". ESB 750, available at: [http://www.nationalgridus.com/non\\_html/shared\\_constr\\_esb750.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb750.pdf)
  - c. Electric System Bulletin 756 "Requirements for Parallel Generation Connected to a Rhode Island Energy-Owned EPS". ESB756D, available at: [www.nationalgridus.com/non\\_html/shared\\_constr\\_esb756.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb756.pdf)
  - d. Distributed Generation: Minimum Self-Performance Requirements
2. The Interconnecting Customer is required to address any outstanding requirements (that are not explicitly addressed herein), which are described in the most recent application review memo and/or study report (which is hereby incorporated in its entirety) provided by the Company on or prior to the Effective Date of this Interconnection Service Agreement.
  - a. If the Effective Date of this Interconnection Service Agreement precedes the issuance of a required Detailed Study by the Company, the Interconnecting Customer is also required to address any outstanding requirements described in the Detailed Study Report upon its issuance.
3. Interconnecting Customer shall adhere to the requirements identified in the Impact Study dated 4/21/2021
4. Interconnecting Customer shall provide Compliance Documentation, including photographs, as requested by, and to the satisfaction of, the Company.
5. Interconnecting Customer may not be allowed to operate with the local EPS in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may disconnect the Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.
6. Per section 6.4 of this agreement, Interconnecting Customer shall provide an external AC UTILITY DISCONNECT, accessible at all times by Rhode Island Energy personnel.
7. Interconnecting Customer's AC UTILITY DISCONNECT switch shall be labeled "AC UTILITY DISCONNECT".
8. The AC UTILITY DISCONNECT shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Company side by Company personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Company shall have the right to open this disconnect switch in accordance with the Interconnection Tariff. The switch has to be installed at the DR output on the current carrying lines. Shunt mechanisms are not permitted.
9. If the AC UTILITY DISCONNECT switch is not adjacent to the meter and/or PCC, Interconnecting Customer shall provide a permanent plaque locating the switch.
10. All plaques as described in NEC 705.10, 705.12 (7), 690.56, 692.4 and 705.70 shall be installed, as applicable.
11. All Interconnecting Customer-Owned meters shall be labeled "CUSTOMER-OWNED METER"

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12. Interconnecting Customer shall install a permanent plaque or directory at the revenue meter and at the PCC with a warning about the generator(s) installed.
13. Interconnecting Customer shall be responsible for providing necessary easements and/or environmental and/or municipal permits, as requested by the Company.
14. For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the Rhode Island Energy revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or – in locations with suitable wireless service, a wireless meter. Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of Rhode Island Energy. If approved, a wireless-enabled meter will be installed, at the customer's expense. If and when Rhode Island Energy's retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to Rhode Island Energy's revenue meter is provided.
15. For systems with redundant relaying, Company witness testing will be required. Customer shall develop, and provide for approval, a functional test procedure, including settings for relaying scheme. Witness test plan must be approved by Company prior to scheduling Company personnel for witness test.
16. Interconnecting Customer may only generate onto the feeder referenced in the Impact Study. Rhode Island Energy's Regional Control Center must first give permission to the customer to allow the operation of their system.
17. **Interconnecting Customer's** protection scheme submitted for review must meet Rhode Island Energy's **specific protection** requirements. Interconnecting Customer shall submit a PE stamped one-line, including relay settings, that meets the requirements specified within this document to Rhode Island Energy for review and approval, before a Witness Test plan can be reviewed. Please refer to "Expedited/Standard Process Completion Documentation Checklist", per Company's website for additional required documentation.
18. In order to minimize the impact of the proposed generation on the EPS and area customers, Rhode Island Energy will require that the reactive contribution of the PV interconnection be maintained between a 99% leading and lagging power factor at the PCC during the normal operation of the PV array. In addition, the PV interconnection shall not contribute to greater than a 3.0% change in voltage on the Rhode Island Energy EPS under any conditions.
19. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements. The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.
20. The Interconnecting Customer is responsible for coordinating with Verizon for any Verizon work. These costs will be billed directly to the customer from Verizon. It will be the responsibility of the customer to obtain any and all easements and required permitting for work that takes place on private property.

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**Attachment 5: Agreement between the Company and the Company's Retail Customer**

If the Company's Retail Customer (account holder) is not the owner (and/or operator) of the Facility, then Exhibit I - Agreement Between the Company and the Company's Retail Customer - shall be signed by the Company's Retail Customer and executed by the Company, and shall be considered part of this Interconnection Service Agreement. It shall be the responsibility of the Interconnecting Customer to notify the Company if the Exhibit I associated with this application changes.

**Attachment 6: System Modifications Construction Schedule**

Below is an estimated construction schedule. This schedule is conceptual, and shows the duration of the facility's milestones from a "start-date" to an "in-service" date, in calendar days. This conceptual schedule is based upon assumptions and knowledge regarding the project, the site, and activities as of the date of the impact study. These estimations of construction time frames and total duration do not include any time that the Company's performance is on hold, delayed, or interrupted, including, without limitation, while waiting on information or on the performance of obligations by the Interconnecting Customer and/or third parties (including, without limitation, Verizon, ISO-NE, Railroad), as a result of unknown environmental and/or permitting issues, events of force majeure, and/or as a result of required transmission outages.

The start-date for this construction schedule is deemed to have occurred once : (1) the Interconnection Service Agreement ("ISA") has been executed (i.e., signed) by both Rhode Island Energy ("Company") and the Interconnecting Customer ("Customer"); and (2) the first payment has been submitted by the Customer to the Company, provided , however, that the Company shall not be required to provide any services or order any equipment without receiving adequate payment therefore from the Interconnecting Customer nor will it be required to initiate any construction before it has received full payment from the Interconnecting Customer.



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**Attachment 6 - Appendix A: System Modifications Construction Schedule**

Total Duration for engineering, permitting,— procurement and construction of Distribution System Modification: 63 weeks to provide back-feed power to Customer

Milestone	Estimated Duration	Responsible Party
Company has received first payment	Start	Customer
Overhead and Underground Distribution System Modification Design	7 weeks	Customer/Company
2nd Payment Due	As per ISA	
Secure and obtain any and all rights, consents environmental permits approval and easement as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third party owned property (as well as for underground civil scope of public way)	16 weeks	Customer/Company
Submit Final Payment	As per ISA	
Distribution system Schedule Coordination and Construction (excluding construction of underground civil scope on public way to be completed by Interconnecting Customer, and supervised by Company appointed full-time civil inspectors, which is required Company to start construction)	27 weeks	Company
Construction Construction (Customer construction can be done in parallel with company construction)	13 weeks	Customer

Project schedule is dependent, among other things, on Interconnecting Customer construction of civil scope on time and to the satisfaction of Rhode Island Energy and for required cable size in respect to this project to be installed per the applicable third-party project schedule.

1 Construction for underground civil scope to be performed by Customer. Further, all Customer performed civil construction work shall be reviewed and approved by Company prior to backfilling by Customer.

The estimated schedule assumes standard tariff timeframe for both submittals and approvals. If submittal exceed tariff standards they may be extended accordingly.

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**Exhibit H – Interconnection Service Agreement**

1. **Parties.** This Interconnection Service Agreement (“Agreement”), dated as of \_\_\_\_\_ (“Effective Date”) is for application number “29048531” and Case Number “246614” is entered into, by and between **The Narragansett Electric Company (doing business as Rhode Island Energy)**, a Rhode Island corporation with a principal place of business at **280 Melrose St., Providence, RI 02907** (hereinafter referred to as the “Company”), and **Robin Hollow Solar, LLC**, a **Rhode Island limited liability company** with a principal place of business (or residence) at **117 Metro Center Boulevard, Suite 1007, Warwick RI 02886** (“Interconnecting Customer”). (The Company and Interconnecting Customer are collectively referred to as the “Parties”). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Tariff which is hereby incorporated by reference.
2. **Basic Understandings.** This Agreement provides for parallel operation of an Interconnecting Customer’s Facility with the Company EPS to be installed and operated by the Interconnecting Customer at **18 Weaver Hill Road, West Greenwich RI 02817**. A description of the Facility is located in Attachment 1. If the Interconnecting Customer is not the Customer, an Agreement between the Company and the Company’s Retail Customer, attached as Exhibit I to the Interconnection Tariff, must be signed and included as an Attachment to this Agreement.  
The Interconnecting Customer has the right to operate its Facility in parallel with the Company EPS immediately upon successful completion of the protective relays testing as witnessed by the Company and receipt of written notice from the Company that interconnection with the Company EPS is authorized (“Authorization Date”).
3. **Term.** This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.
4. **Termination.**
  - 4.1 This Agreement may be terminated under the following conditions.
    - 4.1.1 The Parties agree in writing to terminate the Agreement.
    - 4.1.2 The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Company.
    - 4.1.3 The Company may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.
    - 4.1.4 The Company may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.
    - 4.1.5 The Company, upon 30 days notice, may terminate this Agreement if there are any changes in Commission regulations or state law that have a material adverse effect on the Company’s ability to perform its obligations under the terms of this Agreement.
  - 4.2 **Survival of Obligations.** The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.
  - 4.3 **Related Agreements.** Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.
5. **General Payment Terms.** The Interconnecting Customer shall be responsible for the System Modification costs and payment terms identified in Attachment 3 of this Agreement and any approved cost increases pursuant to the terms of the Interconnection Tariff. If the system modifications exceed \$25,000, Attachment 3 will include a payment and construction schedule for both parties.
  - 5.1 **Cost or Fee Adjustment Procedures.** The Company will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed up to a total amount of increase of 10% only. Any such changes to the

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Company's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Company's notice of increase, authorize such increase and make payment in the amount up to the 10% increase cap, or the Company will suspend the work and the corresponding agreement will terminate.

**5.2 Final Accounting.** The Company within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement and all Company work orders have been closed, shall provide Interconnecting Customer with a final accounting report of any difference between the (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications and for any Impact or Detailed Study performed by the Company, and (b) Interconnecting Customer's previous aggregate payments to the Company for such System Modifications and studies. Costs that are statutorily-based shall not be subject to either a final accounting or reconciliation under this provision (e.g. statutorily set study fees for the ISRDC), but may be reconciled at any time only if the costs exceed the statutory fee, and the Company seeks to collect actual costs in accordance with the applicable statute. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement for the System Modifications and in the Impact and/or Detailed Study Agreements (as applicable) for the studies performed by the Company exceeds Interconnecting Customer's previous aggregate payments, the Company shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Company within forty five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this applicable agreement, the Company shall refund to Interconnecting Customer an amount equal to the difference within forty five (45) days of the provision of such final accounting report.

## **6. Operating Requirements**

**6.1 General Operating Requirements.** Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Company's Interconnection Tariff. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Company has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Company EPS, the Company has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Company may require disconnection as outlined in Section 7.0 of the Interconnection Tariff. The cost of this testing will be borne by the Company unless the Company demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

**6.2 No Adverse Effects; Non-interference.** Company shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other Customers served from the same Company EPS or if operation of the Facility could cause damage to Company EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547-2003, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Company will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Company EPS, and such normal disturbances shall not constitute unreasonable interference unless the Company has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Company EPS, and outages on the Company EPS. If the Interconnecting Customer demonstrates that the Company EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Company deviation from Good Utility Practice, the Company shall take appropriate action to eliminate the adverse effect.

**6.3 Safe Operations and Maintenance.** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Company and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Company's EPS, personnel, and other persons from damage and injury.

**6.4 Access.** The Company shall have access to the disconnect switch of the Facility at all times.

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**6.4.1 Company and Interconnecting Customer Representatives.** Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

**6.4.2 Company Right to Access Company-Owned Facilities and Equipment.** If necessary for the purposes of the Interconnection Tariff and in the manner it describes, the Interconnecting Customer shall allow the Company access to the Company's equipment and the Company's facilities located on the Interconnecting Customer's or Customer's premises. To the extent that the Interconnecting Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Tariff, the Interconnecting Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

**6.4.3 Right to Review Information.** The Company shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Company EPS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.4 in the Interconnection Tariff.

**7. Disconnection**

**7.1 Temporary Disconnection**

**7.1.1 Emergency Conditions.** Company shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Company, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Company EPS or to the electric systems of others to which the Company EPS is directly connected. Company shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Company promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Company EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

**7.1.2 Routine Maintenance, Construction and Repair.** Company shall have the right to disconnect the Facility from the Company EPS when necessary for routine maintenance, construction and repairs on the Company EPS. The Company shall provide the Interconnecting Customer with a minimum of seven (7) calendar days planned outage notification consistent with the Company's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Company at the PCC, the Interconnecting Customer will provide a minimum of seven (7) days notice to the Company. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Company shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

**7.1.3 Forced Outages.** During any forced outage, Company shall have the right to suspend interconnection service to effect immediate repairs on the Company EPS; provided, however, Company shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Company may interrupt Interconnection Service and disconnect the Facility from the Company EPS without such notice.

**7.1.4 Non-Emergency Adverse Operating Effects.** The Company may disconnect the Facility if the Facility is having an adverse operating effect on the Company EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of forty five (45) days to correct such adverse operating effect has elapsed.

**7.1.5 Modification of the Facility.** Company shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Company.

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**7.1.6 Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Company shall cooperate with each other to restore the Facility and the Company EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

**7.2 Permanent Disconnection.** The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Company.

**7.2.1** The Company may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

- 8. Metering.** Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Tariff.
- 9. Assignment.** Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without Company's written consent. Any assignment Interconnecting Customer purports to make without Company's written consent shall not be valid. Company shall not unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement. Notwithstanding the above, Company's consent will not be required for any assignment made by Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction. In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless, and until the assignee assumes in writing all obligations of this Agreement and notifies the Company of such assumption.
- 10. Confidentiality.** Company shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Tariff, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.
- 11. Insurance Requirements.**
- 11.1 General Liability.**
- 11.1(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:
- i. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.
  - ii. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;
  - iii. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;
  - iv. Five hundred thousand dollars (\$500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for eligible net metered customers which are exempt from insurance requirements.
- 11.1(b) No insurance is required for a Facility with a Gross Nameplate Rating less than or equal to 50 kW that is eligible for net metering. However, the Company recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.
- 11.1(c) Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

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- 11.1(d) The general liability insurance required to be purchased in this Section may be purchased for the direct benefit of the Company and shall respond to third party claims asserted against the Company (hereinafter known as “Owners Protective Liability”). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Company and the Company will be designated as the primary and “Named Insured” under the policy.
- 11.1(e) The insurance hereunder is intended to provide coverage for the Company solely with respect to claims made by third parties against the Company.
- 11.1(f) In the event the State of Rhode Island and the Providence Plantations, or any other governmental subdivision thereof subject to the claims limits of R.I.G.L. Chapter 9-31 (hereinafter referred to as the “Governmental Entity”) is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance company from interposing the claims limits of R.I.G.L. Chapter 9-31 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Company. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of R.I.G.L. Chapter 9-31 by the Governmental Entity.

**11.2 Insurer Requirements and Endorsements.** All required insurance shall be carried by reputable insurers qualified to underwrite insurance in RI having a Best Rating of “A-”. In addition, all insurance shall, (a) include Company as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Company shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days’ written notice to Company prior to cancellation, termination, or material change of such insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (e) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Company as required above.

**11.3 Evidence of Insurance.** Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Company with evidence of insurance in compliance with the Interconnection Tariff on an annual basis.

Prior to the Company commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Company certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Company a certificate of insurance for any policy written on a “claims-made” basis. The Interconnecting Customer will maintain extended reporting coverage for three (3) years on all policies written on a “claims-made” basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Company.

**11.4** All insurance certificates, statements of self insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued, updated and submitted yearly to the following:

**Rhode Island**  
Attention: **Risk Management**  
**280 Melrose Street**  
**Providence, RI, 02907**

**12. Indemnification.** Except as precluded by the laws of the State of Rhode Island and the Providence Plantations, Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.

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- 13. Limitation of Liability.** Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.
- 14. Amendments and Modifications.** No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.
- 15. Permits and Approvals.** Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the Interconnecting Customer will notify the Company that it has initiated the permitting process. Prior to the commercial operation of the Facility, the Customer will notify the Company that it has obtained all permits necessary. Upon request, the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Company.
- 16. Force Majeure.** For purposes of this Agreement, "Force Majeure Event" means any event:
- a. that is beyond the reasonable control of the affected Party; and
  - b. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.

**17. Notices.**

- 17.1** Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person specified below:

If to Company: **Rhode Island Energy**  
Attention: **Distributed Generation**  
**280 Melrose Street**  
**Providence RI, 02907**  
E-mail: **CAP@rienergy.com**

If to Interconnecting Customer: **Robin Hollow Solar, LLC**  
Attention: **Ryan Palumbo**  
**117 Metro Center Boulevard, Suite 1007**  
**Warwick, RI 02886**  
Phone: **401-829-0893**  
E-mail: **ryan@revityenergy.com**

- 17.2** A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 17.1.

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17.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.

**18. Default and Remedies**

**18.1 Defaults.** Any one of the following shall constitute "An Event of Default."

- (i) One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, any such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or
- (ii) One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.

**18.2 Remedies.** Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:

- a. Continue to perform and enforce this Agreement;
- b. Recover damages from the defaulting Party except as limited by this Agreement;
- c. By written notice to the defaulting Party terminate this Agreement;
- d. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.

**19. Entire Agreement.** This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Tariff. Together the Agreement and the Interconnection Tariff represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Company's Interconnection Tariff.

**20. Supercedence.** In the event of a conflict between this Agreement, the Interconnection Tariff, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Tariff, as the same may be amended from time to time, shall control. In the event that the Company files a revised tariff related to interconnection for Commission approval after the effective date of this Agreement, the Company shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.

**21. Governing Law.** This Agreement shall be interpreted, governed, and construed under the laws of the State of Rhode Island and the Providence Plantations without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

**22. Non-waiver.** None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

**23. Counterparts.** This Agreement may be signed in counterparts.

**24. No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care with respect to, or any liability to, any person not a party to this Agreement.

**25. Dispute Resolution.** Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Tariff.



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**Exhibit H – Interconnection Service Agreement**

**26. Severability.** If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.

**27. Signatures.** IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to be executed under seal by their duly authorized representatives.

*Robin Hollow Solar, LLC*

*RP*

Robin Hollow LLC:

The Narragansett Electric Company (d/b/a Rhode Island Energy):

Name: *Ryan Palumbo*  
Title: *Vice President*  
Date: *7/21/22*  
Signature: *[Signature]*

Name: Erica Russell Salk  
Title: Manager, CEI  
Date: 07-29-2022  
Signature: *Erica Russell Salk*

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**Exhibit H – Interconnection Service Agreement**

**Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling**

Interconnecting Customer has proposed a 5,250 kW photovoltaic system located at 18 Weaver Hill Road, West Greenwich, RI 02817. The proposed Facility is an Independent Power Producer (“IPP”). Facilities will interconnect to the Rhode Island Energy electric system via the Kent County Substation, 34.5 kV distribution feeder 3310, (“Point of Interconnection” or “POI”).

**a. Description of proposed design/configuration:**

- i. Twenty-one (21) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 5,250 kW / kVA of inverter-based PV.
- ii. Two (2) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 6.3.
- iii. One (1) Customer owned 2,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 6.8.
- iv. One (1) Customer owned padmounted switchgear VFI 38kV, 600A, 12.5KAISC, with SEL-751 relay assembly.
- v. One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- vi. One (1) Customer owned three phase 100E, 38kV cutout.

**b. Metering:** The company will install (1) pole-mounted primary meter, please refer to ESB 750 and ESB 756 Appendix D for service installation and primary/secondary meter installation.

**c. PCC:** The Company’s Design Personnel will determine the exact location of the Company’s facilities and the Customer’s gang operated disconnect. The Customer’s gang operated disconnect must be accessible by the Company’s personnel at all times, and be capable of being locked open and tagged by Company personnel. The Point of Common Coupling (PCC) will be designated as the Customer’s side of the Company’s primary meter. The Interconnecting Customer must install their Facilities up to the Company revenue meter. The Interconnecting Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Interconnecting Customer conductors to the Company meter.

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**Exhibit H – Interconnection Service Agreement**

**Attachment 2: Description of System Modifications**

Rhode Island Energy System Modifications required for the interconnection of 5,250 kW (AC) application as identified in the impact study are as follows:

**On the Customer's property:**

- Install ~250 feet of 3-1/c-477 AL Bare conductor
- Install one (1) 35 kV load break switch
- Install one (1) 35 kV recloser, two (2) single-phase transformers
- Install one (1) primary meter at the PCC
- Install six (6) poles

**On the Company's distribution system:**

- Approximately 16,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road will be utilized for this interconnection and was previously installed to benefit this project.
- Install ~700 circuit feet of 3-500 kcmil CU EPR 35 kV cable from 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install ~200 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Reivity Energy POI) to a 2-way MH on Customer property
- Install ~100 circuit feet of 3-500 kcmil CU EPR 35 kV cable from the 2-way MH on Customer property to proposed riser pole on Customer property
- Install ~1400 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road
- Extend the Kent County 3310, 34.5 KV circuit underground from proposed Pole #26-50, Hopkins Hill Road, West Greenwich, RI to the 3310 PCC-POI located at 18 Weaver Hill Road, West Greenwich, RI. (approximately 3.5 Miles).
- Install ~410 feet of 3-477 AL Bare conductor, two (2) single-phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV loadbreak switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, West Greenwich.

**Civil construction (designed and installed by others):**

- Installation of (3) - 3 way manholes, (21) - 2 way manholes, (311 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment (the "Third Party Ductbank"). For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.

**Civil construction (work anticipated to be completed by Reivity)**

- Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Reivity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer). Rhode Island Energy to provide civil design including drawings to Customer to construct this portion.
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self built by Customer) . Rhode Island Energy to provide civil design including drawings to Customer to construct this portion.
- The Interconnecting Customer will perform the civil construction for the manhole / duct system consistent with civil design plans provided by the Company. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company's civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer civil construction . The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company provided civil design plans.

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**At the Company's substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay
- Change the settings of the 3310 breaker at Kent County Substation

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer will fully cooperate with the Company in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

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**Attachment 3: Costs of System Modifications and Payment Terms**

This application is one of **seven projects** studied together with total system size of 40,700 kW. This application's size is 5,250kW and is 12.90% of the total aggregated project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if one of the applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531,) does not move forward with the interconnection of a facility to the Company's electric power system, the total common modification costs will be re-estimated and reallocated among the remaining facilities, as determined by the Company in its sole discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the group.

At present, total System Modification Costs, that will be performed by Rhode Island Energy, associated with all applications, are: **\$9,602,158** (+/- 25%). As of the ISA execution date, the system modification cost responsibility for this ISA is **\$1,696,156**.

In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is **\$11,761,595** as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated **\$6,116,029**. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 67.05% of this figure or **\$4,555,167** including tax. This application's cost responsibility for the THIRD PARTY DUCTBANK will be **\$587,616** (such amount, the "Interconnecting Customer's Cost Share Amount").

Upon completion of construction of the THIRD PARTY DUCTBANK, Company will request the entity constructing the THIRD PARTY DUCTBANK to provide a cost summary (including a detailed accounting ledger for each line item presented on the cost summary) with the following supporting information: vendor name, date/dates of service, detailed description of service, copy of the cancelled check(s), and associated contract/purchase order/timeslip/certified payroll/etc. documents. Upon the receipt of all required documentation, the Company will audit and verify the proposed costs incurred by the third party, and will adjust the Interconnecting Customer Cost Share Amount to reflect such reconciliation (which adjustment shall be reflected in an amended interconnection service agreement) for cost line items that, in whole or in part, do not qualify as an approved costs.

The Company will audit and verify the actual costs incurred to construct the REVITY DUCTBANK, and agrees that it will facilitate the sharing of such costs with all future parties (excluding the Related Projects) that occupy a common path of the REVITY DUCTBANK based on the distance of the common path and a pro rata megawatt share, and that any such cost sharing amount that is collected by the Company shall be disbursed to Revity Energy LLC.

The parties acknowledge and agree that the ability of the Company to assign and collect from an interconnecting customer any costs incurred by a third party in connection with its self-performance of interconnection work has been challenged in Docket No. 5235 (the "Petition"), which currently is pending before the Rhode Island Public Utilities Commission ("RIPUC"). Accordingly, the Company and Interconnecting Customer agree that Interconnection Customer's payment of the Interconnecting Customer Cost Share Amount, and any collection of costs from a third party by the Company of the REVITY DUCTBANK costs, is expressly subject to any final ruling by the RIPUC on the Petition, and that the Company shall refund to Interconnection Customer any Interconnection Customer Cost Sharing Amount if and to the extent required by the RIPUC.

The total actual costs received and audited will be reallocated among the facilities required to utilize the THIRD PARTY DUCTBANK in order to interconnect to the Company's EPS, as determined by the Company in its sole discretion. Please note, all final costs will be reconciled as a part of the Final Accounting Process as dictated per R.I.P.U.C. No. 2244.

At present, System Modification Costs associated with this application (excluding the THIRD PARTY DUCTBANK) are: **\$1,696,156** +/- 25% and itemized as follows:

- Total cost of facility specific system modifications on the Interconnecting Customer's (or other private) property as mentioned in Attachment 2 above: **\$376,192** (includes capital, removal, and O&M costs).
- Total cost of common system modifications on the Company's distribution system, specifically pulling of the 3310 cable as mentioned in Attachment 2 above is **\$5,397,714** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-27825278 and RI-27888883. RI-29048531 will be responsible for 20.7% or **\$1,117,326**.
- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification

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will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048531 will be responsible for 12.9% or **\$2,270**

- Total cost of the donated property taxes associated with the civil construction is **\$69,554**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048531 will be responsible for 12.9% or **\$8,972**.
- Total cost of Rhode Island Energy Supervision associated with the civil work to be built by the Customer is \$165,000. The cost for the Supervision will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048531 will be responsible for 12.9% or **\$21,285**.
- Total cost of common system modifications on the Company's distribution system, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048531 will be responsible for 12.90% or **\$206**.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: **\$2,096**
- Tax gross-up adder on capital costs is or \$167,809. *(A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any other facility in the Group does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for the Facility and for the Group, as determined by the Company in its sole discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The Total System Modifications Costs and the Facility System Modification Costs do not include any costs for Third Party Rights and Approvals (as defined in Attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the Total System Modifications Costs and the Facility System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party.

**ISO-NE Planning Study**

Rhode Island Energy Transmission Planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) Planning Procedure 5-6 "Scope of Study for System Impact Studies under the Generation Interconnection Procedures" and Rhode Island Energy TGP28 "Transmission Planning Guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

**ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW and will be required to comply with ISO-NE's requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

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Additional costs may be involved if the required pole work takes place in Telephone Company Maintenance Areas. These costs will be billed directly to the Interconnecting Customer from the Telephone Company.

**Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- Payment for differential cable costs to allow the order of the 1000kcmil cable required in the amount of **\$806,400** was paid on February 25, 2022.
- The first payment (5%) of **\$84,808** is due within 90 business days from when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. Proof of payment is required.
- The second payment (20%) of **\$339,231** is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around 08/29/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The third payment (75%) of **\$1,272,117** is due within 15 business days from the receipt of the third payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project, estimated to be on or around 01/05/2023. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The fourth payment of **\$587,616** that is associated with this applications cost sharing responsibility for the Third Party Ductbank will be due prior to the Witness Test for this application being conducted.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021.

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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**Attachment 4: Special Operating Requirements, if any**

The generating system may only normally generate onto the 3310 feeder and Rhode Island Energy's Regional Control Center must first give permission to the Interconnecting Customer to allow the operation of their system. The generator may not be allowed to operate with the local electrical power system (EPS) in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may choose to disconnect the customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.

1. The Interconnecting Customer is required to adhere to the following standards which are incorporated in their entirety by reference:
  - a. Rhode Island Energy's Standards for Interconnecting Distributed Generation (R.I.P.U.C. 2180), available at: [http://www.nationalgridus.com/non\\_html/RI\\_DG\\_Interconnection\\_Tariff.pdf](http://www.nationalgridus.com/non_html/RI_DG_Interconnection_Tariff.pdf)
  - b. Electric System Bulletin 750 "Specifications for Electrical Installations". ESB 750, available at: [http://www.nationalgridus.com/non\\_html/shared\\_constr\\_esb750.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb750.pdf)
  - c. Electric System Bulletin 756 "Requirements for Parallel Generation Connected to a Rhode Island Energy -Owned EPS". ESB756D, available at: [www.nationalgridus.com/non\\_html/shared\\_constr\\_esb756.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb756.pdf)
2. The Interconnecting Customer is required to address any outstanding requirements (that are not explicitly addressed herein), which are described in the most recent application review memo and/or study report (which is hereby incorporated in its entirety) provided by the Company on or prior to the Effective Date of this Interconnection Service Agreement.
  - a. If the Effective Date of this Interconnection Service Agreement precedes the issuance of a required Detailed Study by the Company, the Interconnecting Customer is also required to address any outstanding requirements described in the Detailed Study Report upon its issuance.
3. Interconnecting Customer shall adhere to the requirements identified in the Impact Study dated 4/21/2021
4. Interconnecting Customer shall provide Compliance Documentation, including photographs, as requested by, and to the satisfaction of, the Company.
5. Interconnecting Customer may not be allowed to operate with the local EPS in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may disconnect the Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.
6. Per section 6.4 of this agreement, Interconnecting Customer shall provide an external AC UTILITY DISCONNECT, accessible at all times by Rhode Island Energy personnel.
7. Interconnecting Customer's AC UTILITY DISCONNECT switch shall be labeled "AC UTILITY DISCONNECT".
8. The AC UTILITY DISCONNECT shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Company side by Company personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Company shall have the right to open this disconnect switch in accordance with the Interconnection Tariff. The switch has to be installed at the DR output on the current carrying lines. Shunt mechanisms are not permitted.
9. If the AC UTILITY DISCONNECT switch is not adjacent to the meter and/or PCC, Interconnecting Customer shall provide a permanent plaque locating the switch.
10. All plaques as described in NEC 705.10, 705.12 (7), 690.56, 692.4 and 705.70 shall be installed, as applicable.
11. All Interconnecting Customer-Owned meters shall be labeled "CUSTOMER-OWNED METER"
12. Interconnecting Customer shall install a permanent plaque or directory at the revenue meter and at the PCC with a warning about the generator(s) installed.



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13. Interconnecting Customer shall be responsible for providing necessary easements and/or environmental and/or municipal permits, as requested by the Company.
14. For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the Rhode Island Energy revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or – in locations with suitable wireless service, a wireless meter. Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of Rhode Island Energy . If approved, a wireless-enabled meter will be installed, at the customer's expense. If and when Rhode Island Energy 's retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to Rhode Island Energy 's revenue meter is provided.
15. For systems with redundant relaying, Company witness testing will be required. Customer shall develop, and provide for approval, a functional test procedure, including settings for relaying scheme. Witness test plan must be approved by Company prior to scheduling Company personnel for witness test.
16. Interconnecting Customer may only generate onto the feeder referenced in the Impact Study. Rhode Island Energy 's Regional Control Center must first give permission to the customer to allow the operation of their system.
17. Interconnecting Customer's protection scheme submitted for review must meet Rhode Island Energy 's specific protection requirements. Interconnecting Customer shall submit a PE stamped one-line, including relay settings, that meets the requirements specified within this document to Rhode Island Energy for review and approval, before a Witness Test plan can be reviewed. Please refer to "Expedited/Standard Process Completion Documentation Checklist", per Company's website for additional required documentation.
18. In order to minimize the impact of the proposed generation on the EPS and area customers, Rhode Island Energy will require that the reactive contribution of the PV interconnection be maintained between a 99% leading and lagging power factor at the PCC during the normal operation of the PV array. In addition, the PV interconnection shall not contribute to greater than a 3.0% change in voltage on the Rhode Island Energy EPS under any conditions.
19. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements. The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.
20. The Interconnecting Customer is responsible for coordinating with Verizon for any Verizon work. These costs will be billed directly to the customer from Verizon. It will be the responsibility of the customer to obtain any and all easements and required permitting for work that takes place on private property.

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**Exhibit H – Interconnection Service Agreement**

**Attachment 5: Agreement between the Company and the Company's Retail Customer**

If the Company's Retail Customer (account holder) is not the owner (and/or operator) of the Facility, then Exhibit I - Agreement Between the Company and the Company's Retail Customer - shall be signed by the Company's Retail Customer and executed by the Company, and shall be considered part of this Interconnection Service Agreement. It shall be the responsibility of the Interconnecting Customer to notify the Company if the Exhibit I associated with this application changes.

**Attachment 6: System Modifications Construction Schedule**

Below is an estimated construction schedule. This schedule is conceptual, and shows the duration of the facility's milestones from a "start-date" to an "in-service" date, in calendar days. This conceptual schedule is based upon assumptions and knowledge regarding the project, the site, and activities as of the date of the impact study. These estimations of construction time frames and total duration do not include any time that the Company's performance is on hold, delayed, or interrupted, including, without limitation, while waiting on information or on the performance of obligations by the Interconnecting Customer and/or third parties (including, without limitation, Verizon, ISO-NE, Railroad), as a result of unknown environmental and/or permitting issues, events of force majeure, and/or as a result of required transmission outages.

The start-date for this construction schedule is deemed to have occurred once : (1) the Interconnection Service Agreement ("ISA") has been executed (i.e., signed) by both Rhode Island Energy ("Company") and the Interconnecting Customer ("Customer"); and (2) the first payment has been submitted by the Customer to the Company, provided, however, that the Company shall not be required to provide any services or order any equipment without receiving adequate payment therefore from the Interconnecting Customer nor will it be required to initiate any construction before it has received full payment from the Interconnecting Customer.

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**Attachment 6 - Appendix A: System Modifications Construction Schedule**

Total Duration for engineering, permitting, procurement and construction of Distribution System Modification: 63 weeks to provide back-feed power to Customer

Milestone	Estimated Duration	Responsible Party
Company has received first payment	Start	Customer
Overhead and Underground Distribution System Modification Design	7 weeks	Customer/Company
2nd Payment Due	As per ISA	
Secure and obtain any and all rights, consents environmental permits approval and easement as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third party owned property (as well as for underground civil scope of public way)	16 weeks	Customer/Company
Submit Final Payment	As per ISA	
Distribution system Schedule Coordination and Construction (excluding construction of underground civil scope on public way to be completed by Interconnecting Customer, and supervised by Company appointed full-time civil inspectors, which is required Company to start construction)	27 weeks	Company
Construction Construction (Customer construction can be done in parallel with company construction)	13 weeks	Customer

Project schedule is dependent, among other things, on Interconnecting Customer construction of civil scope on time and to the satisfaction of Rhode Island Energy and for required cable size in respect to this project to be installed per the applicable third-party project schedule.

1 Construction for underground civil scope to be performed by Customer. Further, all Customer performed civil construction work shall be reviewed and approved by Company prior to backfilling by Customer.

The estimated schedule assumes standard tariff timeframe for both submittals and approvals. If submittal exceed tariff standards they may be extended accordingly.

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**Exhibit H – Interconnection Service Agreement**

1. **Parties.** This Interconnection Service Agreement (“Agreement”), dated as of \_\_\_\_\_ (“Effective Date”) is for application number “29048550” and Case Number “246616” is entered into, by and between The Narragansett Electric Company (doing business as Rhode Island Energy), a Rhode Island corporation with a principal place of business at 280 Melrose St., Providence, RI 02907 (hereinafter referred to as the “Company”), and Robin Hollow Solar, LLC, a Rhode Island limited liability company with a principal place of business (or residence) at 117 Metro Center Boulevard, Suite 1007, Wariwck, RI 02886 (“Interconnecting Customer” or “Customer”). (The Company and Interconnecting Customer are collectively referred to as the “Parties”). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Tariff which is hereby incorporated by reference.

2. **Basic Understandings.** This Agreement provides for parallel operation of an Interconnecting Customer’s Facility with the Company EPS to be installed and operated by the Interconnecting Customer at 18 Weaver Hill Road, West Greenwich, RI 02817. A description of the Facility is located in Attachment 1. If the Interconnecting Customer is not the Retail Customer, an Agreement between the Company and the Company’s Retail Customer, attached as Exhibit I to the Interconnection Tariff, must be signed and included as an Attachment to this Agreement.

The Interconnecting Customer has the right to operate its Facility in parallel with the Company EPS immediately upon successful completion of the protective relays testing as witnessed by the Company and receipt of written notice from the Company that interconnection with the Company EPS is authorized (“Authorization Date”).

3. **Term.** This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.

4. **Termination.**

4.1 This Agreement may be terminated under the following conditions.

4.1.1 The Parties agree in writing to terminate the Agreement.

4.1.2 The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Company.

4.1.3 The Company may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.

4.1.4 The Company may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.

4.1.5 The Company, upon 30 days notice, may terminate this Agreement if there are any changes in Commission regulations or state law that have a material adverse effect on the Company’s ability to perform its obligations under the terms of this Agreement.

4.2 **Survival of Obligations.** The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.

4.3 **Related Agreements.** Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. **General Payment Terms.** The Interconnecting Customer shall be responsible for the System Modification costs and payment terms identified in Attachment 3 of this Agreement and any approved cost increases pursuant to the terms of the Interconnection Tariff. If the system modifications exceed \$25,000, Attachment 3 will include a payment and construction schedule for both parties.

5.1 **Cost or Fee Adjustment Procedures.** The Company will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed up to a total amount of increase of 10% only. Any such changes to the

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### **Exhibit H – Interconnection Service Agreement**

Company's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Company's notice of increase, authorize such increase and make payment in the amount up to the 10% increase cap, or the Company will suspend the work and the corresponding agreement will terminate.

**5.2 Final Accounting.** The Company within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement and all Company work orders have been closed, shall provide Interconnecting Customer with a final accounting report of any difference between the (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications and for any Impact or Detailed Study performed by the Company, and (b) Interconnecting Customer's previous aggregate payments to the Company for such System Modifications and studies. Costs that are statutorily-based shall not be subject to either a final accounting or reconciliation under this provision (e.g. statutorily set study fees for the ISRDC), but may be reconciled at any time only if the costs exceed the statutory fee, and the Company seeks to collect actual costs in accordance with the applicable statute. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement for the System Modifications and in the Impact and/or Detailed Study Agreements (as applicable) for the studies performed by the Company exceeds Interconnecting Customer's previous aggregate payments, the Company shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Company within forty five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this applicable agreement, the Company shall refund to Interconnecting Customer an amount equal to the difference within forty five (45) days of the provision of such final accounting report.

## **6. Operating Requirements**

**6.1 General Operating Requirements.** Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Company's Interconnection Tariff. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Company has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Company EPS, the Company has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Company may require disconnection as outlined in Section 7.0 of the Interconnection Tariff. The cost of this testing will be borne by the Company unless the Company demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

**6.2 No Adverse Effects; Non-interference.** Company shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other customers served from the same Company EPS or if operation of the Facility could cause damage to Company EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547-2003, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Company will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Company EPS, and such normal disturbances shall not constitute unreasonable interference unless the Company has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Company EPS, and outages on the Company EPS. If the Interconnecting Customer demonstrates that the Company EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Company deviation from Good Utility Practice, the Company shall take appropriate action to eliminate the adverse effect.

**6.3 Safe Operations and Maintenance.** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Company and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Company's EPS, personnel, and other persons from damage and injury.

**6.4 Access.** The Company shall have access to the disconnect switch of the Facility at all times.

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**6.4.1 Company and Interconnecting Customer Representatives.** Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

**6.4.2 Company Right to Access Company-Owned Facilities and Equipment.** If necessary for the purposes of the Interconnection Tariff and in the manner it describes, the Interconnecting Customer shall allow the Company access to **the Company's equipment and the Company's facilities located on the Interconnecting Customer's or Customer's premises.** To the extent that the Interconnecting Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Tariff, the Interconnecting Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

**6.4.3 Right to Review Information.** The Company shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Company EPS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.4 in the Interconnection Tariff.

## 7. Disconnection

### 7.1 Temporary Disconnection

**7.1.1 Emergency Conditions.** Company shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Company, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Company EPS or to the electric systems of others to which the Company EPS is directly connected. Company shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Company promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Company EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

**7.1.2 Routine Maintenance, Construction and Repair.** Company shall have the right to disconnect the Facility from the Company EPS when necessary for routine maintenance, construction and repairs on the Company EPS. The Company shall provide the Interconnecting Customer with a minimum of seven (7) calendar days planned outage notification consistent with the Company's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Company at the PCC, the Interconnecting Customer will provide a minimum of seven (7) days notice to the Company. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Company shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

**7.1.3 Forced Outages.** During any forced outage, Company shall have the right to suspend interconnection service to effect immediate repairs on the Company EPS; provided, however, Company shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Company may interrupt Interconnection Service and disconnect the Facility from the Company EPS without such notice.

**7.1.4 Non-Emergency Adverse Operating Effects.** The Company may disconnect the Facility if the Facility is having an adverse operating effect on the Company EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of forty five (45) days to correct such adverse operating effect has elapsed.

**7.1.5 Modification of the Facility.** Company shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Company.

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**7.1.6 Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Company shall cooperate with each other to restore the Facility and the Company EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

**7.2 Permanent Disconnection.** The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Company.

**7.2.1** The Company may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

**8. Metering.** Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Tariff.

**9. Assignment.** Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without **Company's written consent**. Any assignment **Interconnecting Customer purports to make without Company's written consent shall not be valid**. Company shall not **unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement**. **Notwithstanding the above, Company's consent will not be required for any assignment made by Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction.** In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless, and until the assignee assumes in writing all obligations of this Agreement and notifies the Company of such assumption.

**10. Confidentiality.** Company shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Tariff, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.

**11. Insurance Requirements.**

**11.1 General Liability.**

11.1(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:

i. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.

ii. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;

iii. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;

iv. Five hundred thousand dollars (\$500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for eligible net metered customers which are exempt from insurance requirements.

11.1(b) No insurance is required for a Facility with a Gross Nameplate Rating less than or equal to 50 kW that is eligible for net metering. However, the Company recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

11.1(c) Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

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11.1(d) The general liability insurance required to be purchased in this Section may be purchased for the direct benefit of the Company and shall respond to third party claims asserted against the Company (hereinafter known as “Owners Protective Liability”). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Company and the Company will be designated as the primary and “Named Insured” under the policy.

11.1(e) The insurance hereunder is intended to provide coverage for the Company solely with respect to claims made by third parties against the Company.

11.1(f) In the event the State of Rhode Island and the Providence Plantations, or any other governmental subdivision thereof subject to the claims limits of R.I.G.L. Chapter 9-31 (hereinafter referred to as the “Governmental Entity”) is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance company from interposing the claims limits of R.I.G.L. Chapter 9-31 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Company. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of R.I.G.L. Chapter 9-31 by the Governmental Entity.

**11.2 Insurer Requirements and Endorsements.** All required insurance shall be carried by reputable insurers qualified to underwrite insurance in RI having a Best Rating of “A-”. In addition, all insurance shall, (a) include Company as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Company shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days’ written notice to Company prior to cancellation, termination, or material change of such insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (e) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Company as required above.

**11.3 Evidence of Insurance.** Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Company with evidence of insurance in compliance with the Interconnection Tariff on an annual basis.

Prior to the Company commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Company certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Company a certificate of insurance for any policy written on a "claims-made" basis. The Interconnecting Customer will maintain extended reporting coverage for three (3) years on all policies written on a "claims-made" basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Company.

11.4 All insurance certificates, statements of self insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued, updated and submitted yearly to the following:

**Rhode Island Energy**  
Attention: **Risk Management**  
300 Erie Blvd West  
Syracuse, NY 13202

12. **Indemnification.** Except as precluded by the laws of the State of Rhode Island and the Providence Plantations, Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.



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13. **Limitation of Liability.** Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.

14. **Amendments and Modifications.** No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.

15. **Permits and Approvals.** Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the Interconnecting Customer will notify the Company that it has initiated the permitting process. Prior to the commercial operation of the Facility, the Customer will notify the Company that it has obtained all permits necessary. Upon request, the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Company.

16. **Force Majeure.** For purposes of this Agreement, "Force Majeure Event" means any event:

- a. that is beyond the reasonable control of the affected Party; and
- b. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lighting, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.

17. **Notices.**

17.1 Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person specified below:

If to Company: **Rhode Island Energy**

Attention: **Distributed Generation**  
**280 Melrose Street**  
**Providence RI 02907**  
E-mail: **CAP@rienergy.com**

If to Interconnecting Customer: **Robin Hollow Solar, LLC**

Attention: **Ryan Palumbo**  
**117 Metro Center Boulevard, Suite 1007**  
**Warwick, RI 02886**  
Phone: **401-829-0893**  
E-mail: **ryan@revityenergy.com**

17.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 17.1.

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**17.3** The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers **may be communicated or revised by one Party's Notice to the other.**

**18. Default and Remedies**

**18.1 Defaults.** Any one of the following shall constitute "An Event of Default."

- i. One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, any such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or
- ii. One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.

**18.2 Remedies.** Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:

- a. Continue to perform and enforce this Agreement;
- b. Recover damages from the defaulting Party except as limited by this Agreement;
- c. By written notice to the defaulting Party terminate this Agreement;
- d. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.

**19. Entire Agreement.** This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Tariff. Together the Agreement and the Interconnection Tariff represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Company's Interconnection Tariff.

**20. Supercedence.** In the event of a conflict between this Agreement, the Interconnection Tariff, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Tariff, as the same may be amended from time to time, shall control. In the event that the Company files a revised tariff related to interconnection for Commission approval after the effective date of this Agreement, the Company shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.

**21. Governing Law.** This Agreement shall be interpreted, governed, and construed under the laws of the State of Rhode Island and the Providence Plantations without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

**22. Non-waiver.** None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

**23. Counterparts.** This Agreement may be signed in counterparts.

**24. No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care with respect to, or any liability to, any person not a party to this Agreement.

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25. **Dispute Resolution.** Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Tariff.

26. **Severability.** If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.

27. **Signatures.** IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to be executed under seal by their duly authorized representatives.

Robin Hollow Solar, LLC:

Name: Ryan Palumbo

Title: Vice President

Date: 7/21/22

Signature: [Handwritten Signature]

The Narragansett Electric Company (d/b/a Rhode Island Energy):

Name: Erica Russell Salk

Title: Manager, CEI

Date: 07-29-2022

Signature: Erica Russell Salk

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**Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling**

Interconnecting Customer has proposed a 9,750 kW photovoltaic system located at 18 Weaver Hill Road, West Greenwich, RI 02817. The proposed Facility is an Independent Power Producer (“IPP”). Facilities will interconnect to the Rhode Island Energy electric system via the Kent County Substation, 34.5 kV distribution feeder 3309, (“Point of Interconnection” or “POI”).

**a. Description of proposed design/configuration:**

- i. Thirty-nine (39) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 9,750 kW / kVA of inverter-based PV.
- ii. Three (3) Customer owned 2,000 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 6.8
- iii. Three (3) Customer owned 1,500 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 6.8.
- iv. One (1) Customer owned padmounted switchgear 38kV, 630A, 12.5KAISC, Cooper Nova recloser with SEL-651R relay assembly.
- v. One (1) Customer owned GOAB switch, Hubbell Type AR126SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- vi. One (1) Customer owned three phase 125E, 38kV cutout fused.

**b. Metering:** The company will install (1) pole-mounted primary meter, please refer to ESB 750 and ESB 756 Appendix D for service installation and primary/secondary meter installation.

**c. PCC:** The Company’s Design Personnel will determine the exact location of the Company’s facilities and the Customer’s gang operated disconnect. The Customer’s gang operated disconnect must be accessible by the Company’s personnel at all times, and be capable of being locked open and tagged by Company personnel. The Point of Common Coupling (PCC) will be designated as the Customer’s side of the Company’s primary meter. The Interconnecting Customer must install their Facilities up to the Company revenue meter. The Interconnecting Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Interconnecting Customer conductors to the Company meter.

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**Attachment 2: Description of System Modifications**

Rhode Island Energy System Modifications required for the interconnection of 9,750 kW (AC) application as identified in the impact study are as follows:

**On the Customer's property:**

- Install ~1,100 circuit feet of 3-477 AAC,
- One (1) 35 kV load break switch
- One (1) 35 kV recloser
- Two disconnect switches
- Six (6) primary meters along with six (6) disconnect switches at the PCC.
- Install Twenty three (23) poles include project numbers for the 6 sites

**On the Company's distribution system:**

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road. .
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revity Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed riser pole on Customer property.
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
- Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI

**Civil construction (designed and installed by others) ("Third Party Ductbank"):**

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.

**Civil construction (work anticipated to be completed by Revity) ("Revity Ductbank")**

- Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road (Revity Energy POI).
- Install duct system (~600 feet) between previously constructed 3-way MH on Hopkins Hill Road and previous constructed 3-way MH at the intersection of Hopkins Hill Road and Division Road. Rhode Island Energy to provide civil design including drawings to Customer to construct this portion.
- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Revity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer). Customer to provide civil design including drawings per Distributed Generation: Minimum Self-Performance Requirements to construct this portion.
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self built by Customer) . Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance.
- Install MH and duct system (~3000 feet) from proposed riser pole on Hopkins Hill Road to 3-way MH on Hopkins Hill Road. Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance Requirements.
- The Interconnecting Customer will perform the civil construction for the manhole / duct system consistent with civil design plans provided by the Customer and approved by the Company per the per Distributed Generation:

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Minimum Self-Performance Requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company’s civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer civil construction . The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company provided civil design plans.

**At the Company’s substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company’s Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

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**Attachment 3: Costs of System Modifications and Payment Terms**

This application is one of seven projects studied together with total system size of 40,700 kW (the “Related Projects”). This application’s size is 9,750 kW and is 24.0% of the total aggregated Related Project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if one of the Related Project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company’s electric power System, the total common modification costs on the Company’s System will be re-estimated and reallocated among the remaining Related Projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the Related Projects group.

The total Company System Modification Costs (excluding the THIRD PARTY DUCTBANK and REVITY DUCTBANK) that will be performed by the Company and are associated with all Related Project applications are: **\$9,602,158 (+/- 25%)**. As of the ISA execution date, the System modification cost responsibility for this ISA is **\$2,174,288**.

In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is **\$11,761,595** as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated **\$6,116,029**. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 67.05% of this figure or **\$4,555,167** including tax. This application’s cost responsibility for the THIRD PARTY DUCTBANK will be **\$1,093,240** (such amount, the “Interconnecting Customer’s Cost Share Amount”).

Upon completion of construction of the THIRD PARTY DUCTBANK, Company will request the entity constructing the THIRD PARTY DUCTBANK to provide a cost summary (including a detailed accounting ledger for each line item presented on the cost summary) with the following supporting information: vendor name, date/dates of service, detailed description of service, copy of the cancelled check(s), and associated contract/purchase order/timeslip/certified payroll/etc. documents. Upon the receipt of all required documentation, the Company will audit and verify the proposed costs incurred by the third party, and will adjust the Interconnecting Customer Cost Share Amount to reflect such reconciliation (which adjustment shall be reflected in an amended interconnection service agreement) for cost line items that, in whole or in part, do not qualify as an approved costs.

The Company will audit and verify the actual costs incurred to construct the REVITY DUCTBANK, and agrees that it will facilitate the sharing of such costs with all future parties (excluding the Related Projects) that occupy a common path of the REVITY DUCTBANK based on the distance of the common path and a pro rata megawatt share, and that any such cost sharing amount that is collected by the Company shall be disbursed to Revity Energy LLC.

The parties acknowledge and agree that the ability of the Company to assign and collect from an interconnecting customer any costs incurred by a third party in connection with its self-performance of interconnection work has been challenged in Docket No. 5235 (the “Petition”), which currently is pending before the Rhode Island Public Utilities Commission (“RIPUC”). Accordingly, the Company and Interconnecting Customer agree that Interconnection Customer’s payment of the Interconnecting Customer Cost Share Amount, and any collection of costs from a third party by the Company of the REVITY DUCTBANK costs, is expressly subject to any final ruling by the RIPUC on the Petition, and that the Company shall refund to Interconnection Customer any Interconnection Customer Cost Sharing Amount if and to the extent required by the RIPUC.

The Company System Modification Costs associated with this application (which do not include the THIRD PARTY DUCTBANK) are: **\$2,174,288 (+/- 25%)** and itemized as follows:

- Total cost of common system modifications on the Interconnecting Customer’s (or other private) property as mentioned in Attachment 2 above: **\$784,147** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048593, and the Interconnecting Customer will be responsible for 27.5% share or **\$215,640**
- Total cost of common system modifications on the Company’s distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above is **\$6,106,255** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048593, and the Interconnecting Customer will be responsible for 27.5% share or **\$1,679,220**

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- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment ) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 24.0% share or **\$4,224**.
- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$69,554**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 24.0% or **\$16,693**
- Total cost of Rhode Island Energy Supervision associated with the REVITY DUCTBANK construction self-performed by Customer is **\$165,000**. The cost for the Supervision will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 24.0% share or **\$39,600**
- **Total cost of common system modifications on the Company's distribution System**, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 24.0% share or **\$384**.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: **\$3,900**.
- Tax gross-up adder on capital costs is or **\$214,627**. *(A 2022 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any other Related Project does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for the Facility and for the Related Projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The System modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The Total System Modifications Costs and the Facility System Modification Costs do not include any costs for Third Party Rights and Approvals (as defined in Attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the Total System Modifications Costs and the Facility System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party

**ISO-NE Planning Study**

Rhode Island Energy Transmission Planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) Planning Procedure 5-6 "Scope of Study for System Impact Studies under the Generation Interconnection Procedures" and Rhode Island Energy TGP28 "Transmission Planning Guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

**ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate



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of 5MW and will be required to comply with ISO-NE's requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in Telephone Company Maintenance Areas. These costs will be billed directly to the Interconnecting Customer from the Telephone Company.

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**Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (5%) of **\$108,714** is due within 90 business days from when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. Proof of payment is required.
- The second payment (20%) of **\$434,858** is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around 08/29/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The third payment (75%) of **\$1,630,716** is due within 15 business days from the receipt of the third payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project, estimated to be on or around 01/05/2023. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The fourth payment of **\$1,093,240** that is associated with this application's cost sharing responsibility for the THIRD PARTY DUCTBANK will be due prior to the Witness Test for this application being conducted.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021.

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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**Attachment 4: Special Operating Requirements, if any**

The generating system may only normally generate onto the 3309 feeder and Rhode Island Energy's **Regional Control Center** must first give permission to the Interconnecting Customer to allow the operation of their system. The generator may not be allowed to operate with the local electrical power system (EPS) in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may choose to disconnect the customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.

1. The Interconnecting Customer is required to adhere to the following standards which are incorporated in their entirety by reference:
  - a. Rhode Island Energy's **Standards for Interconnecting Distributed Generation** (R.I.P.U.C. 2180), available at: [http://www.nationalgridus.com/non\\_html/RI\\_DG\\_Interconnection\\_Tariff.pdf](http://www.nationalgridus.com/non_html/RI_DG_Interconnection_Tariff.pdf)
  - b. **Electric System Bulletin 750 "Specifications for Electrical Installations"**. ESB 750, available at: [http://www.nationalgridus.com/non\\_html/shared\\_constr\\_esb750.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb750.pdf)
  - c. **Electric System Bulletin 756 "Requirements for Parallel Generation Connected to a Rhode Island Energy-Owned EPS"**. ESB756D, available at: [www.nationalgridus.com/non\\_html/shared\\_constr\\_esb756.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb756.pdf)
  - d. Distributed Generation: Minimum Self-Performance Requirements
2. The Interconnecting Customer is required to address any outstanding requirements (that are not explicitly addressed herein), which are described in the most recent application review memo and/or study report (which is hereby incorporated in its entirety) provided by the Company on or prior to the Effective Date of this Interconnection Service Agreement.
  - a. If the Effective Date of this Interconnection Service Agreement precedes the issuance of a required Detailed Study by the Company, the Interconnecting Customer is also required to address any outstanding requirements described in the Detailed Study Report upon its issuance.
3. Interconnecting Customer shall adhere to the requirements identified in the Impact Study dated 4/21/2021
4. Interconnecting Customer shall provide Compliance Documentation, including photographs, as requested by, and to the satisfaction of, the Company.
5. Interconnecting Customer may not be allowed to operate with the local EPS in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may disconnect the Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.
6. Per section 6.4 of this agreement, Interconnecting Customer shall provide an external AC UTILITY DISCONNECT, accessible at all times by Rhode Island Energy personnel.
7. **Interconnecting Customer's AC UTILITY DISCONNECT switch shall be labeled "AC UTILITY DISCONNECT"**.
8. The AC UTILITY DISCONNECT shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Company side by Company personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Company shall have the right to open this disconnect switch in accordance with the Interconnection Tariff. The switch has to be installed at the DR output on the current carrying lines. Shunt mechanisms are not permitted.
9. If the AC UTILITY DISCONNECT switch is not adjacent to the meter and/or PCC, Interconnecting Customer shall provide a permanent plaque locating the switch.
10. All plaques as described in NEC 705.10, 705.12 (7), 690.56, 692.4 and 705.70 shall be installed, as applicable.
11. All Interconnecting Customer-Owned meters shall be labeled "CUSTOMER-OWNED METER"

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12. Interconnecting Customer shall install a permanent plaque or directory at the revenue meter and at the PCC with a warning about the generator(s) installed.
13. Interconnecting Customer shall be responsible for providing necessary easements and/or environmental and/or municipal permits, as requested by the Company.
14. For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the Rhode Island Energy revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or – in locations with suitable wireless service, a wireless meter. Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of Rhode Island Energy. If approved, a wireless-enabled meter will be installed, at the customer's expense. If and when Rhode Island Energy's retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to Rhode Island Energy's revenue meter is provided.
15. For systems with redundant relaying, Company witness testing will be required. Customer shall develop, and provide for approval, a functional test procedure, including settings for relaying scheme. Witness test plan must be approved by Company prior to scheduling Company personnel for witness test.
16. Interconnecting Customer may only generate onto the feeder referenced in the Impact Study. Rhode Island Energy's Regional Control Center must first give permission to the customer to allow the operation of their system.
17. **Interconnecting Customer's protection scheme submitted for review must meet Rhode Island Energy's specific protection requirements.** Interconnecting Customer shall submit a PE stamped one-line, including relay settings, that meets the requirements specified within this document to Rhode Island Energy for review and approval, before a Witness Test plan can be reviewed. **Please refer to "Expedited/Standard Process Completion Documentation Checklist", per Company's website for additional required documentation.**
18. In order to minimize the impact of the proposed generation on the EPS and area customers, Rhode Island Energy will require that the reactive contribution of the PV interconnection be maintained between a 99% leading and lagging power factor at the PCC during the normal operation of the PV array. In addition, the PV interconnection shall not contribute to greater than a 3.0% change in voltage on the Rhode Island Energy EPS under any conditions.
19. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements. **The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.**
20. The Interconnecting Customer is responsible for coordinating with Verizon for any Verizon work. These costs will be billed directly to the customer from Verizon. It will be the responsibility of the customer to obtain any and all easements and required permitting for work that takes place on private property.

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**Attachment 5: Agreement between the Company and the Company's Retail Customer**

If the Company's Retail Customer (account holder) is not the owner (and/or operator) of the Facility, then Exhibit I - Agreement Between the Company and the Company's Retail Customer - shall be signed by the Company's Retail Customer and executed by the Company, and shall be considered part of this Interconnection Service Agreement. It shall be the responsibility of the Interconnecting Customer to notify the Company if the Exhibit I associated with this application changes.

**Attachment 6: System Modifications Construction Schedule**

Below is an estimated construction schedule. This schedule is conceptual, and shows the duration of the facility's milestones from a "start-date" to an "in-service" date, in calendar days. This conceptual schedule is based upon assumptions and knowledge regarding the project, the site, and activities as of the date of the impact study. These estimations of construction time frames and total duration do not include any time that the Company's performance is on hold, delayed, or interrupted, including, without limitation, while waiting on information or on the performance of obligations by the Interconnecting Customer and/or third parties (including, without limitation, Verizon, ISO-NE, Railroad), as a result of unknown environmental and/or permitting issues, events of force majeure, and/or as a result of required transmission outages.

The start-date for this construction schedule is deemed to have occurred once : (1) the Interconnection Service Agreement ("ISA") has been executed (i.e., signed) by both Rhode Island Energy ("Company") and the Interconnecting Customer ("Customer"); and (2) the first payment has been submitted by the Customer to the Company, provided , however, that the Company shall not be required to provide any services or order any equipment without receiving adequate payment therefore from the Interconnecting Customer nor will it be required to initiate any construction before it has received full payment from the Interconnecting Customer.

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**Attachment 6 - Appendix A: System Modifications Construction Schedule**

Total Duration for engineering, permitting,— procurement and construction of Distribution System Modification: 63 weeks to provide back-feed power to Customer

Milestone	Estimated Duration	Responsible Party
Company has received first payment	Start	Customer
Overhead and Underground Distribution System Modification Design	7 weeks	Customer/Company
2nd Payment Due	As per ISA	
Secure and obtain any and all rights, consents environmental permits approval and easement as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third party owned property (as well as for underground civil scope of public way)	16 weeks	Customer/Company
Submit Final Payment	As per ISA	
Distribution system Schedule Coordination and Construction (excluding construction of underground civil scope on public way to be completed by Interconnecting Customer, and supervised by Company appointed full-time civil inspectors, which is required Company to start construction)	27 weeks	Company
Construction Construction (Customer construction can be done in parallel with company construction)	13 weeks	Customer

Project schedule is dependent, among other things, on Interconnecting Customer construction of civil scope on time and to the satisfaction of Rhode Island Energy and for required cable size in respect to this project to be installed per the applicable third-party project schedule.

1 Construction for underground civil scope to be performed by Customer. Further, all Customer performed civil construction work shall be reviewed and approved by Company prior to backfilling by Customer.

The estimated schedule assumes standard tariff timeframe for both submittals and approvals. If submittal exceed tariff standards they may be extended accordingly.

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**Exhibit H – Interconnection Service Agreement**

1. **Parties.** This Interconnection Service Agreement (“Agreement”), dated as of \_\_\_\_\_ (“Effective Date”) is for application number “29048488” and Case Number “246617” is entered into, by and between The Narragansett Electric Company (doing business as Rhode Island Energy), a Rhode Island corporation with a principal place of business at 280 Melrose St., Providence, RI 02907 (hereinafter referred to as the “Company”), and Robin Hollow Solar, LLC, a Rhode Island limited liability company with a principal place of business (or residence) at 117 Metro Center Boulevard, Suite 1007, Wariwck, RI 02886 (“Interconnecting Customer” or “Customer”). (The Company and Interconnecting Customer are collectively referred to as the “Parties”). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Tariff which is hereby incorporated by reference.

2. **Basic Understandings.** This Agreement provides for parallel operation of an Interconnecting Customer’s Facility with the Company EPS to be installed and operated by the Interconnecting Customer at 18 Weaver Hill Road, West Greenwich, RI 02817. A description of the Facility is located in Attachment 1. If the Interconnecting Customer is not the Retail Customer, an Agreement between the Company and the Company’s Retail Customer, attached as Exhibit I to the Interconnection Tariff, must be signed and included as an Attachment to this Agreement.

The Interconnecting Customer has the right to operate its Facility in parallel with the Company EPS immediately upon successful completion of the protective relays testing as witnessed by the Company and receipt of written notice from the Company that interconnection with the Company EPS is authorized (“Authorization Date”).

3. **Term.** This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.

4. **Termination.**

4.1 This Agreement may be terminated under the following conditions.

4.1.1 The Parties agree in writing to terminate the Agreement.

4.1.2 The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Company.

4.1.3 The Company may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.

4.1.4 The Company may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.

4.1.5 The Company, upon 30 days notice, may terminate this Agreement if there are any changes in Commission regulations or state law that have a material adverse effect on the Company’s ability to perform its obligations under the terms of this Agreement.

4.2 **Survival of Obligations.** The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.

4.3 **Related Agreements.** Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. **General Payment Terms.** The Interconnecting Customer shall be responsible for the System Modification costs and payment terms identified in Attachment 3 of this Agreement and any approved cost increases pursuant to the terms of the Interconnection Tariff. If the system modifications exceed \$25,000, Attachment 3 will include a payment and construction schedule for both parties.

5.1 **Cost or Fee Adjustment Procedures.** The Company will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed up to a total amount of increase of 10% only. Any such changes to the

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Company's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Company's notice of increase, authorize such increase and make payment in the amount up to the 10% increase cap, or the Company will suspend the work and the corresponding agreement will terminate.

**5.2 Final Accounting.** The Company within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement and all Company work orders have been closed, shall provide Interconnecting Customer with a final accounting report of any difference between the (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications and for any Impact or Detailed Study performed by the Company, and (b) Interconnecting Customer's previous aggregate payments to the Company for such System Modifications and studies. Costs that are statutorily-based shall not be subject to either a final accounting or reconciliation under this provision (e.g. statutorily set study fees for the ISRDG), but may be reconciled at any time only if the costs exceed the statutory fee, and the Company seeks to collect actual costs in accordance with the applicable statute. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement for the System Modifications and in the Impact and/or Detailed Study Agreements (as applicable) for the studies performed by the Company exceeds Interconnecting Customer's previous aggregate payments, the Company shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Company within forty five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this applicable agreement, the Company shall refund to Interconnecting Customer an amount equal to the difference within forty five (45) days of the provision of such final accounting report.

## 6. Operating Requirements

**6.1 General Operating Requirements.** Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Company's Interconnection Tariff. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Company has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Company EPS, the Company has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Company may require disconnection as outlined in Section 7.0 of the Interconnection Tariff. The cost of this testing will be borne by the Company unless the Company demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

**6.2 No Adverse Effects; Non-interference.** Company shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other customers served from the same Company EPS or if operation of the Facility could cause damage to Company EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547-2003, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Company will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Company EPS, and such normal disturbances shall not constitute unreasonable interference unless the Company has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Company EPS, and outages on the Company EPS. If the Interconnecting Customer demonstrates that the Company EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Company deviation from Good Utility Practice, the Company shall take appropriate action to eliminate the adverse effect.

**6.3 Safe Operations and Maintenance.** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Company and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Company's EPS, personnel, and other persons from damage and injury.

**6.4 Access.** The Company shall have access to the disconnect switch of the Facility at all times.



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**6.4.1 Company and Interconnecting Customer Representatives.** Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

**6.4.2 Company Right to Access Company-Owned Facilities and Equipment.** If necessary for the purposes of the Interconnection Tariff and in the manner it describes, the Interconnecting Customer shall allow the Company access to the Company's equipment and the Company's facilities located on the Interconnecting Customer's or Customer's premises. To the extent that the Interconnecting Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Tariff, the Interconnecting Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

**6.4.3 Right to Review Information.** The Company shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Company EPS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.4 in the Interconnection Tariff.

**7. Disconnection**

**7.1 Temporary Disconnection**

**7.1.1 Emergency Conditions.** Company shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Company, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Company EPS or to the electric systems of others to which the Company EPS is directly connected. Company shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Company promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Company EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

**7.1.2 Routine Maintenance, Construction and Repair.** Company shall have the right to disconnect the Facility from the Company EPS when necessary for routine maintenance, construction and repairs on the Company EPS. The Company shall provide the Interconnecting Customer with a minimum of seven (7) calendar days planned outage notification consistent with the Company's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Company at the PCC, the Interconnecting Customer will provide a minimum of seven (7) days notice to the Company. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Company shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

**7.1.3 Forced Outages.** During any forced outage, Company shall have the right to suspend interconnection service to effect immediate repairs on the Company EPS; provided, however, Company shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Company may interrupt Interconnection Service and disconnect the Facility from the Company EPS without such notice.

**7.1.4 Non-Emergency Adverse Operating Effects.** The Company may disconnect the Facility if the Facility is having an adverse operating effect on the Company EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of forty five (45) days to correct such adverse operating effect has elapsed.

**7.1.5 Modification of the Facility.** Company shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Company.

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**7.1.6 Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Company shall cooperate with each other to restore the Facility and the Company EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

**7.2 Permanent Disconnection.** The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Company.

**7.2.1** The Company may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

**8. Metering.** Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Tariff.

**9. Assignment.** Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without Company's written consent. Any assignment Interconnecting Customer purports to make without Company's written consent shall not be valid. Company shall not unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement. Notwithstanding the above, Company's consent will not be required for any assignment made by Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction. In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless, and until the assignee assumes in writing all obligations of this Agreement and notifies the Company of such assumption.

**10. Confidentiality.** Company shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Tariff, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.

**11. Insurance Requirements.**

**11.1 General Liability.**

**11.1(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:**

i. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.

ii. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;

iii. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;

iv. Five hundred thousand dollars (\$500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for eligible net metered customers which are exempt from insurance requirements.

**11.1(b)** No insurance is required for a Facility with a Gross Nameplate Rating less than or equal to 50 kW that is eligible for net metering. However, the Company recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

**11.1(c)** Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

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11.1(d) The general liability insurance required to be purchased in this Section may be purchased for the direct benefit of the Company and shall respond to third party claims asserted against the Company (hereinafter known as "Owners Protective Liability"). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Company and the Company will be designated as the primary and "Named Insured" under the policy.

11.1(e) The insurance hereunder is intended to provide coverage for the Company solely with respect to claims made by third parties against the Company.

11.1(f) In the event the State of Rhode Island and the Providence Plantations, or any other governmental subdivision thereof subject to the claims limits of R.I.G.L. Chapter 9-31 (hereinafter referred to as the "Governmental Entity") is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance company from interposing the claims limits of R.I.G.L. Chapter 9-31 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Company. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of R.I.G.L. Chapter 9-31 by the Governmental Entity.

**11.2 Insurer Requirements and Endorsements.** All required insurance shall be carried by reputable insurers qualified to underwrite insurance in RI having a Best Rating of "A-". In addition, all insurance shall, (a) include Company as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Company shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to Company prior to cancellation, termination, or material change of such insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (e) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Company as required above.

**11.3 Evidence of Insurance.** Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Company with evidence of insurance in compliance with the Interconnection Tariff on an annual basis.

Prior to the Company commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Company certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Company a certificate of insurance for any policy written on a "claims-made" basis. The Interconnecting Customer will maintain extended reporting coverage for three (3) years on all policies written on a "claims-made" basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Company.

11.4 All insurance certificates, statements of self insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued, updated and submitted yearly to the following:

**Rhode Island Energy**  
Attention: **Risk Management**  
300 Erie Blvd West  
Syracuse, NY 13202

12. **Indemnification.** Except as precluded by the laws of the State of Rhode Island and the Providence Plantations, Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.

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13. **Limitation of Liability.** Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.
14. **Amendments and Modifications.** No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.
15. **Permits and Approvals.** Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the Interconnecting Customer will notify the Company that it has initiated the permitting process. Prior to the commercial operation of the Facility, the Customer will notify the Company that it has obtained all permits necessary. Upon request, the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Company.
16. **Force Majeure.** For purposes of this Agreement, "Force Majeure Event" means any event:
- a. that is beyond the reasonable control of the affected Party; and
  - b. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lighting, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.
17. **Notices.**
- 17.1 Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person specified below:

If to Company: **Rhode Island Energy**

Attention: **Distributed Generation**  
**280 Melrose Street**  
**Providence RI 02907**  
E-mail: **CAP@rienergy.com**

If to Interconnecting Customer: **Robin Hollow Solar, LLC**

Attention: **Ryan Palumbo**  
**117 Metro Center Boulevard, Suite 1007**  
**Warwick, RI 02886**  
Phone: **401-829-0893**  
E-mail: **ryan@revityenergy.com**

17.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 17.1.

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17.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.

18. **Default and Remedies**

18.1 **Defaults.** Any one of the following shall constitute "An Event of Default."

i. One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, any such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or

ii. One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.

18.2 **Remedies.** Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:

- a. Continue to perform and enforce this Agreement;
- b. Recover damages from the defaulting Party except as limited by this Agreement;
- c. By written notice to the defaulting Party terminate this Agreement;
- d. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.

19. **Entire Agreement.** This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Tariff. Together the Agreement and the Interconnection Tariff represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Company's Interconnection Tariff.

20. **Supercedence.** In the event of a conflict between this Agreement, the Interconnection Tariff, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Tariff, as the same may be amended from time to time, shall control. In the event that the Company files a revised tariff related to interconnection for Commission approval after the effective date of this Agreement, the Company shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.

21. **Governing Law.** This Agreement shall be interpreted, governed, and construed under the laws of the State of Rhode Island and the Providence Plantations without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

22. **Non-waiver.** None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

23. **Counterparts.** This Agreement may be signed in counterparts.

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24. **No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care with respect to, or any liability to, any person not a party to this Agreement.

25. **Dispute Resolution.** Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Tariff.

26. **Severability.** If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.

27. **Signatures.** IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to be executed under seal by their duly authorized representatives.

Robin Hollow Solar, LLC:

Name: Ryan Patumbo  
Title: Vice President  
Date: 7/21/22  
Signature: [Handwritten Signature]

The Narragansett Electric Company (d/b/a Rhode Island Energy):

Name: Erica Russell Salk  
Title: Manager, CEI  
Date: 07-29-2022  
Signature: Erica Russell Salk

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**Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling**

Interconnecting Customer has proposed a 750 kW photovoltaic system located at 18 Weaver Hill Road, West Greenwich, RI 02817. The proposed Facility is an Independent Power Producer (“IPP”). Facilities will interconnect to the Rhode Island Energy electric system via the Kent County Substation, 34.5 kV distribution feeder 3309, (“Point of Interconnection” or “POP”).

**a. Description of proposed design/configuration:**

- i. Three (3) Customer owned Sungrow SG250HX, 250 kW / kVA, three phase inverters for a total of 750 kW / kVA of inverter-based PV.
- ii. One (1) Customer owned 750 kVA, 34.5 kV Delta primary, 800 V wye-ungrounded secondary padmounted interface transformer with an impedance of  $Z=5.75\%$  along with X/R ratio of 5.2.
- iii. One (1) Customer owned GOAB switch, Hubbell Type ARI26SS, 38 kV, 900A with a Visible break and utility accessible 24/7.
- iv. One (1) Customer owned three phase 125E, 38kV cutout fused.

**b. Metering:** The company will install (1) pole-mounted primary meter, please refer to ESB 750 and ESB 756 Appendix D for service installation and primary/secondary meter installation.

**c. PCC:** The Company’s Design Personnel will determine the exact location of the Company’s facilities and the Customer’s gang operated disconnect. The Customer’s gang operated disconnect must be accessible by the Company’s personnel at all times, and be capable of being locked open and tagged by Company personnel. The Point of Common Coupling (PCC) will be designated as the Customer’s side of the Company’s primary meter. The Interconnecting Customer must install their Facilities up to the Company revenue meter. The Interconnecting Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Interconnecting Customer conductors to the Company meter.

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**Attachment 2: Description of System Modifications**

Rhode Island Energy System Modifications required for the interconnection of 750 kW (AC) application as identified in the impact study are as follows:

**On the Customer's property:**

- Install ~1,100 circuit feet of 3-477 AAC,
- One (1) 35 kV load break switch
- One (1) 35 kV recloser
- Two disconnect switches
- Six (6) primary meters along with six (6) disconnect switches at the PCC.
- Install Twenty three (23) poles include project numbers for the 6 sites

**On the Company's distribution system:**

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Reivity Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed riser pole on Customer property.
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
- Install ~410 feet of 3-1/c-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI

**Civil construction (designed and installed by others) ("Third Party Ductbank"):**

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width. Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.

**Civil construction (work anticipated to be completed by Reivity) ("Reivity Ductbank")**

- Install MH and duct system (~600 feet) from 3-way MH at intersection of Nooseneck Hill Road/Weaver Hill Road to first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install duct system (~600 feet) between previously constructed 3-way MH on Hopkins Hill Road and previous constructed 3-way MH at the intersection of Hopkins Hill Road and Division Road. Rhode Island Energy to provide civil design including drawings to Customer to construct this portion.
- Install MH and duct system (~100 feet) from first 3-way MH on Weaver Hill Road (Reivity Energy POI) to proposed 2-way MH on Customer property (to be self-built by Customer). Customer to provide civil design including drawings per Distributed Generation: Minimum Self-Performance Requirements to construct this portion.
- Install MH and duct system (~50 feet) from 2-way MH on Customer property to proposed riser pole on Customer property (to be self built by Customer) . Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance.
- Install MH and duct system (~3000 feet) from proposed riser pole on Hopkins Hill Road to 3-way MH on Hopkins Hill Road. Customer to provide civil design including drawings to construct this portion per Distributed Generation: Minimum Self-Performance Requirements.
- The Interconnecting Customer will perform the civil construction for the manhole / duct system consistent with civil design plans provided by the Customer and approved by the Company per the per Distributed Generation:

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The Narragansett Electric Company (d/b/a Rhode Island Energy)

R.I.P.U.C. No. 2244

**Exhibit H – Interconnection Service Agreement**

Minimum Self-Performance Requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company's civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer civil construction. The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company provided civil design plans.

**At the Company's substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

The Narragansett Electric Company (d/b/a Rhode Island Energy)

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**Exhibit H – Interconnection Service Agreement**

**Attachment 3: Costs of System Modifications and Payment Terms**

This application is one of **seven projects** studied together with total system size of 40,700 kW (the “**Related Projects**”). This application’s size is 750kW and is 1.8% of the total aggregated Related Project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if one of the Related Project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company’s electric power System, the total common modification costs on the Company’s System will be re-estimated and reallocated among the remaining Related Projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the Related Projects group.

The total Company System Modification Costs (excluding the THIRD PARTY DUCTBANK and REVITY DUCTBANK) that will be performed by the Company and are associated with all Related Project applications are: **\$9,602,158** (+/- 25%). As of the ISA execution date, the System modification cost responsibility for this ISA is **\$158,288**.

In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is **\$11,761,595** as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated **\$6,116,029**. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 67.05% of this figure or **\$4,555,167** including tax. This application’s cost responsibility for the THIRD PARTY DUCTBANK will be **\$81,993** (such amount, the “**Interconnecting Customer’s Cost Share Amount**”).

Upon completion of construction of the THIRD PARTY DUCTBANK, Company will request the entity constructing the THIRD PARTY DUCTBANK to provide a cost summary (including a detailed accounting ledger for each line item presented on the cost summary) with the following supporting information: vendor name, date/dates of service, detailed description of service, copy of the cancelled check(s), and associated contract/purchase order/timeslip/certified payroll/etc. documents. Upon the receipt of all required documentation, the Company will audit and verify the proposed costs incurred by the third party, and will adjust the Interconnecting Customer Cost Share Amount to reflect such reconciliation (which adjustment shall be reflected in an amended interconnection service agreement) for cost line items that, in whole or in part, do not qualify as an approved costs.

The Company will audit and verify the actual costs incurred to construct the REVITY DUCTBANK, and agrees that it will facilitate the sharing of such costs with all future parties (excluding the Related Projects) that occupy a common path of the REVITY DUCTBANK based on the distance of the common path and a pro rata megawatt share, and that any such cost sharing amount that is collected by the Company shall be disbursed to Revity Energy LLC.

The parties acknowledge and agree that the ability of the Company to assign and collect from an interconnecting customer any costs incurred by a third party in connection with its self-performance of interconnection work has been challenged in Docket No. 5235 (the “**Petition**”), which currently is pending before the Rhode Island Public Utilities Commission (“**RIPUC**”). Accordingly, the Company and Interconnecting Customer agree that **Interconnection Customer’s payment of the Interconnecting Customer Cost Share Amount**, and any collection of costs from a third party by the Company of the REVITY DUCTBANK costs, is expressly subject to any final ruling by the RIPUC on the Petition, and that the Company shall refund to Interconnection Customer any Interconnection Customer Cost Sharing Amount if and to the extent required by the RIPUC.

The Company System Modification Costs associated with this application (which do not include the THIRD PARTY DUCTBANK) are: **\$158,288** (+/- 25%) and itemized as follows:

- **Total cost of common system modifications on the Interconnecting Customer’s (or other private) property as mentioned in Attachment 2 above: \$784,147** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048593, and the Interconnecting Customer will be responsible for 2.0% share or **\$15,683**.
- **Total cost of common system modifications on the Company’s distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above is \$6,106,255** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048593, and the Interconnecting Customer will be responsible for 2.0% share or **\$122,125**.

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- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment) above is \$17,600 (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-2904,8568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 1.8% share or \$317.
- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is \$69,554. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 1.8% or \$1,252.
- Total cost of Rhode Island Energy Supervision associated with the REVITY DUCTBANK construction self-performed by Customer is \$165,000. The cost for the Supervision will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 1.8% share or \$2,970.
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is \$1,600 (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 1.8% share or \$29.
- Cost of witness testing, engineering review, EMS Integration and implementation of protective device settings: \$293.
- Tax gross-up adder on capital costs is or \$15,619. *(A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this Agreement, if any other Related Project does not move forward with its interconnection to the Company's electric power system, the Facility's interconnection may need to be restudied, and the System Modification costs will be re-estimated for the Facility and for the Related Projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the Facility's interconnection under this Agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The System modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The Total System Modifications Costs and the Facility System Modification Costs do not include any costs for Third Party Rights and Approvals (as defined in Attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the Total System Modifications Costs and the Facility System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party

**ISO-NE Planning Study**

Rhode Island Energy Transmission Planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) Planning Procedure 5-6 "Scope of Study for System Impact Studies under the Generation Interconnection Procedures" and Rhode Island Energy TGP28 "Transmission Planning Guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

**ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW and will be required to comply with ISO-NE's requirements, including Operating Procedure No. 14. Prior to the Company

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providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in Telephone Company Maintenance Areas. These costs will be billed directly to the Interconnecting Customer from the Telephone Company.

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**Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment (5%) of **\$7,914** is due within 90 business days from when the Exhibit H-Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. Proof of payment is required.
- The second payment (20%) of **\$31,658** is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around 08/29/2022. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The third payment (75%) of **\$118,716** is due within 15 business days from the receipt of the third payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project, estimated to be on or around 01/05/2023. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The fourth payment of **\$81,993** that is associated with this application's cost sharing responsibility for the THIRD PARTY DUCTBANK will be due prior to the Witness Test for this application being conducted.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021.

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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**Attachment 4: Special Operating Requirements, if any**

The generating system may only normally generate onto the 3309 feeder and Rhode Island Energy's **Regional Control Center** must first give permission to the Interconnecting Customer to allow the operation of their system. The generator may not be allowed to operate with the local electrical power system (EPS) in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may choose to disconnect the customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.

1. The Interconnecting Customer is required to adhere to the following standards which are incorporated in their entirety by reference:
  - a. Rhode Island Energy's **Standards for Interconnecting Distributed Generation** (R.I.P.U.C. 2180), available at: [http://www.nationalgridus.com/non\\_html/RI\\_DG\\_Interconnection\\_Tariff.pdf](http://www.nationalgridus.com/non_html/RI_DG_Interconnection_Tariff.pdf)
  - b. **Electric System Bulletin 750 "Specifications for Electrical Installations"**. ESB 750, available at: [http://www.nationalgridus.com/non\\_html/shared\\_constr\\_esb750.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb750.pdf)
  - c. **Electric System Bulletin 756 "Requirements for Parallel Generation Connected to a Rhode Island Energy-Owned EPS"**. ESB756D, available at: [www.nationalgridus.com/non\\_html/shared\\_constr\\_esb756.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb756.pdf)
  - d. Distributed Generation: Minimum Self-Performance Requirements
2. The Interconnecting Customer is required to address any outstanding requirements (that are not explicitly addressed herein), which are described in the most recent application review memo and/or study report (which is hereby incorporated in its entirety) provided by the Company on or prior to the Effective Date of this Interconnection Service Agreement.
  - a. If the Effective Date of this Interconnection Service Agreement precedes the issuance of a required Detailed Study by the Company, the Interconnecting Customer is also required to address any outstanding requirements described in the Detailed Study Report upon its issuance.
3. Interconnecting Customer shall adhere to the requirements identified in the Impact Study dated 4/21/2021
4. Interconnecting Customer shall provide Compliance Documentation, including photographs, as requested by, and to the satisfaction of, the Company.
5. Interconnecting Customer may not be allowed to operate with the local EPS in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may disconnect the Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.
6. Per section 6.4 of this agreement, Interconnecting Customer shall provide an external AC UTILITY DISCONNECT, accessible at all times by Rhode Island Energy personnel.
7. **Interconnecting Customer's AC UTILITY DISCONNECT** switch shall be labeled "AC UTILITY DISCONNECT".
8. The AC UTILITY DISCONNECT shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Company side by Company personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Company shall have the right to open this disconnect switch in accordance with the Interconnection Tariff. The switch has to be installed at the DR output on the current carrying lines. Shunt mechanisms are not permitted.
9. If the AC UTILITY DISCONNECT switch is not adjacent to the meter and/or PCC, Interconnecting Customer shall provide a permanent plaque locating the switch.
10. All plaques as described in NEC 705.10, 705.12 (7), 690.56, 692.4 and 705.70 shall be installed, as applicable.
11. All Interconnecting Customer-Owned meters shall be labeled "CUSTOMER-OWNED METER"

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12. Interconnecting Customer shall install a permanent plaque or directory at the revenue meter and at the PCC with a warning about the generator(s) installed.
13. Interconnecting Customer shall be responsible for providing necessary easements and/or environmental and/or municipal permits, as requested by the Company.
14. For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the Rhode Island Energy revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or – in locations with suitable wireless service, a wireless meter. Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of Rhode Island Energy. If approved, a wireless-enabled meter will be installed, at the customer's expense. If and when Rhode Island Energy's retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to Rhode Island Energy's revenue meter is provided.
15. For systems with redundant relaying, Company witness testing will be required. Customer shall develop, and provide for approval, a functional test procedure, including settings for relaying scheme. Witness test plan must be approved by Company prior to scheduling Company personnel for witness test.
16. Interconnecting Customer may only generate onto the feeder referenced in the Impact Study. Rhode Island Energy's Regional Control Center must first give permission to the customer to allow the operation of their system.
17. **Interconnecting Customer's** protection scheme submitted for review must meet Rhode Island Energy's **specific protection** requirements. Interconnecting Customer shall submit a PE stamped one-line, including relay settings, that meets the requirements specified within this document to Rhode Island Energy for review and approval, before a Witness Test plan can be reviewed. **Please refer to "Expedited/Standard Process Completion Documentation Checklist", per Company's website for additional required documentation.**
18. In order to minimize the impact of the proposed generation on the EPS and area customers, Rhode Island Energy will require that the reactive contribution of the PV interconnection be maintained between a 99% leading and lagging power factor at the PCC during the normal operation of the PV array. In addition, the PV interconnection shall not contribute to greater than a 3.0% change in voltage on the Rhode Island Energy EPS under any conditions.
19. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements. **The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.**
20. The Interconnecting Customer is responsible for coordinating with Verizon for any Verizon work. These costs will be billed directly to the customer from Verizon. It will be the responsibility of the customer to obtain any and all easements and required permitting for work that takes place on private property.

The Narragansett Electric Company (d/b/a Rhode Island Energy)

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**Exhibit H – Interconnection Service Agreement**

**Attachment 5: Agreement between the Company and the Company's Retail Customer**

If the Company's Retail Customer (account holder) is not the owner (and/or operator) of the Facility, then Exhibit I - Agreement Between the Company and the Company's Retail Customer - shall be signed by the Company's Retail Customer and executed by the Company, and shall be considered part of this Interconnection Service Agreement. It shall be the responsibility of the Interconnecting Customer to notify the Company if the Exhibit I associated with this application changes.

**Attachment 6: System Modifications Construction Schedule**

Below is an estimated construction schedule. This schedule is conceptual, and shows the duration of the facility's milestones from a "start-date" to an "in-service" date, in calendar days. This conceptual schedule is based upon assumptions and knowledge regarding the project, the site, and activities as of the date of the impact study. These estimations of construction time frames and total duration do not include any time that the Company's performance is on hold, delayed, or interrupted, including, without limitation, while waiting on information or on the performance of obligations by the Interconnecting Customer and/or third parties (including, without limitation, Verizon, ISO-NE, Railroad), as a result of unknown environmental and/or permitting issues, events of force majeure, and/or as a result of required transmission outages.

The start-date for this construction schedule is deemed to have occurred once : (1) the Interconnection Service Agreement ("ISA") has been executed (i.e., signed) by both Rhode Island Energy ("Company") and the Interconnecting Customer ("Customer"); and (2) the first payment has been submitted by the Customer to the Company, provided, however, that the Company shall not be required to provide any services or order any equipment without receiving adequate payment therefore from the Interconnecting Customer nor will it be required to initiate any construction before it has received full payment from the Interconnecting Customer.



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**Exhibit H – Interconnection Service Agreement**

**Attachment 6 - Appendix A: System Modifications Construction Schedule**

Total Duration for engineering, permitting,— procurement and construction of Distribution System Modification: 63 weeks to provide back-feed power to Customer

Milestone	Estimated Duration	Responsible Party
Company has received first payment	Start	Customer
Overhead and Underground Distribution System Modification Design	7 weeks	Customer/Company
2nd Payment Due	As per ISA	
Secure and obtain any and all rights, consents environmental permits approval and easement as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third party owned property (as well as for underground civil scope of public way)	16 weeks	Customer/Company
Submit Final Payment	As per ISA	
Distribution system Schedule Coordination and Construction (excluding construction of underground civil scope on public way to be completed by Interconnecting Customer, and supervised by Company appointed full-time civil inspectors, which is required Company to start construction)	27 weeks	Company
Construction Construction (Customer construction can be done in parallel with company construction)	13 weeks	Customer

Project schedule is dependent, among other things, on Interconnecting Customer construction of civil scope on time and to the satisfaction of Rhode Island Energy and for required cable size in respect to this project to be installed per the applicable third-party project schedule.

1 Construction for underground civil scope to be performed by Customer. Further, all Customer performed civil construction work shall be reviewed and approved by Company prior to backfilling by Customer. The estimated schedule assumes standard tariff timeframe for both submittals and approvals. If submittal exceed tariff standards they may be extended accordingly.

The Narragansett Electric Company (d/b/a Rhode Island Energy)

## SECOND AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT

**THIS SECOND AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** (this “Amendment”) dated (“Effective Date”) amends the Interconnection Service Agreement dated 05/16/2022 for application RI-29048593 by and between The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) and Robin Hollow Solar, LLC covering a distributed generation facility located at 18 Weaver-Hill Road, West Greenwich RI (“Agreement”).

**WHEREAS**, on 05/16/2022, Company consented to the Assignment of Interest in the Interconnection Service Agreement;

**WHEREAS**, Customer and the Company both desire to modify the Description of System Modifications (Attachment 2), System Modifications Costs (Attachment 3), and System Modification Construction Schedules (Attachment 6)

**NOW, THEREFORE**, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

1. **Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
2. **Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s Standards for Interconnection of Distributed Generation tariff R.I.P.U.C. No. 2180 (“Interconnection Tariff”), as the same may be amended.
3. **Amendment to Agreement.** The Agreement is hereby amended as follows:
  - (a) By striking Attachment 2 “Description of System Modifications” in its’ entirety, and replacing it with Attachment 2 attached hereto.
  - (b) By striking Attachment 3 “Cost of System Modifications” in its’ entirety, and replacing it with Attachment 3 attached hereto.
  - (c) By striking Attachment 6 “System Modifications Construction Schedule” in its’ entirety, and merging it with Attachment 2 attached hereto.
4. **Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
5. **Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a “.pdf” format data file) shall constitute effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.
6. **Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not executed by the Interconnecting Customer and returned to the Company on or before 7/9/2023

The Narragansett Electric Company (d/b/a Rhode Island Energy)

**SECOND AMENDMENT TO  
INTERCONNECTION SERVICE AGREEMENT**

**IN WITNESS WHEREOF**, the Parties hereto execute this **SECOND AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:  
Robin Hollow Solar, LLC

COMPANY:  
The Narragansett Electric Company d/b/a  
Rhode Island Energy

By:           *Ralph Palumbo*          

By:           *Erica Russell Salk*          

Name:           Ralph A. Palumbo          

Name:           Erica Russell Salk          

Title:           Manager          

Title:           Manager, CEI          

Date:           8/21/2023          

Date:           10/4/2023

The Narragansett Electric Company (d/b/a Rhode Island Energy)

## SECOND AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT

### Attachment 2: Description of System Modifications

Rhode Island Energy System Modifications required for the interconnection of 7,500kW (AC) application as identified in the impact study are as follows:

#### On the Customer's property:

- Install ~1,100 feet of 3 – 477 AAC
- Install one (1) 35 kV load break switch
- Install one (1) 35 kV recloser
- Install one (1) disconnect switch
- Install two (2) single-phase transformers
- Install six (6) primary meters along with six (6) disconnect switches at the PCC
  - **Note:** Revery will be responsible for the procurement of cables mentioned above.
  - **Note:** The above work will be designed and constructed by the Interconnecting Customer.

#### On the Company's distribution system:

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revery Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revery Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed 3309 riser pole on Customer property.
  - **Note:** Interconnecting Customer is responsible for the above electrical design, procurement of 1000 kcmil CU EPR 35kV cable and installation of new cable in any de-energized manholes.
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
  - **Note:** The above work was designed and constructed as part of a prior in-queue project. Cost sharing may be applicable.
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI
- Install ~410 feet of 3-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
  - **Note:** Revery will be responsible for the procurement of cables mentioned above.
  - **Note:** Interconnecting Customer is responsible for the electrical design. Rhode Island Energy is to construct all overhead work on Hopkins Hill Road.

#### Civil construction (designed and installed by others) (“Third Party Ductbank”):

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width.

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- *Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.*

### Civil construction (work anticipated to be completed by Revity) (“Revity Ductbank”)

- ***Note:** Interconnecting Customer is responsible for all the survey and as-builts for this project. Such as-built plans shall comply with Company mapping and engineering requirements. Company will have 10 business days to review and comment on submitted as-built plans.*
- Install manhole and duct system (~3,000 feet) from proposed riser pole on Hopkins Hill Rd to 3-way MH on Hopkins Hill Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install duct System (~600 feet) between previously constructed 3-way manhole on Hopkins Hill Road and previously constructed 3-way manhole at the intersection of Hopkins Hill Rd/Division Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~600 feet) from 3-way manhole at the intersection of Nooseneck Hill Rd/Weaver Hill Rd to the first 3-way manhole on Weaver Hill Rd (Revity Energy POI). Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~100 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (400 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~50 feet) from the proposed 2-way manhole on Customer property to proposed 3309 riser pole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- ***Note:** Interconnecting Customer will perform the civil construction for the manhole/duct system consistent with civil design plans provided by the Customer and approved by the Company per the Distributed Generation: Minimum Self-Performance requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company’s civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer’s civil construction. The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company approved civil design plans.*
- ***Note:** Interconnecting Customer Work is to be performed subject to the Roles and Responsibilities Regarding Interconnecting Customer Work set forth below in this Attachment 2.*

### At the Company’s substation:

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

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**System Modifications Construction Schedule**

*The construction schedule will be a commonly agreed upon time frame by both parties*

Total System Modification Construction Duration: **29** weeks. The duration represents the estimated-total number of weeks the Company will work on this project.

<b>Milestone</b>	<b>Estimated Duration</b>	<b>Responsible Party</b>
First Payment	Start	Interconnecting Customer
Underground Distribution Design Review	Two (2) Weeks	Company
Electrical Distribution System Design Review	Two (2) Weeks	
Distribution System Modification/ /Engineering/Construction	18 weeks	Company
Secure Required Permits/Approvals/Easements and Petition for Company Distribution Work*	Per Customer (Before Construction Begins)	Interconnecting Customer
Submit Final Payment	As per ISA (Before Construction Begins)	Interconnecting Customer
Witness Test Documentation Review and Approval / Witness Test Date Scheduled**	Two (2) weeks	Company
Witness Test Result Review and Approval	One (1) week	Company
Compliance Documentation Review and Approval**	One (1) week	Company
Meter Installation***	Two (2) weeks	Company
Issue Authorization to Interconnect ****	One (1) week	Company

\*Estimated duration dependent on third party.

\*\*Timelines for documentation review are reliant upon receipt of documentation that is accurate and complete. This can be completed in parallel with construction schedule.

\*\*\* Meter procurement requires 8 weeks lead time and will commence after the Interconnecting Customer provides an acceptable wireless signal test or dedicated phone line.

\*\*\*\* If assets require registration with ISO-NE, this shall be completed prior to Authorization to Interconnect.

**General Roles and Responsibilities**

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications

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unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

### Roles and Responsibilities Regarding Interconnecting Customer Work

*The roles and responsibilities listed below for interconnecting customer's work is specific to this project.*

#### 1. GENERAL REQUIREMENTS FOR INTERCONNECTION CUSTOMER WORK

- 1.1. Interconnection Customer shall perform the civil and electrical design in accordance with the Complete Overhead July 2021 Edition (the "Overhead Standard") along with the Complete Underground July 2021 Edition (the "Underground Standard"), which are both incorporated in this Attachment 2 by reference. Upon completion of the design by Interconnection Customer, Company will have 10 business days to review each separately in accordance with these standards.
- 1.2. Upon completion of the electrical design Interconnection Customer will be solely responsible for ordering all material in accordance with the Complete Overhead July 2021 Edition along with the Complete Underground July 2021 Edition, EXCEPT the Primary Meters (approx. [ ]), and the Reclosers (approx. [ ]).
- 1.3. All material ordered/obtained by Interconnection Customer will comply with the product numbers as defined through Company's Stores Program.
- 1.4. All cable procured by Customer will meet the standards set in MS4168 and be properly parallel wound.
- 1.5. Prior to construction of the Interconnection Customer Work Customer will conduct a pre-construction meeting to include the Company team including project management, engineering, construction management, safety etc.
- 1.6. Prior to any cable being installed as part of the Interconnection Customer Work, all duct lines will be proved out and man-drilled by Interconnection Customer with a Company supervisor on site to witness.
- 1.7. Interconnection Customer will pull and splice cable within non energized manholes and witnessed by a Company RCS. Cable phasing will be verified and labeled by Interconnection Customer according to the NG-EOP UG014. Standard phase tags will be used by Interconnection Customer. Tan delta acceptance testing will be performed by Interconnection Customer according to NG-EOP UG004. All test results will be provided by Interconnection Customer to Company.
- 1.8. Upon final completion of installation of assets within each manhole for which Interconnection Customer is responsible, 360 degree images will be taken by Interconnection Customer and provided to Company as documentation that all assets within the manhole were installed per standards.
- 1.9. Interconnection Customer represents to Company that it has fully acquainted itself with, and has carefully examined all documents and conditions relevant to the Interconnection Customer Work to insure that they are sufficient to properly complete the work; all relevant plans, surveys, measurements, dimensions, calculations, and estimates or other information provided by Company; the location of the work, the character of equipment, materials and facilities needed preliminary to and during the prosecution of the Interconnection Customer Work; and the general and local conditions (including environmental conditions and labor relations) which can affect the Interconnection Customer Work.

#### 2. SHIPMENT AND TITLE

- 2.1. Interconnection Customer shall deliver, receive, unload, store in a secure place, and deliver from storage all equipment and material (whether furnished by Company or the Interconnection Customer) required for the performance of the Interconnection Customer Work, in accordance with all manufacturers' recommendations. Receiving of equipment and materials (whether furnished by Company or Interconnection Customer) shall include inspection by Interconnection Customer for correctness of

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quantity, quality, and damage, all of which shall be reported. Interconnection Customer shall bear the cost of all packaging and shipment of equipment and material to the site of the Interconnection Customer Work, of all unloading, storage, protection and installation of equipment and material at such site, and of any insurance on the equipment and material prior to completion of the Interconnection Customer Work.

- 2.2. Upon completion of the Interconnection Customer Work, Interconnection Customer shall convey to Company good, clear and marketable title to all goods and fixtures constituting Interconnection Customer Work, free from any defects, liens, encumbrances and claims of any kind, and shall indemnify, defend and hold harmless Company and warrant and defend title against any claims or demands of third parties; and shall take such action at Interconnection Customer's sole expense as may be necessary to discharge any defect in title, or lien or encumbrance on such goods or fixtures.
- 2.3. Location of laydown area(s) shall be agreeable to all parties including applicable access of Company. equipment include but not limited to cable pulling equipment.

### **3. RISK OF LOSS**

- 3.1. Risk of loss or damage to all goods and fixtures constituting Interconnection Customer Work shall remain with Interconnection Customer until completion of the Interconnection Customer Work, regardless of whether title has passed. Interconnection Customer shall bear the risk of loss or damage to any such goods or fixtures that occurs prior to transfer of risk of loss, except to the extent such damage or loss is caused by the negligence or willful misconduct of Company.
- 3.2. Interconnection Customer shall be solely responsible for storage and protection of all goods and fixtures constituting Interconnection Customer Work (whether furnished by Company or Interconnection Customer) against deterioration or damage from any cause, vandalism, and theft until completion of the Interconnection Customer Work.
- 3.3. Interconnection Customer shall be responsible for the security of all (1) materials and equipment under its custody and control, and (2) the sites over which it has care, custody, and control and in which it is performing the Interconnection Customer Work. Interconnection Customer shall cooperate with Company regarding all security measures instituted at the site(s) of the Interconnection Customer Work.

### **4. WARRANTY/REMEDY**

- 4.1. Interconnection Customer warrants to Company that: 1) the Interconnection Customer Work shall conform to the Overhead Standard, and the Underground Standard, this Agreement, and the Interconnection Tariff; 2) all services constituting Interconnection Customer Work shall be performed by qualified, competent, and experienced personnel, and in accordance with generally accepted practices in the electric construction industry; and 3) all portions of the Interconnection Customer Work, including but not limited to construction, installation of goods, refurbishment, and repairs, shall be free from defects in material, workmanship and design.
- 4.2. If the Interconnection Customer Work fails to conform to the warranties set forth in this agreement, Interconnection Customer shall repair or replace the nonconforming Work, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.

### **5. REVIEW AND QUALITY ASSURANCE**

- 5.1. Interconnection Customer shall inspect all Interconnection Customer work and make or cause to be made all tests and reviews required by this Agreement.
- 5.2. Company shall have the right to review Interconnection Customer Work and any other work covered by this Agreement and, at no cost to Company, the right to inspect and/or audit any inspection records of Interconnection Customer or its subcontractors inspection records and associated costs pertaining to this Agreement. In the event the work or associated costs are found to be deficient or not in accordance with this Agreement, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.
- 5.3. Company may require periodic reviews of all engineering and design documents and drawings. Such reviews may occur at various stages of completion, typically at 30%, 60%, and 90% complete, up to and



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including, final design Issue for Construction (IFC) drawings. Interconnection Customer shall submit all engineering work for review in accordance with the Project Schedule, and in an electronic format acceptable to Company. Interconnection Customer shall allow a minimum of fourteen (14) business days for each such review by RIE from the date of receipt by the Company of all required documents and drawings.

- 5.4. Company shall advise Interconnection Customer of errors, or variations from the requirements of the this Agreement, and of defects in the Interconnection Customer Work, but it is expressly agreed that any omission on the Company's part to advise Interconnection Customer of any such errors, variations, or defects or to provide any instructions or explanations shall not give Interconnection Customer any right or claim against the Company, and shall not in any way relieve Interconnection Customer from its obligation to provide the Interconnection Customer Work in accordance with this Agreement.
  - 5.5. All trenches and excavation must be reviewed by a Company Project and Construction Management representative against and to conform to the Underground Standards. As an example, but not limited to, all trenches must be free from water and debris with manholes having one (1') foot of three quarter (3/4") inch stone.
  - 5.6. Company Project and Construction Management will have the right to review all construction efforts against and to conform to the Underground Standards. In exception, earth pouring will not be permitted and all duct lines must be formed and cannot be stripped until a 12hr. cure time has been achieved.
6. SAFETY
- 6.1. Interconnection Customer shall provide reasonably adequate safeguards, safety devices and protective equipment and enforce their use and take any other needed actions to protect the life, health and safety of the public and to protect the portion of the site(s) of the Interconnection Customer Work for which it has care, custody and control in connection with its performance of the Interconnection Customer Work.
  - 6.2. Interconnection Customer shall follow all current and applicable OSHA policies, procedures and standards during construction.
7. RECORDS/DOCUMENTS/INTELLECTUAL PROPERTY
- 7.1. Interconnection Customer shall, and shall require its subcontractors, for Company's benefit, at their own expense, to maintain a method of accounting in accordance with generally accepted accounting procedures and practices with respect to all matters pertinent to this Agreement. For Interconnection Customer Work performed on a time and materials or cost plus basis under the Agreement, Interconnection Customer shall maintain timesheets and invoices applicable to such portion of the Interconnection Customer Work performed on a time and materials or cost plus basis and shall make such timesheets and invoices available to Company or its authorized representative for inspection and audit and shall be kept in a manner which (1) adequately permits evaluation and verification of any invoices, payments or claims based on Interconnection Customer's actual costs incurred in the performance of the portion of the Work performed on a time and materials or cost plus basis.
  - 7.2. Interconnection Customer shall supply all documents in order to complete the Interconnection customer Work including but not limited to drawings; studies; surveys; inventories; reports; computer models; testing results; and data files collectively referred to in this Section as "Documents", in quantities and types, at times, according to instructions, and in the manner set forth in this Agreement. Any Document, which is prepared by Interconnection Customer in connection with this Agreement, shall be submitted in accordance with this Agreement.
  - 7.3. All documents prepared, procured, or developed by Interconnection Customer that are specific to the Interconnection Customer Work and furnished to Company shall be the property of Company and may be used by Company without restriction, whether during the term of this Agreement or thereafter.
  - 7.4. Any and all works, expressions, inventions, ideas, discoveries, improvements or developments (whether or not patentable), as well as all copyrights, patents or trademarks thereof, that may be conceived or made by Interconnection Customer or Interconnection Customer's subcontractors, vendor(s), supplier(s) or any

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other party employed by Interconnection Customer or Subcontractor to Interconnection Customer of any tier, to satisfy its obligation under this Agreement shall remain the property of Interconnection Customer or applicable owner. Interconnection Customer shall provide Company with a perpetual, non-transferrable, royalty-free, non-exclusive license to use such intellectual property incorporated into the Interconnection Customer Work for the purpose of operation and maintenance of the Interconnection Customer Work. Such license shall not include rights to derivative works or source code.

### 8. COMPLIANCE WITH LAWS AND STANDARDS

8.1. Interconnection Customer shall, in connection with any work provided by Interconnection Customer hereunder, comply with all, permits, easements and associated laws required to complete the Interconnection Customer Work.

### 9. ENVIRONMENTAL COMPLIANCE

9.1. Interconnection Customer shall conduct all Interconnection Customer Work in such a manner to minimize the impact upon the natural environment and shall comply fully with applicable laws and permits for the protection and preservation of the environment, as may be amended from time to time, and all applicable Environmental Procedures and Guidance prescribed by Company in writing as applicable to the Interconnection Customer Work, including without limitation, the Resource Conservation and Recovery Act, the Hazardous Materials and Transportation Act, the Occupational Safety and Health Act of 1970 ("OSHA"), regulations of the Environmental Protection Agency, and the Department of Transportation. Interconnection Customer shall impose the requirements of this Section upon its Subcontractor and Suppliers who are supplying Work at the Site.

### Attachment 3: Rhode Island Energy only Costs of System Modifications and Payment Terms

This application is one of seven projects studied together with total system size of 40,700 kw (the "related projects"). This application's size is 7,500kw and is 18.4% of the total aggregated related project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if one of the related project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company's electric power system, the total common modification costs on the Company's system will be re-estimated and reallocated among the remaining related projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the related projects group.

The total Company system modification costs (excluding the third party ductbank and Revity ductbank) that will be performed by the Company and are associated with all related project applications are: **\$3,597,710.12** (+/- 25%). As of the ISA execution date, the system modification cost responsibility for this ISA is **\$661,978.66** (+/- 25%)

- Total cost of common system modifications on the Interconnecting Customer's (or other private) property and on the Company's distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above: **\$1,009,165.40** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 18.4% share or **\$185,686.43**.
- **WORK TO BE PERFORMED BY RIE: WE ARE ONLY DETERMINING THE MATERIAL AND LABOR COSTS FOR THE PORTION RIE WILL BE DOING. INTERCONNECTING CUSTOMER IS RESPONSIBLE FOR PURCHASING ALL MATERIALS EXCEPT (METERS AND RECLOSERS)**
- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568,

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RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 18.4% share or **\$3,238.40**

- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$516,708**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 18.4% or **\$95,074.27**. – *This cost has been added to the gross tax adder*
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 18.4% share or **\$294.40**
- Cost of witness testing, engineering review, EMS Integration, and implementation of protective device settings: **\$2,990**
- Order Charges including (Construction support/inspection, Engineering support for review and approval, cable testing reviews, weekly project review meetings, civil design/reel plan review and approval, electrical design review and approval is **\$1,731,262.33**. The cost will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 18.4% share or **\$318,552.27**
- *In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is \$12,023,525 as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated \$6,128,924. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 58.226% of this figure or \$3,667,000 including tax. This application's cost responsibility for the THIRD PARTY DUCTBANK will be \$674,728 (such amount, the "Interconnecting Customer's Cost Share Amount").*
- Tax gross-up adder on capital costs is or **\$151,217.16**. (A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if any other related project does not move forward with its interconnection to the Company's electric power system, the facility's interconnection may need to be restudied, and the system modification costs will be re-estimated for the facility and for the related projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the facility's interconnection under this agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The

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cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the impact /group study, the Company reserves the right to adjust those estimated costs as authorized under this agreement, the tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The total system modifications costs and the facility system modification costs do not include any costs for third party rights and approvals (as defined in attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the total system modifications costs and the facility system modification costs and must be paid directly by the Interconnecting Customer to the appropriate third party

### ISO-NE planning study

Rhode Island Energy transmission planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) planning procedure 5-6 "scope of study for system impact studies under the generation interconnection procedures" and Rhode Island Energy tgp28 "transmission planning guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

### ISO-NE operating requirement

This is part of a group of generating facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5mw and will be required to comply with ISO-NE's requirements, including operating procedure no. 14. Prior to the Company providing authorization to interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in telephone Company maintenance areas. These costs will be billed directly to the Interconnecting Customer from the telephone Company.

### Payment Terms:

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment is:
  - (25%) of \$661,979 for services rendered by RIE is **\$165,495 + \$674,728** (cost sharing for third party DUCTBANK work), **or \$840,223** is due within 15 business days from the receipt of the first payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around the completion of electrical design. An invoice, including payment instructions, will be sent to the Interconnecting Customer. A total of **\$232,171** was paid prior to this amendment. The new balance is **\$608,052**
- The Second payment (75%) of **\$496,484** is due within 15 business days from the receipt of the second payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

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A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021.

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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## FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT

**THIS AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** (this “Amendment”) dated (“Effective Date”) amends the Interconnection Service Agreement dated 05/16/2022 for application RI-29048574 by and between The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) and Robin Hollow Solar, LLC covering a distributed generation facility located at 18 Weaver-Hill Road, West Greenwich RI (“Agreement”).

**WHEREAS**, on 05/16/2022, Company consented to the Assignment of Interest in the Interconnection Service Agreement;

**WHEREAS**, Customer and the Company both desire to modify the Description of System Modifications (Attachment 2), System Modifications Costs (Attachment 3), and System Modification Construction Schedules (Attachment 6)

**NOW, THEREFORE**, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

1. **Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
2. **Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s Standards for Interconnection of Distributed Generation tariff R.I.P.U.C. No. 2180 (“Interconnection Tariff”), as the same may be amended.
3. **Amendment to Agreement.** The Agreement is hereby amended as follows:
  - (a) By striking Attachment 2 “Description of System Modifications” in its’ entirety, and replacing it with Attachment 2 attached hereto.
  - (b) By striking Attachment 3 “Cost of System Modifications” in its’ entirety, and replacing it with Attachment 3 attached hereto.
  - (c) By striking Attachment 6 “System Modifications Construction Schedule” in its’ entirety, and merging it with Attachment 2 attached hereto.
4. **Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
5. **Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a “.pdf” format data file) shall constitute effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.
6. **Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not executed by the Interconnecting Customer and returned to the Company on or before 7/9/2023

The Narragansett Electric Company (d/b/a Rhode Island Energy)

**FIRST AMENDMENT TO  
INTERCONNECTION SERVICE AGREEMENT**

**IN WITNESS WHEREOF**, the Parties hereto execute this **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:  
Robin Hollow Solar, LLC

COMPANY:  
The Narragansett Electric Company d/b/a  
Rhode Island Energy

By: *Ralph Palumbo*

By: *Erica Russell Salk*

Name: Ralph A. Palumbo

Name: Erica Russell Salk

Title: Manager

Title: Manager, CEI

Date: September 26, 2023

Date: 10/4/2023

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### Attachment 2: Description of System Modifications

#### On the Customer's property:

Rhode Island Energy System Modifications required for the interconnection of 8,750kW (AC) application as identified in the impact study are as follows:

#### On the Customer's property:

- Install ~1,100 feet of 3 – 477 AAC
- Install one (1) 35 kV load break switch
- Install one (1) 35 kV recloser
- Install one (1) disconnect switch
- Install two (2) single-phase transformers
- Install six (6) primary meters along with six (6) disconnect switches at the PCC
  - **Note:** Reivity will be responsible for the procurement of poles specified in the approved design on the Customer's property.
  - **Note:** *The above work will be designed and constructed by the Interconnecting Customer.*

#### On the Company's distribution system:

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Reivity Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed 3309 riser pole on Customer property.
  - **Note:** *Interconnecting Customer is responsible for the above electrical design, procurement of 1000kcmil CU EPR 35 kV cable and installation of new cable in any de-energized manholes.*
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
  - **Note:** *The above work was designed and constructed as part of a prior in-queue project. Cost sharing may be applicable.*
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI
- Install ~410 feet of 3-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
  - **Note:** *Interconnecting Customer is responsible for the electrical design. Rhode Island Energy is to construct all overhead work on Hopkins Hill Road.*



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### **Civil construction (designed and installed by others) (“Third Party Ductbank”):**

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width.
  - *Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.*

### **Civil construction (work anticipated to be completed by Revity) (“Revity Ductbank”)**

- ***Note:** Interconnecting Customer is responsible for all the survey and as-builts for this project. Such as-built plans shall comply with Company mapping and engineering requirements. Company will have 10 business days to review and comment on submitted as-built plans.*
- Install manhole and duct system (~3,000 feet) from proposed riser pole on Hopkins Hill Rd to 3-way MH on Hopkins Hill Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install duct System (~600 feet) between previously constructed 3-way manhole on Hopkins Hill Road and previously constructed 3-way manhole at the intersection of Hopkins Hill Rd/Division Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~600 feet) from 3-way manhole at the intersection of Nooseneck Hill Rd/Weaver Hill Rd to the first 3-way manhole on Weaver Hill Rd (Revity Energy POI). Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~100 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~50 feet) from the proposed 2-way manhole on Customer property to proposed 3309 riser pole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- ***Note:** Interconnecting Customer will perform the civil construction for the manhole/duct system consistent with civil design plans provided by the Customer and approved by the Company per the Distributed Generation: Minimum Self-Performance requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company’s civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer’s civil construction. The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company approved civil design plans.*
- ***Note:** Interconnecting Customer Work is to be performed subject to the Roles and Responsibilities Regarding Interconnecting Customer Work set forth below in this Attachment 2.*

### **At the Company’s substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

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It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company’s Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

**System Modifications Construction Schedule**

*The construction schedule will be a commonly agreed upon time frame by both parties*

Total System Modification Construction Duration: **29** weeks. The duration represents the estimated-total number of weeks the Company (RIE) will work on this project.

<b>Milestone</b>	<b>Estimated Duration</b>	<b>Responsible Party</b>
First Payment	Start	Interconnecting Customer
Underground Distribution Design Review	Two (2) Weeks	Company
Electrical Distribution System Design Review	Two (2) Weeks	
Distribution System Modification/ /Engineering/Construction	18 weeks	Company
Secure Required Permits/Approvals/Easements and Petition for Company Distribution Work*	Per Customer (Before Construction Begins)	Interconnecting Customer
Submit Final Payment	As per ISA (Before Construction Begins)	Interconnecting Customer
Witness Test Documentation Review and Approval / Witness Test Date Scheduled**	Two (2) weeks	Company
Witness Test Result Review and Approval	One (1) week	Company
Compliance Documentation Review and Approval**	One (1) week	Company
Meter Installation***	Two (2) weeks	Company
Issue Authorization to Interconnect ****	One (1) week	Company

\*Estimated duration dependent on third party.

\*\*Timelines for documentation review are reliant upon receipt of documentation that is accurate and complete. This can be completed in parallel with construction schedule.

\*\*\* Meter procurement requires 8 weeks lead time and will commence after the Interconnecting Customer provides an acceptable wireless signal test or dedicated phone line.

\*\*\*\* If assets require registration with ISO-NE, this shall be completed prior to Authorization to Interconnect.

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### **General Roles and Responsibilities**

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company's System Modifications on any Interconnecting Customer-owned property or any third-party owned property ("Third Party Rights and Approvals"). The Interconnecting Customer shall use the Company's standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer's sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion ("Other Rights and Approvals"; together with Third Party Rights and Approvals referred to as "System Modification Required Approvals"). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

### **Roles and Responsibilities Regarding Interconnecting Customer Work**

*The roles and responsibilities listed below for interconnecting customer's work is specific to this project.*

#### **1. GENERAL REQUIREMENTS FOR INTERCONNECTION CUSTOMER WORK**

- 1.1. Interconnection Customer shall perform the civil and electrical design in accordance with the Complete Overhead July 2021 Edition (the "Overhead Standard") along with the Complete Underground July 2021 Edition (the "Underground Standard"), which are both incorporated in this Attachment 2 by reference. Upon completion of the design by Interconnection Customer, Company will have 10 business days to review each separately in accordance with these standards.
- 1.2. Upon completion of the electrical design Interconnection Customer will be solely responsible for ordering all material in accordance with the Complete Overhead July 2021 Edition along with the Complete Underground July 2021 Edition, EXCEPT the Primary Meters (approx. [ ]), and the Reclosers (approx. [ ]).
- 1.3. All material ordered/obtained by Interconnection Customer will comply with the product numbers as defined through Company's Stores Program.
- 1.4. All cable procured by Customer will meet the standards set in MS4168 and be properly parallel wound.
- 1.5. Prior to construction of the Interconnection Customer Work Customer will conduct a pre-construction meeting to include the Company team including project management, engineering, construction management, safety etc.
- 1.6. Prior to any cable being installed as part of the Interconnection Customer Work, all duct lines will be proved out and man-drilled by Interconnection Customer with a Company supervisor on site to witness.
- 1.7. Interconnection Customer will pull and splice cable within non energized manholes and witnessed by a Company RCS. Cable phasing will be verified and labeled by Interconnection Customer according to the NG-EOP UG014. Standard phase tags will be used by Interconnection Customer. Tan delta acceptance testing will be performed by Interconnection Customer according to NG-EOP UG004. All test results will be provided by Interconnection Customer to Company.

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- 1.8. Upon final completion of installation of assets within each manhole for which Interconnection Customer is responsible, 360 degree images will be taken by Interconnection Customer and provided to Company as documentation that all assets within the manhole were installed per standards.
  - 1.9. Interconnection Customer represents to Company that it has fully acquainted itself with, and has carefully examined all documents and conditions relevant to the Interconnection Customer Work to insure that they are sufficient to properly complete the work; all relevant plans, surveys, measurements, dimensions, calculations, and estimates or other information provided by Company; the location of the work, the character of equipment, materials and facilities needed preliminary to and during the prosecution of the Interconnection Customer Work; and the general and local conditions (including environmental conditions and labor relations) which can affect the Interconnection Customer Work.
2. SHIPMENT AND TITLE
- 2.1. Interconnection Customer shall deliver, receive, unload, store in a secure place, and deliver from storage all equipment and material (whether furnished by Company or the Interconnection Customer) required for the performance of the Interconnection Customer Work, in accordance with all manufacturers' recommendations. Receiving of equipment and materials (whether furnished by Company or Interconnection Customer) shall include inspection by Interconnection Customer for correctness of quantity, quality, and damage, all of which shall be reported. Interconnection Customer shall bear the cost of all packaging and shipment of equipment and material to the site of the Interconnection Customer Work, of all unloading, storage, protection and installation of equipment and material at such site, and of any insurance on the equipment and material prior to completion of the Interconnection Customer Work.
  - 2.2. Upon completion of the Interconnection Customer Work, Interconnection Customer shall convey to Company good, clear and marketable title to all goods and fixtures constituting Interconnection Customer Work, free from any defects, liens, encumbrances and claims of any kind, and shall indemnify, defend and hold harmless Company and warrant and defend title against any claims or demands of third parties; and shall take such action at Interconnection Customer's sole expense as may be necessary to discharge any defect in title, or lien or encumbrance on such goods or fixtures.
  - 2.3. Location of laydown area(s) shall be agreeable to all parties including applicable access of Company. equipment include but not limited to cable pulling equipment.
3. RISK OF LOSS
- 3.1. Risk of loss or damage to all goods and fixtures constituting Interconnection Customer Work shall remain with Interconnection Customer until completion of the Interconnection Customer Work, regardless of whether title has passed. Interconnection Customer shall bear the risk of loss or damage to any such goods or fixtures that occurs prior to transfer of risk of loss, except to the extent such damage or loss is caused by the negligence or willful misconduct of Company.
  - 3.2. Interconnection Customer shall be solely responsible for storage and protection of all goods and fixtures constituting Interconnection Customer Work (whether furnished by Company or Interconnection Customer) against deterioration or damage from any cause, vandalism, and theft until completion of the Interconnection Customer Work.
  - 3.3. Interconnection Customer shall be responsible for the security of all (1) materials and equipment under its custody and control, and (2) the sites over which it has care, custody, and control and in which it is performing the Interconnection Customer Work. Interconnection Customer shall cooperate with Company regarding all security measures instituted at the site(s) of the Interconnection Customer Work.
4. WARRANTY/REMEDY
- 4.1. Interconnection Customer warrants to Company that: 1) the Interconnection Customer Work shall conform to the Overhead Standard, and the Underground Standard, this Agreement, and the Interconnection Tariff; 2) all services constituting Interconnection Customer Work shall be performed by qualified, competent, and experienced personnel, and in accordance with generally accepted practices in the electric construction industry; and 3) all portions of the Interconnection Customer Work, including but not limited to

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construction, installation of goods, refurbishment, and repairs, shall be free from defects in material, workmanship and design.

- 4.2. If the Interconnection Customer Work fails to conform to the warranties set forth in this agreement, Interconnection Customer shall repair or replace the nonconforming Work, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.

### **5. REVIEW AND QUALITY ASSURANCE**

- 5.1. Interconnection Customer shall inspect all Interconnection Customer work and make or cause to be made all tests and reviews required by this Agreement.
- 5.2. Company shall have the right to review Interconnection Customer Work and any other work covered by this Agreement and, at no cost to Company, the right to inspect and/or audit any inspection records of Interconnection Customer or its subcontractors inspection records and associated costs pertaining to this Agreement. In the event the work or associated costs are found to be deficient or not in accordance with this Agreement, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.
- 5.3. Company may require periodic reviews of all engineering and design documents and drawings. Such reviews may occur at various stages of completion, typically at 30%, 60%, and 90% complete, up to and including, final design Issue for Construction (IFC) drawings. Interconnection Customer shall submit all engineering work for review in accordance with the Project Schedule, and in an electronic format acceptable to Company. Interconnection Customer shall allow a minimum of fourteen (14) business days for each such review by RIE from the date of receipt by the Company of all required documents and drawings.
- 5.4. Company shall advise Interconnection Customer of errors, or variations from the requirements of the this Agreement, and of defects in the Interconnection Customer Work, but it is expressly agreed that any omission on the Company's part to advise Interconnection Customer of any such errors, variations, or defects or to provide any instructions or explanations shall not give Interconnection Customer any right or claim against the Company, and shall not in any way relieve Interconnection Customer from its obligation to provide the Interconnection Customer Work in accordance with this Agreement.
- 5.5. All trenches and excavation must be reviewed by a Company Project and Construction Management representative against and to conform to the Underground Standards. As an example, but not limited to, all trenches must be free from water and debris with manholes having one (1') foot of three quarter (3/4") inch stone.
- 5.6. Company Project and Construction Management will have the right to review all construction efforts against and to conform to the Underground Standards. In exception, earth pouring will not be permitted and all duct lines must be formed and cannot be stripped until a 12hr. cure time has been achieved.

### **6. SAFETY**

- 6.1. Interconnection Customer shall provide reasonably adequate safeguards, safety devices and protective equipment and enforce their use and take any other needed actions to protect the life, health and safety of the public and to protect the portion of the site(s) of the Interconnection Customer Work for which it has care, custody and control in connection with its performance of the Interconnection Customer Work.
- 6.2. Interconnection Customer shall follow all current and applicable OSHA policies, procedures and standards during construction.

### **7. RECORDS/DOCUMENTS/INTELLECTUAL PROPERTY**

- 7.1. Interconnection Customer shall, and shall require its subcontractors, for Company's benefit, at their own expense, to maintain a method of accounting in accordance with generally accepted accounting procedures and practices with respect to all matters pertinent to this Agreement. For Interconnection Customer Work performed on a time and materials or cost plus basis under the Agreement, Interconnection Customer shall maintain timesheets and invoices applicable to such portion of the Interconnection Customer Work performed on a time and materials or cost plus basis and shall make such timesheets and invoices available

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## **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT**

to Company or its authorized representative for inspection and audit and shall be kept in a manner which (1) adequately permits evaluation and verification of any invoices, payments or claims based on Interconnection Customer's actual costs incurred in the performance of the portion of the Work performed on a time and materials or cost plus basis.

- 7.2. Interconnection Customer shall supply all documents in order to complete the Interconnection customer Work including but not limited to drawings; studies; surveys; inventories; reports; computer models; testing results; and data files collectively referred to in this Section as "Documents", in quantities and types, at times, according to instructions, and in the manner set forth in this Agreement. Any Document, which is prepared by Interconnection Customer in connection with this Agreement, shall be submitted in accordance with this Agreement.
- 7.3. All documents prepared, procured, or developed by Interconnection Customer that are specific to the Interconnection Customer Work and furnished to Company shall be the property of Company and may be used by Company without restriction, whether during the term of this Agreement or thereafter.
- 7.4. Any and all works, expressions, inventions, ideas, discoveries, improvements or developments (whether or not patentable), as well as all copyrights, patents or trademarks thereof, that may be conceived or made by Interconnection Customer or Interconnection Customer's subcontractors, vendor(s), supplier(s) or any other party employed by Interconnection Customer or Subcontractor to Interconnection Customer of any tier, to satisfy its obligation under this Agreement shall remain the property of Interconnection Customer or applicable owner. Interconnection Customer shall provide Company with a perpetual, non-transferrable, royalty-free, non-exclusive license to use such intellectual property incorporated into the Interconnection Customer Work for the purpose of operation and maintenance of the Interconnection Customer Work. Such license shall not include rights to derivative works or source code.

### **8. COMPLIANCE WITH LAWS AND STANDARDS**

- 8.1. Interconnection Customer shall, in connection with any work provided by Interconnection Customer hereunder, comply with all, permits, easements and associated laws required to complete the Interconnection Customer Work.

### **9. ENVIRONMENTAL COMPLIANCE**

- 9.1. Interconnection Customer shall conduct all Interconnection Customer Work in such a manner to minimize the impact upon the natural environment and shall comply fully with applicable laws and permits for the protection and preservation of the environment, as may be amended from time to time, and all applicable Environmental Procedures and Guidance prescribed by Company in writing as applicable to the Interconnection Customer Work, including without limitation, the Resource Conservation and Recovery Act, the Hazardous Materials and Transportation Act, the Occupational Safety and Health Act of 1970 ("OSHA"), regulations of the Environmental Protection Agency, and the Department of Transportation. Interconnection Customer shall impose the requirements of this Section upon its Subcontractor and Suppliers who are supplying Work at the Site.

### **Attachment 3: Rhode Island Energy only Costs of System Modifications and Payment Terms**

This application is one of seven projects studied together with total system size of 40,700 kw (the "related projects"). This application's size is 8,750kw and is 21.5% of the total aggregated related project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if one of the related project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company's electric power system, the total common modification costs on the Company's system will be re-estimated and reallocated among the remaining related projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the related projects group.

The total Company system modification costs (excluding the third party ductbank and Revity ductbank) that will be performed by the Company and are associated with all related project applications are: **\$3,597,710.12**

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(+/- 25%). As of the ISA execution date, the system modification cost responsibility for this ISA is **\$773,508.00 (+/- 25%)**

- Total cost of common system modifications on the Interconnecting Customer's (or other private) property and on the Company's distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above: **\$1,009,165.40** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 21.5% share or **\$216,970.56**.
- **WORK TO BE PERFORMED BY RIE: WE ARE ONLY DETERMINING THE MATERIAL AND LABOR COSTS FOR THE PORTION RIE WILL BE DOING. INTERCONNECTING CUSTOMER IS RESPONSIBLE FOR PURCHASING ALL MATERIALS EXCEPT (METERS AND RECLOSERS)**
- Total cost of common system modifications (**NECO**) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 21.5% share or **\$3,784**.
- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$516,708**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 21.5% or **\$111,092.22**. - *This cost has been added to the gross tax adder*
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 21.5% share or **\$344**
- Cost of witness testing, engineering review, EMS Integration, and implementation of protective device settings: **\$3,494**
- Order Charges including (Construction support/inspection, Engineering support for review and approval, cable testing reviews, weekly project review meetings, civil design/reel plan review and approval, electrical design review and approval is **\$1,731,262.33**. The cost will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 21.5 % share or **\$372,221.40**
- *In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is \$12,023,525 as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated \$6,128,924. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 58.226% of this figure or \$3,667,000 including tax. This application's cost responsibility for the THIRD PARTY DUCTBANK will be \$788,405.00 (such amount, the "Interconnecting Customer's Cost Share Amount").*
- Tax gross-up adder on capital costs is or **\$176,693.96**. (A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is

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*included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if any other related project does not move forward with its interconnection to the Company's electric power system, the facility's interconnection may need to be restudied, and the system modification costs will be re-estimated for the facility and for the related projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the facility's interconnection under this agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the impact /group study, the Company reserves the right to adjust those estimated costs as authorized under this agreement, the tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The total system modifications costs and the facility system modification costs do not include any costs for third party rights and approvals (as defined in attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the total system modifications costs and the facility system modification costs and must be paid directly by the Interconnecting Customer to the appropriate third party

### ISO-NE planning study

Rhode Island Energy transmission planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) planning procedure 5-6 "scope of study for system impact studies under the generation interconnection procedures" and Rhode Island Energy tgp28 "transmission planning guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

### ISO-NE operating requirement

This is part of a group of generating facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5mw and will be required to comply with ISO-NE's requirements, including operating procedure no. 14. Prior to the Company providing authorization to interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in telephone Company maintenance areas. These costs will be billed directly to the Interconnecting Customer from the telephone Company.

### Payment Terms:

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment is:
  - (25%) of \$773,508 for services rendered by RIE is **\$193,377 + \$788,405** (cost sharing for third party DUCTBANK work), **or \$981,782** is due within 15 business days from the receipt of the first



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payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around the completion of electrical design. An invoice, including payment instructions, will be sent to the Interconnecting Customer. A total of **\$271,013** was paid prior to this amendment. The new balance is **\$710,769**

- The second payment (75%) of **\$580,131** is due within 15 business days from the receipt of the second payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021. The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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**THIS AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** (this “Amendment”) dated (“Effective Date”) amends the Interconnection Service Agreement dated 05/16/2022 for application RI-29599253 by and between The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) and Robin Hollow Solar, LLC covering a distributed generation facility located at 18 Weaver-Hill Road, West Greenwich RI (“Agreement”).

**WHEREAS**, on 05/16/2022, Company consented to the Assignment of Interest in the Interconnection Service Agreement;

**WHEREAS**, Customer and the Company both desire to modify the Description of System Modifications (Attachment 2), System Modifications Costs (Attachment 3), and System Modification Construction Schedules (Attachment 6)

**NOW, THEREFORE**, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

1. **Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
2. **Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s Standards for Interconnection of Distributed Generation tariff R.I.P.U.C. No. 2180 (“Interconnection Tariff”), as the same may be amended.
3. **Amendment to Agreement.** The Agreement is hereby amended as follows:
  - (a) By striking Attachment 2 “Description of System Modifications” in its’ entirety, and replacing it with Attachment 2 attached hereto.
  - (b) By striking Attachment 3 “Cost of System Modifications” in its’ entirety, and replacing it with Attachment 3 attached hereto.
  - (c) By striking Attachment 6 “System Modifications Construction Schedule” in its’ entirety, and merging it with Attachment 2 attached hereto.
4. **Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
5. **Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a “.pdf” format data file) shall constitute effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.
6. **Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not executed by the Interconnecting Customer and returned to the Company on or before 7/9/2023

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**IN WITNESS WHEREOF**, the Parties hereto execute this **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:  
Robin Hollow Solar, LLC

COMPANY:  
The Narragansett Electric Company d/b/a  
Rhode Island Energy

By: *Ralph Palumbo*

By: *Erica Russell Salk*

Name: Ralph A. Palumbo

Name: Erica Russell Salk

Title: Manager

Title: Manager, CEI

Date: September 26, 2023

Date: 10/4/2023

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### **Attachment 2: Description of System Modifications.**

#### **On the Customer's property:**

Rhode Island Energy System Modifications required for the interconnection of 200kW (AC) application as identified in the impact study are as follows:

#### **On the Customer's property:**

- Install ~1,100 feet of 3 – 477 AAC
- Install one (1) 35 kV load break switch
- Install one (1) 35 kV recloser
- Install one (1) disconnect switch
- Install two (2) single-phase transformers
- Install six (6) primary meters along with six (6) disconnect switches at the PCC
  - **Note:** *The Interconnecting Customer will be responsible for the procurement of the poles specified in the approved design on the Customer's property.*
  - **Note:** *The above work will be designed and constructed by the Interconnecting Customer.*

#### **On the Company's distribution system:**

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Reivity Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Reivity Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed 3309 riser pole on Customer property.
  - **Note:** *Interconnecting Customer is responsible for the above electrical design, procurement of 1000kcmil CU EPR 35kV cable and installation of new cable in any de-energized manholes*
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
  - **Note:** *The above work was designed and constructed as part of a prior in-queue project. Cost sharing may be applicable.*
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI
- Install ~410 feet of 3-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
  - **Note:** *Interconnecting Customer is responsible for the electrical design. Rhode Island Energy is to construct all overhead work on Hopkins Hill Road.*

#### **Civil construction (designed and installed by others) ("Third Party Ductbank"):**

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- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width.
  - *Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.*

### Civil construction (work anticipated to be completed by Revity) (“Revity Ductbank”)

- **Note:** *Interconnecting Customer is responsible for all the survey and as-builts for this project. Such as-built plans shall comply with Company mapping and engineering requirements. Company will have 10 business days to review and comment on submitted as-built plans.*
- Install manhole and duct system (~3,000 feet) from proposed riser pole on Hopkins Hill Rd to 3-way MH on Hopkins Hill Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install duct System (~600 feet) between previously constructed 3-way manhole on Hopkins Hill Road and previously constructed 3-way manhole at the intersection of Hopkins Hill Rd/Division Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~600 feet) from 3-way manhole at the intersection of Nooseneck Hill Rd/Weaver Hill Rd to the first 3-way manhole on Weaver Hill Rd (Revity Energy POI). Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~100 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (400 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~50 feet) from the proposed 2-way manhole on Customer property to proposed 3309 riser pole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- **Note:** *Interconnecting Customer will perform the civil construction for the manhole/duct system consistent with civil design plans provided by the Customer and approved by the Company per the Distributed Generation: Minimum Self-Performance requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company's civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer's civil construction. The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company approved civil design plans.*
- **Note:** *Interconnecting Customer Work is to be performed subject to the Roles and Responsibilities Regarding Interconnecting Customer Work set forth below in this Attachment 2.*

### At the Company's substation:

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

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**System Modifications Construction Schedule**

*The construction schedule will be a commonly agreed upon time frame by both parties.*

Total System Modification Construction Duration: **29** weeks. The duration represents the estimated-total number of weeks the Company will work on this project.

<b>Milestone</b>	<b>Estimated Duration</b>	<b>Responsible Party</b>
First Payment	Start	Interconnecting Customer
Underground Distribution Design Review	Two (2) Weeks	Company
Electrical Distribution System Design Review	Two (2) Weeks	
Distribution System Modification/ /Engineering/Construction	18 weeks	Company
Secure Required Permits/Approvals/Easements and Petition for Company Distribution Work*	Per Customer (Before Construction Begins)	Interconnecting Customer
Submit Final Payment	As per ISA (Before Construction Begins)	Interconnecting Customer
Witness Test Documentation Review and Approval / Witness Test Date Scheduled**	Two (2) weeks	Company
Witness Test Result Review and Approval	One (1) week	Company
Compliance Documentation Review and Approval**	One (1) week	Company
Meter Installation***	Two (2) weeks	Company
Issue Authorization to Interconnect ****	One (1) week	Company

\*Estimated duration dependent on third party.

\*\*Timelines for documentation review are reliant upon receipt of documentation that is accurate and complete. This can be completed in parallel with construction schedule.

\*\*\* Meter procurement requires 8 weeks lead time and will commence after the Interconnecting Customer provides an acceptable wireless signal test or dedicated phone line.

\*\*\*\* If assets require registration with ISO-NE, this shall be completed prior to Authorization to Interconnect.

**General Roles and Responsibilities**

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The

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Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

### **Roles and Responsibilities Regarding Interconnecting Customer Work**

*The roles and responsibilities listed below for interconnecting customer's work is specific to this project.*

#### **1. GENERAL REQUIREMENTS FOR INTERCONNECTION CUSTOMER WORK**

- 1.1. Interconnection Customer shall perform the civil and electrical design in accordance with the Complete Overhead July 2021 Edition (the "Overhead Standard") along with the Complete Underground July 2021 Edition (the "Underground Standard"), which are both incorporated in this Attachment 2 by reference. Upon completion of the design by Interconnection Customer, Company will have 10 business days to review each separately in accordance with these standards.
- 1.2. Upon completion of the electrical design Interconnection Customer will be solely responsible for ordering all material in accordance with the Complete Overhead July 2021 Edition along with the Complete Underground July 2021 Edition, EXCEPT the Primary Meters (approx. [ ]), and the Reclosers (approx. [ ]).
- 1.3. All material ordered/obtained by Interconnection Customer will comply with the product numbers as defined through Company's Stores Program.
- 1.4. All cable procured by Customer will meet the standards set in MS4168 and be properly parallel wound.
- 1.5. Prior to construction of the Interconnection Customer Work Customer will conduct a pre-construction meeting to include the Company team including project management, engineering, construction management, safety etc.
- 1.6. Prior to any cable being installed as part of the Interconnection Customer Work, all duct lines will be proved out and man-drilled by Interconnection Customer with a Company supervisor on site to witness.
- 1.7. Interconnection Customer will pull and splice cable within non energized manholes and witnessed by a Company RCS. Cable phasing will be verified and labeled by Interconnection Customer according to the NG-EOP UG014. Standard phase tags will be used by Interconnection Customer. Tan delta acceptance testing will be performed by Interconnection Customer according to NG-EOP UG004. All test results will be provided by Interconnection Customer to Company.
- 1.8. Upon final completion of installation of assets within each manhole for which Interconnection Customer is responsible, 360 degree images will be taken by Interconnection Customer and provided to Company as documentation that all assets within the manhole were installed per standards.
- 1.9. Interconnection Customer represents to Company that it has fully acquainted itself with, and has carefully examined all documents and conditions relevant to the Interconnection Customer Work to insure that they are sufficient to properly complete the work; all relevant plans, surveys, measurements, dimensions, calculations, and estimates or other information provided by Company; the location of the work, the character of equipment, materials and facilities needed preliminary to and during the prosecution of the Interconnection Customer Work; and the general and local conditions (including environmental conditions and labor relations) which can affect the Interconnection Customer Work.

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### **2. SHIPMENT AND TITLE**

- 2.1. Interconnection Customer shall deliver, receive, unload, store in a secure place, and deliver from storage all equipment and material (whether furnished by Company or the Interconnection Customer) required for the performance of the Interconnection Customer Work, in accordance with all manufacturers' recommendations. Receiving of equipment and materials (whether furnished by Company or Interconnection Customer) shall include inspection by Interconnection Customer for correctness of quantity, quality, and damage, all of which shall be reported. Interconnection Customer shall bear the cost of all packaging and shipment of equipment and material to the site of the Interconnection Customer Work, of all unloading, storage, protection and installation of equipment and material at such site, and of any insurance on the equipment and material prior to completion of the Interconnection Customer Work.
- 2.2. Upon completion of the Interconnection Customer Work, Interconnection Customer shall convey to Company good, clear and marketable title to all goods and fixtures constituting Interconnection Customer Work, free from any defects, liens, encumbrances and claims of any kind, and shall indemnify, defend and hold harmless Company and warrant and defend title against any claims or demands of third parties; and shall take such action at Interconnection Customer's sole expense as may be necessary to discharge any defect in title, or lien or encumbrance on such goods or fixtures.
- 2.3. Location of laydown area(s) shall be agreeable to all parties including applicable access of Company. equipment include but not limited to cable pulling equipment.

### **3. RISK OF LOSS**

- 3.1. Risk of loss or damage to all goods and fixtures constituting Interconnection Customer Work shall remain with Interconnection Customer until completion of the Interconnection Customer Work, regardless of whether title has passed. Interconnection Customer shall bear the risk of loss or damage to any such goods or fixtures that occurs prior to transfer of risk of loss, except to the extent such damage or loss is caused by the negligence or willful misconduct of Company.
- 3.2. Interconnection Customer shall be solely responsible for storage and protection of all goods and fixtures constituting Interconnection Customer Work (whether furnished by Company or Interconnection Customer) against deterioration or damage from any cause, vandalism, and theft until completion of the Interconnection Customer Work.
- 3.3. Interconnection Customer shall be responsible for the security of all (1) materials and equipment under its custody and control, and (2) the sites over which it has care, custody, and control and in which it is performing the Interconnection Customer Work. Interconnection Customer shall cooperate with Company regarding all security measures instituted at the site(s) of the Interconnection Customer Work.

### **4. WARRANTY/REMEDY**

- 4.1. Interconnection Customer warrants to Company that: 1) the Interconnection Customer Work shall conform to the Overhead Standard, and the Underground Standard, this Agreement, and the Interconnection Tariff; 2) all services constituting Interconnection Customer Work shall be performed by qualified, competent, and experienced personnel, and in accordance with generally accepted practices in the electric construction industry; and 3) all portions of the Interconnection Customer Work, including but not limited to construction, installation of goods, refurbishment, and repairs, shall be free from defects in material, workmanship and design.
- 4.2. If the Interconnection Customer Work fails to conform to the warranties set forth in this agreement, Interconnection Customer shall repair or replace the nonconforming Work, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.

### **5. REVIEW AND QUALITY ASSURANCE**

- 5.1. Interconnection Customer shall inspect all Interconnection Customer work and make or cause to be made all tests and reviews required by this Agreement.



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- 5.2. Company shall have the right to review Interconnection Customer Work and any other work covered by this Agreement and, at no cost to Company, the right to inspect and/or audit any inspection records of Interconnection Customer or its subcontractors inspection records and associated costs pertaining to this Agreement. In the event the work or associated costs are found to be deficient or not in accordance with this Agreement, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.
  - 5.3. Company may require periodic reviews of all engineering and design documents and drawings. Such reviews may occur at various stages of completion, typically at 30%, 60%, and 90% complete, up to and including, final design Issue for Construction (IFC) drawings. Interconnection Customer shall submit all engineering work for review in accordance with the Project Schedule, and in an electronic format acceptable to Company. Interconnection Customer shall allow a minimum of fourteen (14) business days for each such review by RIE from the date of receipt by the Company of all required documents and drawings.
  - 5.4. Company shall advise Interconnection Customer of errors, or variations from the requirements of the this Agreement, and of defects in the Interconnection Customer Work, but it is expressly agreed that any omission on the Company's part to advise Interconnection Customer of any such errors, variations, or defects or to provide any instructions or explanations shall not give Interconnection Customer any right or claim against the Company, and shall not in any way relieve Interconnection Customer from its obligation to provide the Interconnection Customer Work in accordance with this Agreement.
  - 5.5. All trenches and excavation must be reviewed by a Company Project and Construction Management representative against and to conform to the Underground Standards. As an example, but not limited to, all trenches must be free from water and debris with manholes having one (1') foot of three quarter (3/4") inch stone.
  - 5.6. Company Project and Construction Management will have the right to review all construction efforts against and to conform to the Underground Standards. In exception, earth pouring will not be permitted and all duct lines must be formed and cannot be stripped until a 12hr. cure time has been achieved.
6. SAFETY
- 6.1. Interconnection Customer shall provide reasonably adequate safeguards, safety devices and protective equipment and enforce their use and take any other needed actions to protect the life, health and safety of the public and to protect the portion of the site(s) of the Interconnection Customer Work for which it has care, custody and control in connection with its performance of the Interconnection Customer Work.
  - 6.2. Interconnection Customer shall follow all current and applicable OSHA policies, procedures and standards during construction.
7. RECORDS/DOCUMENTS/INTELLECTUAL PROPERTY
- 7.1. Interconnection Customer shall, and shall require its subcontractors, for Company's benefit, at their own expense, to maintain a method of accounting in accordance with generally accepted accounting procedures and practices with respect to all matters pertinent to this Agreement. For Interconnection Customer Work performed on a time and materials or cost plus basis under the Agreement, Interconnection Customer shall maintain timesheets and invoices applicable to such portion of the Interconnection Customer Work performed on a time and materials or cost plus basis and shall make such timesheets and invoices available to Company or its authorized representative for inspection and audit and shall be kept in a manner which (1) adequately permits evaluation and verification of any invoices, payments or claims based on Interconnection Customer's actual costs incurred in the performance of the portion of the Work performed on a time and materials or cost plus basis.
  - 7.2. Interconnection Customer shall supply all documents in order to complete the Interconnection customer Work including but not limited to drawings; studies; surveys; inventories; reports; computer models; testing results; and data files collectively referred to in this Section as "Documents", in quantities and types, at times, according to instructions, and in the manner set forth in this Agreement. Any Document, which

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is prepared by Interconnection Customer in connection with this Agreement, shall be submitted in accordance with this Agreement.

- 7.3. All documents prepared, procured, or developed by Interconnection Customer that are specific to the Interconnection Customer Work and furnished to Company shall be the property of Company and may be used by Company without restriction, whether during the term of this Agreement or thereafter.
- 7.4. Any and all works, expressions, inventions, ideas, discoveries, improvements or developments (whether or not patentable), as well as all copyrights, patents or trademarks thereof, that may be conceived or made by Interconnection Customer or Interconnection Customer's subcontractors, vendor(s), supplier(s) or any other party employed by Interconnection Customer or Subcontractor to Interconnection Customer of any tier, to satisfy its obligation under this Agreement shall remain the property of Interconnection Customer or applicable owner. Interconnection Customer shall provide Company with a perpetual, non-transferrable, royalty-free, non-exclusive license to use such intellectual property incorporated into the Interconnection Customer Work for the purpose of operation and maintenance of the Interconnection Customer Work. Such license shall not include rights to derivative works or source code.

### 8. COMPLIANCE WITH LAWS AND STANDARDS

- 8.1. Interconnection Customer shall, in connection with any work provided by Interconnection Customer hereunder, comply with all, permits, easements and associated laws required to complete the Interconnection Customer Work.

### 9. ENVIRONMENTAL COMPLIANCE

- 9.1. Interconnection Customer shall conduct all Interconnection Customer Work in such a manner to minimize the impact upon the natural environment and shall comply fully with applicable laws and permits for the protection and preservation of the environment, as may be amended from time to time, and all applicable Environmental Procedures and Guidance prescribed by Company in writing as applicable to the Interconnection Customer Work, including without limitation, the Resource Conservation and Recovery Act, the Hazardous Materials and Transportation Act, the Occupational Safety and Health Act of 1970 ("OSHA"), regulations of the Environmental Protection Agency, and the Department of Transportation. Interconnection Customer shall impose the requirements of this Section upon its Subcontractor and Suppliers who are supplying Work at the Site.

### Attachment 3: Rhode Island Energy only Costs of System Modifications and Payment Terms

This application is one of seven projects studied together with total system size of 40,700 kw (the "related projects"). This application's size is 200kw and is 0.5% of the total aggregated related project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if one of the related project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company's electric power system, the total common modification costs on the Company's system will be re-estimated and reallocated among the remaining related projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the related projects group.

The total Company system modification costs (excluding the third party ductbank and Revity ductbank) that will be performed by the Company and are associated with all related project applications are: **\$3,597,710** (+/- 25%). As of the ISA execution date, the system modification cost responsibility for this ISA is **\$17,989** (+/- 25%)

- Total cost of common system modifications on the Interconnecting Customer's (or other private) property and on the Company's distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above: **\$1,009,165.40** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 0.5% share or **\$5,045.83**.

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- **WORK TO BE PERFORMED BY RIE: WE ARE ONLY DETERMINING THE MATERIAL AND LABOR COSTS FOR THE PORTION RIE WILL BE DOING. INTERCONNECTING CUSTOMER IS RESPONSIBLE FOR PURCHASING ALL MATERIALS EXCEPT (METERS AND RECLOSERS)**
- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 0.5% share or **\$88**.
- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$516,708**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 0.5% or **\$2,583.54**. - *This cost has been added to the gross tax adder*
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 0.5% share or **\$8**.
- Cost of witness testing, engineering review, EMS Integration, and implementation of protective device settings: **\$81.25**
- Order Charges including (Construction support/inspection, Engineering support for review and approval, cable testing reviews, weekly project review meetings, civil design/reel plan review and approval, electrical design review and approval) is \$1,731,262.33. The cost will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 0.5 % share or **\$8,656.31**
- *In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is \$12,023,525 as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated \$6,128,924. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 58.226% of this figure or \$3,667,000 including tax. This application's cost responsibility for the THIRD PARTY DUCTBANK will be \$18,335 (such amount, the "Interconnecting Customer's Cost Share Amount").*
- Tax gross-up adder on capital costs is or **\$4,109.16**. (A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if any other related project does not move forward with its interconnection to the Company's electric power system, the facility's interconnection may need to be restudied, and the system modification costs will be re-estimated for the facility and for the related projects, as determined by the Company in its reasonable discretion. In

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such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the facility's interconnection under this agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the impact /group study, the Company reserves the right to adjust those estimated costs as authorized under this agreement, the tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The total system modifications costs and the facility system modification costs do not include any costs for third party rights and approvals (as defined in attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the total system modifications costs and the facility system modification costs and must be paid directly by the Interconnecting Customer to the appropriate third party

### ISO-NE planning study

Rhode Island Energy transmission planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) planning procedure 5-6 "scope of study for system impact studies under the generation interconnection procedures" and Rhode Island Energy tgp28 "transmission planning guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

### ISO-NE operating requirement

This is part of a group of generating facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5mw and will be required to comply with ISO-NE's requirements, including operating procedure no. 14. Prior to the Company providing authorization to interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in telephone Company maintenance areas. These costs will be billed directly to the Interconnecting Customer from the telephone Company.

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if any other related project does not move forward with its interconnection to the Company's electric power system, the facility's interconnection may need to be restudied, and the system modification costs will be re-estimated for the facility and for the related projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the facility's interconnection under this agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the impact /group study, the Company reserves the right to adjust those estimated costs as authorized under this agreement, the tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The total system modifications costs and the facility system modification costs do not include any costs for third party rights and approvals (as defined in attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the total system modifications costs and the facility system modification costs and must be paid directly by the Interconnecting Customer to the appropriate third party

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**Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment is:
  - (25%) of \$ 17,989 for services rendered by RIE is **\$4,497 + \$18,335** (cost sharing for third party DUCTBANK work), **or \$22,832** is due within 15 business days from the receipt of the first payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around the completion of electrical design. An invoice, including payment instructions, will be sent to the Interconnecting Customer. A total of **\$6,401** was paid prior to this amendment. The new balance is **\$16,431**
- The second payment (75%) of **\$13,491** is due within 15 business days from the receipt of the second payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021.

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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## FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT

**THIS AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** (this “Amendment”) dated (“Effective Date”) amends the Interconnection Service Agreement dated 05/16/2022 for application RI-29048568 by and between The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) and Robin Hollow Solar, LLC covering a distributed generation facility located at 18 Weaver-Hill Road, West Greenwich RI (“Agreement”).

**WHEREAS**, on 05/16/2022, Company consented to the Assignment of Interest in the Interconnection Service Agreement;

**WHEREAS**, Customer and the Company both desire to modify the Description of System Modifications (Attachment 2), System Modifications Costs (Attachment 3), and System Modification Construction Schedules (Attachment 6)

**NOW, THEREFORE**, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

1. **Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
2. **Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s Standards for Interconnection of Distributed Generation tariff R.I.P.U.C. No. 2180 (“Interconnection Tariff”), as the same may be amended.
3. **Amendment to Agreement.** The Agreement is hereby amended as follows:
  - (a) By striking Attachment 2 “Description of System Modifications” in its’ entirety, and replacing it with Attachment 2 attached hereto.
  - (b) By striking Attachment 3 “Cost of System Modifications” in its’ entirety, and replacing it with Attachment 3 attached hereto.
  - (c) By striking Attachment 6 “System Modifications Construction Schedule” in its’ entirety, and merging it with Attachment 2 attached hereto.
4. **Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
5. **Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a “.pdf” format data file) shall constitute effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.
6. **Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not executed by the Interconnecting Customer and returned to the Company on or before 7/9/2023.

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**FIRST AMENDMENT TO  
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**IN WITNESS WHEREOF**, the Parties hereto execute this **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:  
Robin Hollow Solar, LLC

COMPANY:  
The Narragansett Electric Company d/b/a  
Rhode Island Energy

By: *Ralph Palumbo*

By: *Erica Russell Salk*

Name: Ralph A. Palumbo

Name: Erica Russell Salk

Title: Manager

Title: Manager, CEI

Date: September 26, 2023

Date: 10/4/2023

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## **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT**

### **Attachment 2: Description of System Modifications**

#### **On the Customer's property:**

Rhode Island Energy System Modifications required for the interconnection of 8,500kW (AC) application as identified in the impact study are as follows:

#### **On the Customer's property:**

- Install ~1,100 feet of 3 – 477 AAC
- Install one (1) 35 kV load break switch
- Install one (1) 35 kV recloser
- Install one (1) disconnect switch
- Install two (2) single-phase transformers
- Install six (6) primary meters along with six (6) disconnect switches at the PCC
  - **Note:** *The Interconnecting Customer will be responsible for the procurement of the poles specified in the approved design on the Customer's property.*
  - **Note:** *The above work will be designed and constructed by the Interconnecting Customer.*

#### **On the Company's distribution system:**

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revity Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed 3309 riser pole on Customer property.
  - **Note:** *Interconnecting Customer is responsible for the above electrical design, procurement of 1000kcmil CU EPR 35kV cable and installation of new cable in any de-energized manholes.*
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
  - **Note:** *The above work was designed and constructed as part of a prior in-queue project. Cost sharing may be applicable.*
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI
- Install ~410 feet of 3-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
  - **Note:** *Interconnecting Customer is responsible for the electrical design. Rhode Island Energy is to construct all overhead work on Hopkins Hill Road.*

#### **Civil construction (designed and installed by others) ("Third Party Ductbank"):**

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width.



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- *Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.*

### **Civil construction (work anticipated to be completed by Revity) (“Revity Ductbank”)**

- ***Note:** Interconnecting Customer is responsible for all the survey and as-builts for this project. Such as-built plans shall comply with Company mapping and engineering requirements. Company will have 10 business days to review and comment on submitted as-built plans.*
- Install manhole and duct system (~3,000 feet) from proposed riser pole on Hopkins Hill Rd to 3-way MH on Hopkins Hill Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install duct System (~600 feet) between previously constructed 3-way manhole on Hopkins Hill Road and previously constructed 3-way manhole at the intersection of Hopkins Hill Rd/Division Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~600 feet) from 3-way manhole at the intersection of Nooseneck Hill Rd/Weaver Hill Rd to the first 3-way manhole on Weaver Hill Rd (Revity Energy POI). Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~100 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (400 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~50 feet) from the proposed 2-way manhole on Customer property to proposed 3310 riser pole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- ***Note:** Interconnecting Customer will perform the civil construction for the manhole/duct system consistent with civil design plans provided by the Customer and approved by the Company per the Distributed Generation: Minimum Self-Performance requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company’s civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer’s civil construction. The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company approved civil design plans.*
- ***Note:** Interconnecting Customer Work is to be performed subject to the Roles and Responsibilities Regarding Interconnecting Customer Work set forth below in this Attachment 2.*

### **At the Company’s substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

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**System Modifications Construction Schedule**

*The construction schedule will be a commonly agreed upon time frame by both parties*

Total System Modification Construction Duration: **29** weeks. The duration represents the estimated-total number of weeks the Company will work on this project.

<b>Milestone</b>	<b>Estimated Duration</b>	<b>Responsible Party</b>
First Payment	Start	Interconnecting Customer
Underground Distribution Design Review	Two (2) Weeks	Company
Electrical Distribution System Design Review	Two (2) Weeks	Company
Distribution System Modification/ /Engineering/Construction	18 weeks	Company
Secure Required Permits/Approvals/Easements and Petition for Company Distribution Work*	Per Customer (Before Construction Begins)	Interconnecting Customer
Submit Final Payment	As per ISA (Before Construction Begins)	Interconnecting Customer
Witness Test Documentation Review and Approval / Witness Test Date Scheduled**	Two (2) weeks	Company
Witness Test Result Review and Approval	One (1) week	Company
Compliance Documentation Review and Approval**	One (1) week	Company
Meter Installation***	Two (2) weeks	Company
Issue Authorization to Interconnect ****	One (1) week	Company

\*Estimated duration dependent on third party.

\*\*Timelines for documentation review are reliant upon receipt of documentation that is accurate and complete. This can be completed in parallel with construction schedule.

\*\*\* Meter procurement requires 8 weeks lead time and will commence after the Interconnecting Customer provides an acceptable wireless signal test or dedicated phone line.

\*\*\*\* If assets require registration with ISO-NE, this shall be completed prior to Authorization to Interconnect.

**General Roles and Responsibilities**

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights

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and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

### **Roles and Responsibilities Regarding Interconnecting Customer Work**

*The roles and responsibilities listed below for interconnecting customer's work is specific to this project.*

#### **1. GENERAL REQUIREMENTS FOR INTERCONNECTION CUSTOMER WORK**

- 1.1. Interconnection Customer shall perform the civil and electrical design in accordance with the Complete Overhead July 2021 Edition (the "Overhead Standard") along with the Complete Underground July 2021 Edition (the "Underground Standard"), which are both incorporated in this Attachment 2 by reference. Upon completion of the design by Interconnection Customer, Company will have 10 business days to review each separately in accordance with these standards.
- 1.2. Upon completion of the electrical design Interconnection Customer will be solely responsible for ordering all material in accordance with the Complete Overhead July 2021 Edition along with the Complete Underground July 2021 Edition, EXCEPT the Primary Meters (approx. [\_\_]), and the Reclosers (approx. [\_\_]).
- 1.3. All material ordered/obtained by Interconnection Customer will comply with the product numbers as defined through Company's Stores Program.
- 1.4. All cable procured by Customer will meet the standards set in MS4168 and be properly parallel wound.
- 1.5. Prior to construction of the Interconnection Customer Work Customer will conduct a pre-construction meeting to include the Company team including project management, engineering, construction management, safety etc.
- 1.6. Prior to any cable being installed as part of the Interconnection Customer Work, all duct lines will be proved out and man-drilled by Interconnection Customer with a Company supervisor on site to witness.
- 1.7. Interconnection Customer will pull and splice cable within non energized manholes and witnessed by a Company RCS. Cable phasing will be verified and labeled by Interconnection Customer according to the NG-EOP UG014. Standard phase tags will be used by Interconnection Customer. Tan delta acceptance testing will be performed by Interconnection Customer according to NG-EOP UG004. All test results will be provided by Interconnection Customer to Company.
- 1.8. Upon final completion of installation of assets within each manhole for which Interconnection Customer is responsible, 360 degree images will be taken by Interconnection Customer and provided to Company as documentation that all assets within the manhole were installed per standards.
- 1.9. Interconnection Customer represents to Company that it has fully acquainted itself with, and has carefully examined all documents and conditions relevant to the Interconnection Customer Work to insure that they are sufficient to properly complete the work; all relevant plans, surveys, measurements, dimensions, calculations, and estimates or other information provided by Company; the location of the work, the character of equipment, materials and facilities needed preliminary to and during the prosecution of the Interconnection Customer Work; and the general and local conditions (including environmental conditions and labor relations) which can affect the Interconnection Customer Work.

#### **2. SHIPMENT AND TITLE**

- 2.1. Interconnection Customer shall deliver, receive, unload, store in a secure place, and deliver from storage all equipment and material (whether furnished by Company or the Interconnection Customer) required for the performance of the Interconnection Customer Work, in accordance with all manufacturers' recommendations. Receiving of equipment and materials (whether furnished by Company or

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Interconnection Customer) shall include inspection by Interconnection Customer for correctness of quantity, quality, and damage, all of which shall be reported. Interconnection Customer shall bear the cost of all packaging and shipment of equipment and material to the site of the Interconnection Customer Work, of all unloading, storage, protection and installation of equipment and material at such site, and of any insurance on the equipment and material prior to completion of the Interconnection Customer Work.

- 2.2. Upon completion of the Interconnection Customer Work, Interconnection Customer shall convey to Company good, clear and marketable title to all goods and fixtures constituting Interconnection Customer Work, free from any defects, liens, encumbrances and claims of any kind, and shall indemnify, defend and hold harmless Company and warrant and defend title against any claims or demands of third parties; and shall take such action at Interconnection Customer's sole expense as may be necessary to discharge any defect in title, or lien or encumbrance on such goods or fixtures.
- 2.3. Location of laydown area(s) shall be agreeable to all parties including applicable access of Company. equipment include but not limited to cable pulling equipment.

### **3. RISK OF LOSS**

- 3.1. Risk of loss or damage to all goods and fixtures constituting Interconnection Customer Work shall remain with Interconnection Customer until completion of the Interconnection Customer Work, regardless of whether title has passed. Interconnection Customer shall bear the risk of loss or damage to any such goods or fixtures that occurs prior to transfer of risk of loss, except to the extent such damage or loss is caused by the negligence or willful misconduct of Company.
- 3.2. Interconnection Customer shall be solely responsible for storage and protection of all goods and fixtures constituting Interconnection Customer Work (whether furnished by Company or Interconnection Customer) against deterioration or damage from any cause, vandalism, and theft until completion of the Interconnection Customer Work.
- 3.3. Interconnection Customer shall be responsible for the security of all (1) materials and equipment under its custody and control, and (2) the sites over which it has care, custody, and control and in which it is performing the Interconnection Customer Work. Interconnection Customer shall cooperate with Company regarding all security measures instituted at the site(s) of the Interconnection Customer Work.

### **4. WARRANTY/REMEDY**

- 4.1. Interconnection Customer warrants to Company that: 1) the Interconnection Customer Work shall conform to the Overhead Standard, and the Underground Standard, this Agreement, and the Interconnection Tariff; 2) all services constituting Interconnection Customer Work shall be performed by qualified, competent, and experienced personnel, and in accordance with generally accepted practices in the electric construction industry; and 3) all portions of the Interconnection Customer Work, including but not limited to construction, installation of goods, refurbishment, and repairs, shall be free from defects in material, workmanship and design.
- 4.2. If the Interconnection Customer Work fails to conform to the warranties set forth in this agreement, Interconnection Customer shall repair or replace the nonconforming Work, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.

### **5. REVIEW AND QUALITY ASSURANCE**

- 5.1. Interconnection Customer shall inspect all Interconnection Customer work and make or cause to be made all tests and reviews required by this Agreement.
- 5.2. Company shall have the right to review Interconnection Customer Work and any other work covered by this Agreement and, at no cost to Company, the right to inspect and/or audit any inspection records of Interconnection Customer or its subcontractors inspection records and associated costs pertaining to this Agreement. In the event the work or associated costs are found to be deficient or not in accordance with

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this Agreement, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.

- 5.3. Company may require periodic reviews of all engineering and design documents and drawings. Such reviews may occur at various stages of completion, typically at 30%, 60%, and 90% complete, up to and including, final design Issue for Construction (IFC) drawings. Interconnection Customer shall submit all engineering work for review in accordance with the Project Schedule, and in an electronic format acceptable to Company. Interconnection Customer shall allow a minimum of fourteen (14) business days for each such review by RIE from the date of receipt by the Company of all required documents and drawings.
  - 5.4. Company shall advise Interconnection Customer of errors, or variations from the requirements of the this Agreement, and of defects in the Interconnection Customer Work, but it is expressly agreed that any omission on the Company's part to advise Interconnection Customer of any such errors, variations, or defects or to provide any instructions or explanations shall not give Interconnection Customer any right or claim against the Company, and shall not in any way relieve Interconnection Customer from its obligation to provide the Interconnection Customer Work in accordance with this Agreement.
  - 5.5. All trenches and excavation must be reviewed by a Company Project and Construction Management representative against and to conform to the Underground Standards. As an example, but not limited to, all trenches must be free from water and debris with manholes having one (1') foot of three quarter (3/4") inch stone.
  - 5.6. Company Project and Construction Management will have the right to review all construction efforts against and to conform to the Underground Standards. In exception, earth pouring will not be permitted and all duct lines must be formed and cannot be stripped until a 12hr. cure time has been achieved.
6. SAFETY
- 6.1. Interconnection Customer shall provide reasonably adequate safeguards, safety devices and protective equipment and enforce their use and take any other needed actions to protect the life, health and safety of the public and to protect the portion of the site(s) of the Interconnection Customer Work for which it has care, custody and control in connection with its performance of the Interconnection Customer Work.
  - 6.2. Interconnection Customer shall follow all current and applicable OSHA policies, procedures and standards during construction.
7. RECORDS/DOCUMENTS/INTELLECTUAL PROPERTY
- 7.1. Interconnection Customer shall, and shall require its subcontractors, for Company's benefit, at their own expense, to maintain a method of accounting in accordance with generally accepted accounting procedures and practices with respect to all matters pertinent to this Agreement. For Interconnection Customer Work performed on a time and materials or cost plus basis under the Agreement, Interconnection Customer shall maintain timesheets and invoices applicable to such portion of the Interconnection Customer Work performed on a time and materials or cost plus basis and shall make such timesheets and invoices available to Company or its authorized representative for inspection and audit and shall be kept in a manner which (1) adequately permits evaluation and verification of any invoices, payments or claims based on Interconnection Customer's actual costs incurred in the performance of the portion of the Work performed on a time and materials or cost plus basis.
  - 7.2. Interconnection Customer shall supply all documents in order to complete the Interconnection customer Work including but not limited to drawings; studies; surveys; inventories; reports; computer models; testing results; and data files collectively referred to in this Section as "Documents", in quantities and types, at times, according to instructions, and in the manner set forth in this Agreement. Any Document, which is prepared by Interconnection Customer in connection with this Agreement, shall be submitted in accordance with this Agreement.
  - 7.3. All documents prepared, procured, or developed by Interconnection Customer that are specific to the Interconnection Customer Work and furnished to Company shall be the property of Company and may be used by Company without restriction, whether during the term of this Agreement or thereafter.

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- 7.4. Any and all works, expressions, inventions, ideas, discoveries, improvements or developments (whether or not patentable), as well as all copyrights, patents or trademarks thereof, that may be conceived or made by Interconnection Customer or Interconnection Customer's subcontractors, vendor(s), supplier(s) or any other party employed by Interconnection Customer or Subcontractor to Interconnection Customer of any tier, to satisfy its obligation under this Agreement shall remain the property of Interconnection Customer or applicable owner. Interconnection Customer shall provide Company with a perpetual, non-transferrable, royalty-free, non-exclusive license to use such intellectual property incorporated into the Interconnection Customer Work for the purpose of operation and maintenance of the Interconnection Customer Work. Such license shall not include rights to derivative works or source code.
8. COMPLIANCE WITH LAWS AND STANDARDS
- 8.1. Interconnection Customer shall, in connection with any work provided by Interconnection Customer hereunder, comply with all, permits, easements and associated laws required to complete the Interconnection Customer Work.
9. ENVIRONMENTAL COMPLIANCE
- 9.1. Interconnection Customer shall conduct all Interconnection Customer Work in such a manner to minimize the impact upon the natural environment and shall comply fully with applicable laws and permits for the protection and preservation of the environment, as may be amended from time to time, and all applicable Environmental Procedures and Guidance prescribed by Company in writing as applicable to the Interconnection Customer Work, including without limitation, the Resource Conservation and Recovery Act, the Hazardous Materials and Transportation Act, the Occupational Safety and Health Act of 1970 ("OSHA"), regulations of the Environmental Protection Agency, and the Department of Transportation,. Interconnection Customer shall impose the requirements of this Section upon its Subcontractor and Suppliers who are supplying Work at the Site.

### Attachment 3: Rhode Island Energy only Costs of System Modifications and Payment Terms

This application is one of seven projects studied together with total system size of 40,700 kw (the "related projects"). This application's size is 8,500kw and is 20.9% of the total aggregated related project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if one of the related project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company's electric power system, the total common modification costs on the Company's system will be re-estimated and reallocated among the remaining related projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the related projects group.

The total Company system modification costs (excluding the third party ductbank and Revery ductbank) that will be performed by the Company and are associated with all related project applications are: **\$3,597,710.12** (+/- 25%). As of the ISA execution date, the system modification cost responsibility for this ISA is **\$751,921.42** (+/- 25%)

- Total cost of common system modifications on the Interconnecting Customer's (or other private) property and on the Company's distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above: **\$1,009,165.40** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 20.9% share or **\$210,915.57**.
- **WORK TO BE PERFORMED BY RIE: WE ARE ONLY DETERMINING THE MATERIAL AND LABOR COSTS FOR THE PORTION RIE WILL BE DOING. INTERCONNECTING CUSTOMER IS RESPONSIBLE FOR PURCHASING ALL MATERIALS EXCEPT (METERS AND RECLOSERS)**

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- Total cost of common system modifications (**NECO**) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 20.9% share or **\$3,678**.
- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$516,708**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 20.9% or **\$107,991.97**. - *This cost has been added to the gross tax adder*
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 20.9% share or **\$334.40**
- Cost of witness testing, engineering review, EMS Integration, and implementation of protective device settings: **\$3,396.25**
- Order Charges including (Construction support/inspection, Engineering support for review and approval, cable testing reviews, weekly project review meetings, civil design/reel plan review and approval, electrical design review and approval is **\$1,731,262.33**. The cost will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 20.9% share or **\$361,833.83**

### WORK PERFORMED BY THIRD PARTY:

- *In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is \$12,023,525 as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated \$6,128,924. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 58.226% of this figure or \$3,667,000 including tax. This application's cost responsibility for the THIRD PARTY DUCTBANK will be \$766,403 (such amount, the "Interconnecting Customer's Cost Share Amount").*
- Tax gross-up adder on capital costs is or **\$171,762.42**. (A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if any other related project does not move forward with its interconnection to the Company's electric power system, the facility's interconnection may need to be restudied, and the system modification costs will be re-estimated for the facility and for the related projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in

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the costs in order to continue with the facility's interconnection under this agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the impact /group study, the Company reserves the right to adjust those estimated costs as authorized under this agreement, the tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The total system modifications costs and the facility system modification costs do not include any costs for third party rights and approvals (as defined in attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the total system modifications costs and the facility system modification costs and must be paid directly by the Interconnecting Customer to the appropriate third party

### ISO-NE planning study

Rhode Island Energy transmission planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) planning procedure 5-6 "scope of study for system impact studies under the generation interconnection procedures" and Rhode Island Energy tgp28 "transmission planning guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

### ISO-NE operating requirement

This is part of a group of generating facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5mw and will be required to comply with ISO-NE's requirements, including operating procedure no. 14. Prior to the Company providing authorization to interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in telephone Company maintenance areas. These costs will be billed directly to the Interconnecting Customer from the telephone Company.

### **Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment is:
  - (25%) of \$751,921 for services rendered by RIE is **\$187,980 + \$766,403** (cost sharing for third party DUCTBANK work), **or \$954,383** is due within 15 business days from the receipt of the first payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around the completion of electrical design. An invoice, including payment instructions, will be sent to the Interconnecting Customer. A total of **\$263,409** was paid prior to this amendment. The new balance is **\$690,974**
  
- The second payment (75%) of **\$563,941** is due within 15 business days from the receipt of the second payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project. An invoice, including payment instructions, will be sent to the Interconnecting Customer..



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If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021. The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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**THIS AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** (this “Amendment”) dated (“Effective Date”) amends the Interconnection Service Agreement dated 05/16/2022 for application RI-29048531 by and between The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) and Robin Hollow Solar, LLC covering a distributed generation facility located at 18 Weaver-Hill Road, West Greenwich RI (“Agreement”).

**WHEREAS**, on 05/16/2022, Company consented to the Assignment of Interest in the Interconnection Service Agreement;

**WHEREAS**, Customer and the Company both desire to modify the Description of System Modifications (Attachment 2), System Modifications Costs (Attachment 3), and System Modification Construction Schedules (Attachment 6)

**NOW, THEREFORE**, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

1. **Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
2. **Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s Standards for Interconnection of Distributed Generation tariff R.I.P.U.C. No. 2180 (“Interconnection Tariff”), as the same may be amended.
3. **Amendment to Agreement.** The Agreement is hereby amended as follows:
  - (a) By striking Attachment 2 “Description of System Modifications” in its’ entirety, and replacing it with Attachment 2 attached hereto.
  - (b) By striking Attachment 3 “Cost of System Modifications” in its’ entirety, and replacing it with Attachment 3 attached hereto.
  - (c) By striking Attachment 6 “System Modifications Construction Schedule” in its’ entirety, and merging it with Attachment 2 attached hereto.
4. **Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
5. **Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a “.pdf” format data file) shall constitute effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.
6. **Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not executed by the Interconnecting Customer and returned to the Company on or before **7/20/2023**

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**IN WITNESS WHEREOF**, the Parties hereto execute this **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:  
Robin Hollow Solar, LLC

COMPANY:  
The Narragansett Electric Company d/b/a  
Rhode Island Energy

By: *Ralph Palumbo*

By: *Erica Russell Salk*

Name: Ralph A. Palumbo

Name: Erica Russell Salk

Title: Manager

Title: Manager, CEI

Date: September 26, 2023

Date: 10/4/2023

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### Attachment 2: Description of System Modifications

Rhode Island Energy System Modifications required for the interconnection of 5,250 kW (AC) application as identified in the impact study are as follows:

#### On the Interconnecting Customer's property:

- Install ~250 feet of 3 – 477 AAC
- Install one (1) 35 kV load break switch
- Install one (1) 35 kV recloser
- Install one (1) disconnect switch
- Install two (2) single-phase transformers
- Install one (1) primary meter
  - **Note:** *The above work will be designed and constructed by the Interconnecting Customer.*
  - **Note:** *Interconnecting Customer is responsible for the procurement of the poles specified in the approved design on the customer's property.*

#### On the Company's distribution system:

- Install ~16,100 feet of 3-1/c-1000 kcmil Cu EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Rd/Weaver Hill Rd.
  - **Note:** *This was previously designed and installed for a prior in-queue project. Cost sharing may be applicable.*
- Install ~700 feet of 3-1/c-500 kcmil Cu EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Rd/Weaver Hill Rd to the first 3-way MH on Weaver Hill Rd (Revity Energy POI).
- Install ~200 feet of 3-1/c-500 kcmil Cu EPR 35 kV cable from the first 3-way MH on Weaver Hill Rd (Revity Energy POI) to a 2-way MH on Customer property.
- Install ~100 feet of 3-1/c-500 kcmil Cu EPR 35 kV cable from 2-way MH on Customer property to proposed 3310 riser pole on Customer property.
  - **Note:** *Interconnecting Customer is responsible for the above electrical design, procurement of 1000kcmil CU EPR 35kV Cable and installation of new cable in any de-energized manholes.*
- Install ~1,400 feet of 3-477 AAC overhead conductor and associated equipment on Nooseneck Hill Rd.
- **Note:** *This was previously designed and installed for a prior in-queue project. Cost sharing may be applicable.* Install ~410 feet of 3-477 AAC overhead conductor, two (2) single-phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Rd, Coventry.
  - **Note:** *This was previously designed and installed for a prior in-queue project. Cost sharing may be applicable.*

#### Civil construction (designed and installed by others) (“Third Party Civil Construction”):

- Installation of (3) – 3-way manholes, (21) – 2-way manholes, (311 feet) – 2-way, 6” PVC-DB concrete encased ductbank, (14,309 feet) – 4-way, 6” PVC-DB concrete encased ductbank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width.
  - **Note:** *Should additional permanent restoration (i.e., curb-to-curb or centerline-to-curb) be required, the cost of civil construction could increase.*

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**Civil construction and related work (work to be completed by Interconnecting Customer) (“Interconnecting Customer Work”)**

- **Note:** *Interconnecting Customer is responsible for all the survey and as-builts for this project. Such as-built plans shall comply with Company mapping and engineering requirements. Company will have 10 business days to review and comment on submitted as-built plans.*
- Install manhole and duct system (~600 feet) from 3-way manhole at the intersection of Nooseneck Hill Rd/Weaver Hill Rd to the first 3-way manhole on Weaver Hill Rd (Reivity Energy POI). Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install duct system (approximately 100 feet) from the first 3-way manhole on weaver Hill Rd (Reivity Energy POI) to proposed 3310 riser on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~400 feet) from the first 3-way manhole on Weaver Hill Rd (Reivity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install duct system (~50 feet) from the proposed 2-way manhole on Customer property to proposed 3310 riser pole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- **Note:** *Interconnecting Customer will perform the civil construction for the manhole/duct system consistent with civil design plans provided by the Customer and approved by the Company per the Distributed Generation: Minimum Self-Performance requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company’s civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer’s civil construction. The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company approved civil design plans.*
- **Note:** *Interconnecting Customer Work is to be performed subject to the Roles and Responsibilities Regarding Interconnecting Customer Work set forth below in this Attachment 2.*

**At the Company’s substation:**

- Add load encroachment settings to the Kent County T7 directional overcurrent relay.
- Change the settings of the 3310 breaker at Kent County Substation.

**System Modifications Construction Schedule**

*The construction schedule will be a commonly agreed upon time frame by both parties*

Total System Modification Construction Duration: **29** weeks. The duration represents the estimated-total number of weeks the Company will work on this project. This duration does not represent the timeline for interconnection.

Milestone	Estimated Duration	Responsible Party
First Payment	Start	Interconnecting Customer
Underground Distribution Design Review	Two (2) Weeks	Company
Electrical Distribution System Design Review	Two (2) Weeks	

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Distribution System Modification/ /Engineering/Construction.	18 weeks	Company
Secure Required Permits/Approvals/Easements and Petition for Company Distribution Work*	Per Customer (Before Construction Begins)	Interconnecting Customer
Submit Final Payment	As per ISA (Before Construction Begins)	Interconnecting Customer
Witness Test Documentation Review and Approval / Witness Test Date Scheduled**	Two (2) weeks	Company
Witness Test Result Review and Approval	One (1) week	Company
Compliance Documentation Review and Approval**	One (1) week	Company
Meter Installation***	Two (2) weeks	Company
Issue Authorization to Interconnect ****	One (1) week	Company

\*Estimated duration dependent on third party.

\*\*Timelines for documentation review are reliant upon receipt of documentation that is accurate and complete. This can be completed in parallel with construction schedule.

\*\*\* Meter procurement requires 8 weeks lead time and will commence after the Interconnecting Customer provides an acceptable wireless signal test or dedicated phone line.

\*\*\*\* If assets require registration with ISO-NE, this shall be completed prior to Authorization to Interconnect.

**General Roles and Responsibilities**

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company’s Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

**Roles and Responsibilities Regarding Interconnecting Customer Work**

*The roles and responsibilities listed below for interconnecting customer’s work is specific to this project.*

**1. GENERAL REQUIREMENTS FOR INTERCONNECTION CUSTOMER WORK**

- 1.1. Interconnection Customer shall perform the civil and electrical design in accordance with the Complete Overhead July 2021 Edition (the “Overhead Standard”) along with the Complete Underground July 2021 Edition (the “Underground Standard”), which are both incorporated in this Attachment 2 by reference.

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Upon completion of the design by Interconnection Customer, Company will have 10 business days to review each separately in accordance with these standards.

- 1.2. Upon completion of the electrical design Interconnection Customer will be solely responsible for ordering the poles required to be installed on Customer's property and the 1000kcmil Cu. EPR 35kV Class cable required in accordance with the Complete Overhead July 2021 Edition along with the Complete Underground July 2021 Edition, EXCEPT the Primary Meters (approx. [7]), and the Reclosers (approx. [3]).
  - 1.3. All material ordered/obtained by Interconnection Customer will comply with the product numbers as defined through Company's Stores Program.
  - 1.4. All cable procured by Customer will meet the standards set in MS4168 and be properly parallel wound.
  - 1.5. Prior to construction of the Interconnection Customer Work Customer will conduct a pre-construction meeting to include the Company team including project management, engineering, construction management, safety etc.
  - 1.6. Prior to any cable being installed as part of the Interconnection Customer Work, all duct lines will be proved out and mandrelled by Interconnection Customer with a Company supervisor on site to witness.
  - 1.7. Interconnection Customer will pull and splice cable within non energized manholes and witnessed by a Company RCS. Cable phasing will be verified and labeled by Interconnection Customer according to the NG-EOP UG014. Standard phase tags will be used by Interconnection Customer. Tan delta acceptance testing will be performed by Interconnection Customer according to NG-EOP UG004. All test results will be provided by Interconnection Customer to Company.
  - 1.8. Upon final completion of installation of assets within each manhole for which Interconnection Customer is responsible, 360 degree images will be taken by Interconnection Customer and provided to Company as documentation that all assets within the manhole were installed per standards.
  - 1.9. Interconnection Customer represents to Company that it has fully acquainted itself with, and has carefully examined all documents and conditions relevant to the Interconnection Customer Work to insure that they are sufficient to properly complete the work; all relevant plans, surveys, measurements, dimensions, calculations, and estimates or other information provided by Company; the location of the work, the character of equipment, materials and facilities needed preliminary to and during the prosecution of the Interconnection Customer Work; and the general and local conditions (including environmental conditions and labor relations) which can affect the Interconnection Customer Work.
2. SHIPMENT AND TITLE
- 2.1. Interconnection Customer shall deliver, receive, unload, store in a secure place, and deliver from storage all equipment and material (whether furnished by Company or the Interconnection Customer) required for the performance of the Interconnection Customer Work, in accordance with all manufacturers' recommendations. Receiving of equipment and materials (whether furnished by Company or Interconnection Customer) shall include inspection by Interconnection Customer for correctness of quantity, quality, and damage, all of which shall be reported. Interconnection Customer shall bear the cost of all packaging and shipment of equipment and material to the site of the Interconnection Customer Work, of all unloading, storage, protection and installation of equipment and material at such site, and of any insurance on the equipment and material prior to completion of the Interconnection Customer Work.
  - 2.2. Upon completion of the Interconnection Customer Work, Interconnection Customer shall convey to Company good, clear and marketable title to all goods and fixtures constituting Interconnection Customer Work, free from any defects, liens, encumbrances and claims of any kind, and shall indemnify, defend and hold harmless Company and warrant and defend title against any claims or demands of third parties; and shall take such action at Interconnection Customer's sole expense as may be necessary to discharge any defect in title, or lien or encumbrance on such goods or fixtures.
  - 2.3. Location of laydown area(s) shall be agreeable to all parties including applicable access of Company. equipment

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include but not limited to cable pulling equipment.

### **3. RISK OF LOSS**

- 3.1. Risk of loss or damage to all goods and fixtures constituting Interconnection Customer Work shall remain with Interconnection Customer until completion of the Interconnection Customer Work, regardless of whether title has passed. Interconnection Customer shall bear the risk of loss or damage to any such goods or fixtures that occurs prior to transfer of risk of loss, except to the extent such damage or loss is caused by the negligence or willful misconduct of Company.
- 3.2. Interconnection Customer shall be solely responsible for storage and protection of all goods and fixtures constituting Interconnection Customer Work (whether furnished by Company or Interconnection Customer) against deterioration or damage from any cause, vandalism, and theft until completion of the Interconnection Customer Work.
- 3.3. Interconnection Customer shall be responsible for the security of all (1) materials and equipment under its custody and control, and (2) the sites over which it has care, custody, and control and in which it is performing the Interconnection Customer Work. Interconnection Customer shall cooperate with Company regarding all security measures instituted at the site(s) of the Interconnection Customer Work.

### **4. WARRANTY/REMEDY**

- 4.1. Interconnection Customer warrants to Company that: 1) the Interconnection Customer Work shall conform to the Overhead Standard, and the Underground Standard, this Agreement, and the Interconnection Tariff; 2) all services constituting Interconnection Customer Work shall be performed by qualified, competent, and experienced personnel, and in accordance with generally accepted practices in the electric construction industry; and 3) all portions of the Interconnection Customer Work, including but not limited to construction, installation of goods, refurbishment, and repairs, shall be free from defects in material, workmanship and design.
- 4.2. If the Interconnection Customer Work fails to conform to the warranties set forth in this agreement, Interconnection Customer shall repair or replace the nonconforming Work, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.

### **5. REVIEW AND QUALITY ASSURANCE**

- 5.1. Interconnection Customer shall inspect all Interconnection Customer work and make or cause to be made all tests and reviews required by this Agreement.
- 5.2. Company shall have the right to review Interconnection Customer Work and any other work covered by this Agreement and, at no cost to Company, the right to inspect and/or audit any inspection records of Interconnection Customer or its subcontractors inspection records and associated costs pertaining to this Agreement. In the event the work or associated costs are found to be deficient or not in accordance with this Agreement, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.
- 5.3. Company may require periodic reviews of all engineering and design documents and drawings. Such reviews may occur at various stages of completion, typically at 30%, 60%, and 90% complete, up to and including, final design Issue for Construction (IFC) drawings. Interconnection Customer shall submit all engineering work for review in accordance with the Project Schedule, and in an electronic format acceptable to Company. Interconnection Customer shall allow a minimum of fourteen (14) business days for each such review by RIE from the date of receipt by the Company of all required documents and drawings.
- 5.4. Company shall advise Interconnection Customer of errors, or variations from the requirements of the this Agreement, and of defects in the Interconnection Customer Work, but it is expressly agreed that any omission on the Company's part to advise Interconnection Customer of any such errors, variations, or defects or to provide any instructions or explanations shall not give Interconnection Customer any right or claim against the Company, and shall not in any way relieve Interconnection Customer from its obligation to provide the Interconnection Customer Work in accordance with this Agreement.



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- 5.5. All trenches and excavation must be reviewed by a Company Project and Construction Management representative against and to conform to the Underground Standards. As an example, but not limited to, all trenches must be free from water and debris with manholes having one (1') foot of three quarter (3/4") inch stone.
- 5.6. Company Project and Construction Management will have the right to review all construction efforts against and to conform to the Underground Standards. In exception, earth pouring will not be permitted and all duct lines must be formed and cannot be stripped until a 12hr. cure time has been achieved.
6. SAFETY
  - 6.1. Interconnection Customer shall provide reasonably adequate safeguards, safety devices and protective equipment and enforce their use and take any other needed actions to protect the life, health and safety of the public and to protect the portion of the site(s) of the Interconnection Customer Work for which it has care, custody and control in connection with its performance of the Interconnection Customer Work.
  - 6.2. Interconnection Customer shall follow all current and applicable OSHA policies, procedures and standards during construction.
7. RECORDS/DOCUMENTS/INTELLECTUAL PROPERTY
  - 7.1. Interconnection Customer shall, and shall require its subcontractors, for Company's benefit, at their own expense, to maintain a method of accounting in accordance with generally accepted accounting procedures and practices with respect to all matters pertinent to this Agreement. For Interconnection Customer Work performed on a time and materials or cost plus basis under the Agreement, Interconnection Customer shall maintain timesheets and invoices applicable to such portion of the Interconnection Customer Work performed on a time and materials or cost plus basis and shall make such timesheets and invoices available to Company or its authorized representative for inspection and audit and shall be kept in a manner which (1) adequately permits evaluation and verification of any invoices, payments or claims based on Interconnection Customer's actual costs incurred in the performance of the portion of the Work performed on a time and materials or cost plus basis.
  - 7.2. Interconnection Customer shall supply all documents in order to complete the Interconnection customer Work including but not limited to drawings; studies; surveys; inventories; reports; computer models; testing results; and data files collectively referred to in this Section as "Documents", in quantities and types, at times, according to instructions, and in the manner set forth in this Agreement. Any Document, which is prepared by Interconnection Customer in connection with this Agreement, shall be submitted in accordance with this Agreement.
  - 7.3. All documents prepared, procured, or developed by Interconnection Customer that are specific to the Interconnection Customer Work and furnished to Company shall be the property of Company and may be used by Company without restriction, whether during the term of this Agreement or thereafter.
  - 7.4. Any and all works, expressions, inventions, ideas, discoveries, improvements or developments (whether or not patentable), as well as all copyrights, patents or trademarks thereof, that may be conceived or made by Interconnection Customer or Interconnection Customer's subcontractors, vendor(s), supplier(s) or any other party employed by Interconnection Customer or Subcontractor to Interconnection Customer of any tier, to satisfy its obligation under this Agreement shall remain the property of Interconnection Customer or applicable owner. Interconnection Customer shall provide Company with a perpetual, non-transferrable, royalty-free, non-exclusive license to use such intellectual property incorporated into the Interconnection Customer Work for the purpose of operation and maintenance of the Interconnection Customer Work. Such license shall not include rights to derivative works or source code.
8. COMPLIANCE WITH LAWS AND STANDARDS
  - 8.1. Interconnection Customer shall, in connection with any work provided by Interconnection Customer hereunder, comply with all, permits, easements and associated laws required to complete the Interconnection Customer Work.

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### 9. ENVIRONMENTAL COMPLIANCE

9.1. Interconnection Customer shall conduct all Interconnection Customer Work in such a manner to minimize the impact upon the natural environment and shall comply fully with applicable laws and permits for the protection and preservation of the environment, as may be amended from time to time, and all applicable Environmental Procedures and Guidance prescribed by Company in writing as applicable to the Interconnection Customer Work, including without limitation, the Resource Conservation and Recovery Act, the Hazardous Materials and Transportation Act, the Occupational Safety and Health Act of 1970 (“OSHA”), regulations of the Environmental Protection Agency, and the Department of Transportation. Interconnection Customer shall impose the requirements of this Section upon its Subcontractor and Suppliers who are supplying Work at the Site.

#### **Attachment 3: Rhode Island Energy only Costs of System Modifications and Payment Terms**

This application is one of seven projects studied together with total system size of 40,700 kw (the “related projects”). This application’s size is 5,250kw and is 12.9% of the total aggregated related project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if one of the related project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company’s electric power system, the total common modification costs on the Company’s system will be re-estimated and reallocated among the remaining related projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the related projects group.

The total Company system modification costs (excluding the third party ductbank and Revity ductbank) that will be performed by the Company and are associated with all related project applications are: **\$3,597,710** (+/- 25%). As of the isa execution date, the system modification cost responsibility for this ISA is **\$464,105** (+/- 25%)

#### • **WORK TO BE PERFORMED BY RIE:**

- In addition to determining costs of metering assemblies and reclosers, RIE will also determine cost of all material excepting the poles required to be installed on private property and the 1000kcmil Cu. EPR 35kV Class required for the project.
- Determination of labor costs for the work that RIE will perform within energized manholes and energized pole line.
- Customer is responsible for purchasing the poles required to be installed on Customer’s and the 1000kcmil Cu. EPR 35kV Class cable required for the project.
  
- Total cost of common system modifications (**NECO**) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment) above is **\$17,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 12.9% share or **\$2,270.40**.
- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$516,708.00**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 12.9% or **\$66,655.33**. - *This cost has been added to the gross tax adder*
- Total cost of common system modifications on the Company’s distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550,

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RI-29048488, RI-29599253. RI-29048593 will be responsible for 12.9% share or **\$206.40**.

- Cost of witness testing, engineering review, EMS Integration, and implementation of protective device settings: **\$2,096.25**
- Order Charges including (Construction support/inspection, Engineering support for review and approval, cable testing reviews, weekly project review meetings, civil design/reel plan review and approval, electrical design review and approval is **\$1,731,262.33**. The cost will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 12.9% share or **\$223,332.84**

### WORK PERFORMED BY THIRD PARTY:

- In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is **\$12,023,525** as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated **\$6,128,924**. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 58.226% of this figure or **\$3,667** including tax. This application's cost responsibility for the THIRD PARTY DUCTBANK will be 12.9% or **\$473,043** (such amount, the "Interconnecting Customer's Cost Share Amount").
- Total cost of common system modifications on the Interconnecting Customer's (or other private) property and on the Company's distribution System previously designed and installed for a prior in queue project (Third Party), specifically **3310** Cable pulling as mentioned in Attachment 2 above: **\$822,612** (includes capital, removal, and O&M costs). The cost for this modification will only be borne by RI-29048531.
- Total cost of THIRD-PARTY common system modification (Civil and Electrical):  $\$473,043 + \$822,612$  or **\$1,295,655**.
- Tax gross-up adder on capital costs is or **\$106,016**. *(A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if any other related project does not move forward with its interconnection to the Company's electric power system, the facility's interconnection may need to be restudied, and the system modification costs will be re-estimated for the facility and for the related projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the facility's interconnection under this agreement, including its pro-rata share of any re-estimated and re-allocated costs.

The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while

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they are presumed valid for 60 business days from the date of the impact /group study, the Company reserves the right to adjust those estimated costs as authorized under this agreement, the tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The total system modifications costs and the facility system modification costs do not include any costs for third party rights and approvals (as defined in attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the total system modifications costs and the facility system modification costs and must be paid directly by the Interconnecting Customer to the appropriate third party

### ISO-NE planning study

Rhode Island Energy transmission planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) planning procedure 5-6 “scope of study for system impact studies under the generation interconnection procedures” and Rhode Island Energy tgp28 “transmission planning guide.” Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

### ISO-NE operating requirement

This is part of a group of generating facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5mw and will be required to comply with ISO-NE’s requirements, including operating procedure no. 14. Prior to the Company providing authorization to interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in telephone Company maintenance areas. These costs will be billed directly to the Interconnecting Customer from the telephone Company.

### Payment Terms:

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment is:
  - (25%) of \$ 464,105 for services rendered by RIE is **\$116,026 + \$1,295,655** (cost sharing for third party DUCTBANK and Electrical work), **or \$1,411,681** is due within 15 business days from the receipt of the first payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around the completion of electrical design. An invoice, including payment instructions, will be sent to the Interconnecting Customer. A total of **\$188,834** was paid prior to this amendment. The new balance is **\$1,222,847**
- The second payment (75%) of **\$348,078** is due within 15 business days from the receipt of the second payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021. The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company

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earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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## FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT

**THIS AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** (this “Amendment”) dated (“Effective Date”) amends the Interconnection Service Agreement dated 05/16/2022 for application RI-29048550 by and between The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) and Robin Hollow Solar, LLC covering a distributed generation facility located at 18 Weaver-Hill Road, West Greenwich RI (“Agreement”).

**WHEREAS**, on 05/16/2022, Company consented to the Assignment of Interest in the Interconnection Service Agreement;

**WHEREAS**, Customer and the Company both desire to modify the Description of System Modifications (Attachment 2), System Modifications Costs (Attachment 3), and System Modification Construction Schedules (Attachment 6)

**NOW, THEREFORE**, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

- 1. Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
- 2. Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s Standards for Interconnection of Distributed Generation tariff R.I.P.U.C. No. 2180 (“Interconnection Tariff”), as the same may be amended.
- 3. Amendment to Agreement.** The Agreement is hereby amended as follows:
  - (a) By striking Attachment 2 “Description of System Modifications” in its’ entirety, and replacing it with Attachment 2 attached hereto.
  - (b) By striking Attachment 3 “Cost of System Modifications” in its’ entirety, and replacing it with Attachment 3 attached hereto.
  - (c) By striking Attachment 6 “System Modifications Construction Schedule” in its’ entirety, and merging it with Attachment 2 attached hereto.
- 4. Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
- 5. Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a “.pdf” format data file) shall constitute effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.
- 6. Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not executed by the Interconnecting Customer and returned to the Company on or before 7/9/2023

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**IN WITNESS WHEREOF**, the Parties hereto execute this **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:  
Robin Hollow Solar, LLC

COMPANY:  
The Narragansett Electric Company d/b/a  
Rhode Island Energy

By: *Ralph Palumbo*

By: *Erica Russell Salk*

Name: Ralph A. Palumbo

Name: Erica Russell Salk

Title: Manager

Title: Manager, CEI

Date: September 26, 2023

Date: 10/4/2023

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### Attachment 2: Description of System Modifications

#### On the Customer's property:

Rhode Island Energy System Modifications required for the interconnection of 9,750kW (AC) application as identified in the impact study are as follows:

#### On the Customer's property:

- Install ~1,100 feet of 3 – 477 AAC
- Install one (1) 35 kV load break switch
- Install one (1) 35 kV recloser
- Install one (1) disconnect switch
- Install two (2) single-phase transformers
- Install six (6) primary meters along with six (6) disconnect switches at the PCC
  - **Note:** Revity will be responsible for the procurement of cables mentioned above.
  - **Note:** *The above work will be designed and constructed by the Interconnecting Customer.*

#### On the Company's distribution system:

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revity Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed 3309 riser pole on Customer property.
  - **Note:** *Interconnecting Customer is responsible for the procurement of all material mentioned above.*
  - **Note:** *Interconnecting Customer is responsible for the above electrical design and installation of new cable in any de-energized manholes.*
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
  - **Note:** *The above work was designed and constructed as part of a prior in-queue project. Cost sharing may be applicable.*
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI
- Install ~410 feet of 3-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
  - **Note:** *Interconnecting Customer is responsible for the electrical design. Rhode Island Energy is to construct all overhead work on Hopkins Hill Road.*

#### Civil construction (designed and installed by others) (“Third Party Ductbank”):

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Signing Customer Initials: RAP



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- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width.
  - *Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.*

### **Civil construction (work anticipated to be completed by Revity) (“Revity Ductbank”)**

- **Note:** *Interconnecting Customer is responsible for all the survey and as-builts for this project. Such as-built plans shall comply with Company mapping and engineering requirements. Company will have 10 business days to review and comment on submitted as-built plans.*
- Install manhole and duct system (~3,000 feet) from proposed riser pole on Hopkins Hill Rd to 3-way MH on Hopkins Hill Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install duct System (~600 feet) between previously constructed 3-way manhole on Hopkins Hill Road and previously constructed 3-way manhole at the intersection of Hopkins Hill Rd/Division Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~600 feet) from 3-way manhole at the intersection of Nooseneck Hill Rd/Weaver Hill Rd to the first 3-way manhole on Weaver Hill Rd (Revity Energy POI). Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~100 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~50 feet) from the proposed 2-way manhole on Customer property to proposed 3309 riser pole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- **Note:** *Interconnecting Customer will perform the civil construction for the manhole/duct system consistent with civil design plans provided by the Customer and approved by the Company per the Distributed Generation: Minimum Self-Performance requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company’s civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer’s civil construction. The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company approved civil design plans.*
- **Note:** *Interconnecting Customer Work is to be performed subject to the Roles and Responsibilities Regarding Interconnecting Customer Work set forth below in this Attachment 2.*

### **At the Company’s substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

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**System Modifications Construction Schedule**

*The construction schedule will be a commonly agreed upon time frame by both parties*

Total System Modification Construction Duration: **29** weeks. The duration represents the estimated-total number of weeks the Company will work on this project.

<b>Milestone</b>	<b>Estimated Duration</b>	<b>Responsible Party</b>
First Payment	Start	Interconnecting Customer
Underground Distribution Design Review	Two (2) Weeks	Company
Electrical Distribution System Design Review	Two (2) Weeks	
Distribution System Modification/ /Engineering/Construction	18 weeks	Company
Secure Required Permits/Approvals/Easements and Petition for Company Distribution Work*	Per Customer (Before Construction Begins)	Interconnecting Customer
Submit Final Payment	As per ISA (Before Construction Begins)	Interconnecting Customer
Witness Test Documentation Review and Approval / Witness Test Date Scheduled**	Two (2) weeks	Company
Witness Test Result Review and Approval	One (1) week	Company
Compliance Documentation Review and Approval**	One (1) week	Company
Meter Installation***	Two (2) weeks	Company
Issue Authorization to Interconnect ****	One (1) week	Company

\*Estimated duration dependent on third party.

\*\*Timelines for documentation review are reliant upon receipt of documentation that is accurate and complete. This can be completed in parallel with construction schedule.

\*\*\* Meter procurement requires 8 weeks lead time and will commence after the Interconnecting Customer provides an acceptable wireless signal test or dedicated phone line.

\*\*\*\* If assets require registration with ISO-NE, this shall be completed prior to Authorization to Interconnect.

**General Roles and Responsibilities**

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approvals, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer

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shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

### **Roles and Responsibilities Regarding Interconnecting Customer Work**

*The roles and responsibilities listed below for interconnecting customer's work is specific to this project.*

#### **1. GENERAL REQUIREMENTS FOR INTERCONNECTION CUSTOMER WORK**

- 1.1. Interconnection Customer shall perform the civil and electrical design in accordance with the Complete Overhead July 2021 Edition (the "Overhead Standard") along with the Complete Underground July 2021 Edition (the "Underground Standard"), which are both incorporated in this Attachment 2 by reference. Upon completion of the design by Interconnection Customer, Company will have 10 business days to review each separately in accordance with these standards.
- 1.2. Upon completion of the electrical design Interconnection Customer will be solely responsible for ordering all material in accordance with the Complete Overhead July 2021 Edition along with the Complete Underground July 2021 Edition, EXCEPT the Primary Meters (approx. [ ]), and the Reclosers (approx. [ ]).
- 1.3. All material ordered/obtained by Interconnection Customer will comply with the product numbers as defined through Company's Stores Program.
- 1.4. All cable procured by Customer will meet the standards set in MS4168 and be properly parallel wound.
- 1.5. Prior to construction of the Interconnection Customer Work Customer will conduct a pre-construction meeting to include the Company team including project management, engineering, construction management, safety etc.
- 1.6. Prior to any cable being installed as part of the Interconnection Customer Work, all duct lines will be proved out and man-drilled by Interconnection Customer with a Company supervisor on site to witness.
- 1.7. Interconnection Customer will pull and splice cable within non energized manholes and witnessed by a Company RCS. Cable phasing will be verified and labeled by Interconnection Customer according to the NG-EOP UG014. Standard phase tags will be used by Interconnection Customer. Tan delta acceptance testing will be performed by Interconnection Customer according to NG-EOP UG004. All test results will be provided by Interconnection Customer to Company.
- 1.8. Upon final completion of installation of assets within each manhole for which Interconnection Customer is responsible, 360 degree images will be taken by Interconnection Customer and provided to Company as documentation that all assets within the manhole were installed per standards.
- 1.9. Interconnection Customer represents to Company that it has fully acquainted itself with, and has carefully examined all documents and conditions relevant to the Interconnection Customer Work to insure that they are sufficient to properly complete the work; all relevant plans, surveys, measurements, dimensions, calculations, and estimates or other information provided by Company; the location of the work, the character of equipment, materials and facilities needed preliminary to and during the prosecution of the Interconnection Customer Work; and the general and local conditions (including environmental conditions and labor relations) which can affect the Interconnection Customer Work.

#### **2. SHIPMENT AND TITLE**

- 2.1. Interconnection Customer shall deliver, receive, unload, store in a secure place, and deliver from storage

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## **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT**

all equipment and material (whether furnished by Company or the Interconnection Customer) required for the performance of the Interconnection Customer Work, in accordance with all manufacturers' recommendations. Receiving of equipment and materials (whether furnished by Company or Interconnection Customer) shall include inspection by Interconnection Customer for correctness of quantity, quality, and damage, all of which shall be reported. Interconnection Customer shall bear the cost of all packaging and shipment of equipment and material to the site of the Interconnection Customer Work, of all unloading, storage, protection and installation of equipment and material at such site, and of any insurance on the equipment and material prior to completion of the Interconnection Customer Work.

- 2.2. Upon completion of the Interconnection Customer Work, Interconnection Customer shall convey to Company good, clear and marketable title to all goods and fixtures constituting Interconnection Customer Work, free from any defects, liens, encumbrances and claims of any kind, and shall indemnify, defend and hold harmless Company and warrant and defend title against any claims or demands of third parties; and shall take such action at Interconnection Customer's sole expense as may be necessary to discharge any defect in title, or lien or encumbrance on such goods or fixtures.
- 2.3. Location of laydown area(s) shall be agreeable to all parties including applicable access of Company. equipment include but not limited to cable pulling equipment.

### **3. RISK OF LOSS**

- 3.1. Risk of loss or damage to all goods and fixtures constituting Interconnection Customer Work shall remain with Interconnection Customer until completion of the Interconnection Customer Work, regardless of whether title has passed. Interconnection Customer shall bear the risk of loss or damage to any such goods or fixtures that occurs prior to transfer of risk of loss, except to the extent such damage or loss is caused by the negligence or willful misconduct of Company.
- 3.2. Interconnection Customer shall be solely responsible for storage and protection of all goods and fixtures constituting Interconnection Customer Work (whether furnished by Company or Interconnection Customer) against deterioration or damage from any cause, vandalism, and theft until completion of the Interconnection Customer Work.
- 3.3. Interconnection Customer shall be responsible for the security of all (1) materials and equipment under its custody and control, and (2) the sites over which it has care, custody, and control and in which it is performing the Interconnection Customer Work. Interconnection Customer shall cooperate with Company regarding all security measures instituted at the site(s) of the Interconnection Customer Work.

### **4. WARRANTY/REMEDY**

- 4.1. Interconnection Customer warrants to Company that: 1) the Interconnection Customer Work shall conform to the Overhead Standard, and the Underground Standard, this Agreement, and the Interconnection Tariff; 2) all services constituting Interconnection Customer Work shall be performed by qualified, competent, and experienced personnel, and in accordance with generally accepted practices in the electric construction industry; and 3) all portions of the Interconnection Customer Work, including but not limited to construction, installation of goods, refurbishment, and repairs, shall be free from defects in material, workmanship and design.
- 4.2. If the Interconnection Customer Work fails to conform to the warranties set forth in this agreement, Interconnection Customer shall repair or replace the nonconforming Work, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.

### **5. REVIEW AND QUALITY ASSURANCE**

- 5.1. Interconnection Customer shall inspect all Interconnection Customer work and make or cause to be made all tests and reviews required by this Agreement.
- 5.2. Company shall have the right to review Interconnection Customer Work and any other work covered by this Agreement and, at no cost to Company, the right to inspect and/or audit any inspection records of Interconnection Customer or its subcontractors inspection records and associated costs pertaining to this Agreement. In the event the work or associated costs are found to be deficient or not in accordance with

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this Agreement, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.

- 5.3. Company may require periodic reviews of all engineering and design documents and drawings. Such reviews may occur at various stages of completion, typically at 30%, 60%, and 90% complete, up to and including, final design Issue for Construction (IFC) drawings. Interconnection Customer shall submit all engineering work for review in accordance with the Project Schedule, and in an electronic format acceptable to Company. Interconnection Customer shall allow a minimum of fourteen (14) business days for each such review by RIE from the date of receipt by the Company of all required documents and drawings.
  - 5.4. Company shall advise Interconnection Customer of errors, or variations from the requirements of the this Agreement, and of defects in the Interconnection Customer Work, but it is expressly agreed that any omission on the Company's part to advise Interconnection Customer of any such errors, variations, or defects or to provide any instructions or explanations shall not give Interconnection Customer any right or claim against the Company, and shall not in any way relieve Interconnection Customer from its obligation to provide the Interconnection Customer Work in accordance with this Agreement.
  - 5.5. All trenches and excavation must be reviewed by a Company Project and Construction Management representative against and to conform to the Underground Standards. As an example, but not limited to, all trenches must be free from water and debris with manholes having one (1') foot of three quarter (3/4") inch stone.
  - 5.6. Company Project and Construction Management will have the right to review all construction efforts against and to conform to the Underground Standards. In exception, earth pouring will not be permitted and all duct lines must be formed and cannot be stripped until a 12hr. cure time has been achieved.
6. SAFETY
- 6.1. Interconnection Customer shall provide reasonably adequate safeguards, safety devices and protective equipment and enforce their use and take any other needed actions to protect the life, health and safety of the public and to protect the portion of the site(s) of the Interconnection Customer Work for which it has care, custody and control in connection with its performance of the Interconnection Customer Work.
  - 6.2. Interconnection Customer shall follow all current and applicable OSHA policies, procedures and standards during construction.
7. RECORDS/DOCUMENTS/INTELLECTUAL PROPERTY
- 7.1. Interconnection Customer shall, and shall require its subcontractors, for Company's benefit, at their own expense, to maintain a method of accounting in accordance with generally accepted accounting procedures and practices with respect to all matters pertinent to this Agreement. For Interconnection Customer Work performed on a time and materials or cost plus basis under the Agreement, Interconnection Customer shall maintain timesheets and invoices applicable to such portion of the Interconnection Customer Work performed on a time and materials or cost plus basis and shall make such timesheets and invoices available to Company or its authorized representative for inspection and audit and shall be kept in a manner which (1) adequately permits evaluation and verification of any invoices, payments or claims based on Interconnection Customer's actual costs incurred in the performance of the portion of the Work performed on a time and materials or cost plus basis.
  - 7.2. Interconnection Customer shall supply all documents in order to complete the Interconnection customer Work including but not limited to drawings; studies; surveys; inventories; reports; computer models; testing results; and data files collectively referred to in this Section as "Documents", in quantities and types, at times, according to instructions, and in the manner set forth in this Agreement. Any Document, which is prepared by Interconnection Customer in connection with this Agreement, shall be submitted in accordance with this Agreement.
  - 7.3. All documents prepared, procured, or developed by Interconnection Customer that are specific to the Interconnection Customer Work and furnished to Company shall be the property of Company and may be used by Company without restriction, whether during the term of this Agreement or thereafter.

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7.4. Any and all works, expressions, inventions, ideas, discoveries, improvements or developments (whether or not patentable), as well as all copyrights, patents or trademarks thereof, that may be conceived or made by Interconnection Customer or Interconnection Customer's subcontractors, vendor(s), supplier(s) or any other party employed by Interconnection Customer or Subcontractor to Interconnection Customer of any tier, to satisfy its obligation under this Agreement shall remain the property of Interconnection Customer or applicable owner. Interconnection Customer shall provide Company with a perpetual, non-transferrable, royalty-free, non-exclusive license to use such intellectual property incorporated into the Interconnection Customer Work for the purpose of operation and maintenance of the Interconnection Customer Work. Such license shall not include rights to derivative works or source code.

### 8. COMPLIANCE WITH LAWS AND STANDARDS

8.1. Interconnection Customer shall, in connection with any work provided by Interconnection Customer hereunder, comply with all, permits, easements and associated laws required to complete the Interconnection Customer Work.

### 9. ENVIRONMENTAL COMPLIANCE

9.1. Interconnection Customer shall conduct all Interconnection Customer Work in such a manner to minimize the impact upon the natural environment and shall comply fully with applicable laws and permits for the protection and preservation of the environment, as may be amended from time to time, and all applicable Environmental Procedures and Guidance prescribed by Company in writing as applicable to the Interconnection Customer Work, including without limitation, the Resource Conservation and Recovery Act, the Hazardous Materials and Transportation Act, the Occupational Safety and Health Act of 1970 ("OSHA"), regulations of the Environmental Protection Agency, and the Department of Transportation. Interconnection Customer shall impose the requirements of this Section upon its Subcontractor and Suppliers who are supplying Work at the Site.

### Attachment 3: Rhode Island Energy only Costs of System Modifications and Payment Terms

This application is one of seven projects studied together with total system size of 40,700 kw (the "related projects"). This application's size is 9,750kw and is 24.0% of the total aggregated related project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if one of the related project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company's electric power system, the total common modification costs on the Company's system will be re-estimated and reallocated among the remaining related projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the related projects group.

The total Company system modification costs (excluding the third party ductbank and Revity ductbank) that will be performed by the Company and are associated with all related project applications are: **\$3,597,710** (+/- 25%). As of the ISA execution date, the system modification cost responsibility for this ISA is **\$863,450** (+/- 25%)

- Total cost of common system modifications on the Interconnecting Customer's (or other private) property and on the Company's distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above: **\$1,009,165.40** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 24.0% share or **\$242,199.70**.
- **WORK TO BE PERFORMED BY RIE: WE ARE ONLY DETERMINING THE MATERIAL AND LABOR COSTS FOR THE PORTION RIE WILL BE DOING. INTERCONNECTING CUSTOMER IS RESPONSIBLE FOR PURCHASING ALL MATERIALS EXCEPT (METERS AND RECLOSERS)**
- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment) above is **\$17,600** (includes capital, removal, and O&M costs).

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The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 24.0% share or **\$4,224**.

- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$516,708**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 24.0% or **\$124,009.92**. - *This cost has been added to the gross tax adder*
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 24.0% share or **\$384**.
- Cost of witness testing, engineering review, EMS Integration, and implementation of protective device settings: **\$3,900**
- Order Charges including (Construction support/inspection, Engineering support for review and approval, cable testing reviews, weekly project review meetings, civil design/reel plan review and approval, electrical design review and approval is **\$1,731,262.33**. The cost will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 24.0 % share or **\$415,502.96**

### WORK PERFORMED BY THIRD PARTY:

- In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party estimate provided to construct the THIRD PARTY DUCTBANK is **\$12,023,525** as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage; the Company will facilitate the sharing of an estimated **\$6,128,924**. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 58.226% of this figure or **\$3,667,000** including tax. This application's cost responsibility for the THIRD PARTY DUCTBANK will be **\$880,080** (such amount, the "Interconnecting Customer's Cost Share Amount").
- Tax gross-up adder on capital costs is or **\$197,239.77**. (*A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*)

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if any other related project does not move forward with its interconnection to the Company's electric power system, the facility's interconnection may need to be restudied, and the system modification costs will be re-estimated for the facility and for the related projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the facility's interconnection under this agreement, including its pro-rata share of any re-estimated and re-allocated costs.

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The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the impact /group study, the Company reserves the right to adjust those estimated costs as authorized under this agreement, the tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The total system modifications costs and the facility system modification costs do not include any costs for third party rights and approvals (as defined in attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the total system modifications costs and the facility system modification costs and must be paid directly by the Interconnecting Customer to the appropriate third party

### ISO-NE planning study

Rhode Island Energy transmission planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) planning procedure 5-6 “scope of study for system impact studies under the generation interconnection procedures” and Rhode Island Energy tgp28 “transmission planning guide.” Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

### ISO-NE operating requirement

This is part of a group of generating facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5mw and will be required to comply with ISO-NE’s requirements, including operating procedure no. 14. Prior to the Company providing authorization to interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in telephone Company maintenance areas. These costs will be billed directly to the Interconnecting Customer from the telephone Company.

### **Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment is:
  - (25%) of **\$863,450** for services rendered by RIE is **\$215,863 + \$880,080** (cost sharing for third party DUCTBANK work), **or \$1,095,943** is due within 15 business days from the receipt of the first payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around the completion of electrical design. An invoice, including payment instructions, will be sent to the Interconnecting Customer. A total of **\$302,250** was paid prior to this amendment. The new balance is **\$793,693**
- The second payment (75%) of **\$647,588** is due within 15 business days from the receipt of the second payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021. The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company



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earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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## FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT

from the receipt of the first payment invoice.

**THIS AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** (this “Amendment”) dated (“Effective Date”) amends the Interconnection Service Agreement dated 05/16/2022 for application RI-29048488 by and between The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) and Robin Hollow Solar, LLC covering a distributed generation facility located at 18 Weaver-Hill Road, West Greenwich RI (“Agreement”).

**WHEREAS**, on 05/16/2022, Company consented to the Assignment of Interest in the Interconnection Service Agreement;

**WHEREAS**, Customer and the Company both desire to modify the Description of System Modifications (Attachment 2), System Modifications Costs (Attachment 3), and System Modification Construction Schedules (Attachment 6)

**NOW, THEREFORE**, pursuant to Section 14 of the Agreement, for good and valuable consideration the receipt and sufficiency which are hereby acknowledged, the Company and the Interconnecting Customer (individually “Party” and together the “Parties”) agree as follows:

1. **Defined Terms.** Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to them in the Agreement or the Interconnection Tariff (defined below), as applicable.
2. **Standards for Interconnection of Distributed Generation.** The Interconnecting Customer shall be subject to and shall comply with the terms, conditions and requirements set forth in the Company’s Standards for Interconnection of Distributed Generation tariff R.I.P.U.C. No. 2180 (“Interconnection Tariff”), as the same may be amended.
3. **Amendment to Agreement.** The Agreement is hereby amended as follows:
  - (a) By striking Attachment 2 “Description of System Modifications” in its’ entirety, and replacing it with Attachment 2 attached hereto.
  - (b) By striking Attachment 3 “Cost of System Modifications” in its’ entirety, and replacing it with Attachment 3 attached hereto.
  - (c) By striking Attachment 6 “System Modifications Construction Schedule” in its’ entirety, and merging it with Attachment 2 attached hereto.
4. **Construction.** The Parties hereto agree that, once signed by both Parties, this Amendment modifies, supplements, and forms a part of the Agreement. Except as specifically modified and amended herein, all of the terms, provisions and requirements contained in the Agreement remain in full force and effect.
5. **Counterparts.** This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The delivery of this Agreement and of signature pages by facsimile or other electronic transmission (including a “.pdf” format data file) shall constitute effective execution and delivery of this Amendment as to the Parties and shall be deemed to be their original signatures for all purposes.
6. **Signatory Authority.** The Parties each represent and warrant that this Amendment is being signed by its duly authorized representative.

This Amendment shall be effective as of the Effective Date when fully executed, and shall be void with no further force or effect, or recourse to either Party, if not executed by the Interconnecting Customer and returned to the Company on or before 7/9/2023.

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**IN WITNESS WHEREOF**, the Parties hereto execute this **FIRST AMENDMENT TO INTERCONNECTION SERVICE AGREEMENT** under seal.

INTERCONNECTING CUSTOMER:  
Robin Hollow Solar, LLC

COMPANY:  
The Narragansett Electric Company d/b/a  
Rhode Island Energy

By:           *Ralph Palumbo*          

By:           *Erica Russell Salk*          

Name:           Ralph A. Palumbo          

Name:           Erica Russell Salk          

Title:           Manager          

Title:           Manager, CEI          

Date:           September 26, 2023          

Date:           10/4/2023

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### **Attachment 2: Description of System Modifications**

#### **On the Customer's property:**

Rhode Island Energy System Modifications required for the interconnection of 750kW (AC) application as identified in the impact study are as follows:

#### **On the Customer's property:**

- Install ~1,100 feet of 3 – 477 AAC
- Install one (1) 35 kV load break switch
- Install one (1) 35 kV recloser
- Install one (1) disconnect switch
- Install two (2) single-phase transformers
- Install six (6) primary meters along with six (6) disconnect switches at the PCC
  - **Note:** *The Interconnecting Customer will be responsible for the procurement of the poles specified in the approved design on the Customer's property.*
  - **Note:** *The above work will be designed and constructed by the Interconnecting Customer.*

#### **On the Company's distribution system:**

- Install 20,100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road.
- Install ~700 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the 3-way MH at the intersection of Nooseneck Hill Road/Weaver Hill Road to the first 3-way MH on Weaver Hill Road (Revity Energy POI).
- Install ~200 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from the first 3-way MH on Weaver Hill Road (Revity Energy POI) to a 2-way MH on Customer property.
- Install ~100 circuit feet of 3-1000 kcmil CU EPR 35 kV cable from 2-way MH on Customer property to proposed 3309 riser pole on Customer property.
  - **Note:** *Interconnecting Customer is responsible for the above electrical design, procurement of 1000kcmil CU EPR 35kV cable and installation of new cable in any de-energized manholes.*
- Install ~1500 circuit feet of 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Road.
  - **Note:** *The above work was designed and constructed as part of a prior in-queue project. Cost sharing may be applicable.*
- Implement live line reclose blocking and settings change at pole 10 Hopkins Hill Road, Coventry, RI
- Install ~410 feet of 3-477 AL Bare conductor, two (2) single phase transformers, one (1) 35 kV recloser, one (1) disconnect switch, one (1) 35 kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Road, Coventry
  - **Note:** *Interconnecting Customer is responsible for the electrical design. Rhode Island Energy is to construct all overhead work on Hopkins Hill Road.*

#### **Civil construction (designed and installed by others) ("Third Party Ductbank"):**

- Installation of (4) - 3 way manholes, (21) - 2 way manholes, (89 feet) - 2 way, 6" PVC - DB concrete encased duct bank, (14,309 feet) 4 way, 6" PVC - DB concrete encased duct bank, and associated equipment. For estimating purposes, permanent restoration for civil work is assumed to be twelve (12) feet in width.

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- *Note: Should additional permanent restoration (i.e. Curb to curb or centerline to curb) be required, the cost of civil construction could increase.*

### **Civil construction (work anticipated to be completed by Revity) (“Revity Ductbank”)**

- ***Note:** Interconnecting Customer is responsible for all the survey and as-builts for this project. Such as-built plans shall comply with Company mapping and engineering requirements. Company will have 10 business days to review and comment on submitted as-built plans.*
- Install manhole and duct system (~3,000 feet) from proposed riser pole on Hopkins Hill Rd to 3-way MH on Hopkins Hill Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install duct System (~600 feet) between previously constructed 3-way manhole on Hopkins Hill Road and previously constructed 3-way manhole at the intersection of Hopkins Hill Rd/Division Rd. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~600 feet) from 3-way manhole at the intersection of Nooseneck Hill Rd/Weaver Hill Rd to the first 3-way manhole on Weaver Hill Rd (Revity Energy POI). Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~100 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (400 feet) from the first 3-way manhole on Weaver Hill Rd (Revity Energy POI) to proposed 2-way manhole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- Install manhole and duct system (~50 feet) from the proposed 2-way manhole on Customer property to proposed 3309 riser pole on Customer property. Customer to provide civil design including drawings per Distribution Generation: Minimum Self Performance Requirements to construct this portion.
- ***Note:** Interconnecting Customer will perform the civil construction for the manhole/duct system consistent with civil design plans provided by the Customer and approved by the Company per the Distributed Generation: Minimum Self-Performance requirements. A kick-off meeting will be held and coordinated by the Company to 1) review and convey all of the Company’s civil design parameters and requirements, and 2) coordinate the schedule for the Interconnecting Customer’s civil construction. The Interconnecting Customer agrees that 1) civil installation work performed and 2) all materials provided will be in strict conformance with the Company approved civil design plans.*
- ***Note:** Interconnecting Customer Work is to be performed subject to the Roles and Responsibilities Regarding Interconnecting Customer Work set forth below in this Attachment 2.*

### **At the Company’s substation:**

- Add Load encroachment settings to the Kent County T7 Directional Overcurrent relay

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**System Modifications Construction Schedule**

*The construction schedule will be a commonly agreed upon time frame by both parties.*

Total System Modification Construction Duration: **29** weeks. The duration represents the estimated-total number of weeks the Company (RIE) will work on this project.

<b>Milestone</b>	<b>Estimated Duration</b>	<b>Responsible Party</b>
First Payment	Start	Interconnecting Customer
Underground Distribution Design Review	Two (2) Weeks	Company
Electrical Distribution System Design Review	Two (2) Weeks	
Distribution System Modification/ /Engineering/Construction upon receipt of Cable & Interconnecting Customer’s Civil portion is completed and accepted by RIE	18 weeks	Company
Secure Required Permits/Approvals/Easements and Petition for Company Distribution Work*	Per Customer (Before Construction Begins)	Interconnecting Customer
Submit Final Payment	As per ISA (Before Construction Begins)	Interconnecting Customer
Witness Test Documentation Review and Approval / Witness Test Date Scheduled**	Two (2) weeks	Company
Witness Test Result Review and Approval	One (1) week	Company
Compliance Documentation Review and Approval**	One (1) week	Company
Meter Installation***	Two (2) weeks	Company
Issue Authorization to Interconnect ****	One (1) week	Company

\*Estimated duration dependent on third party.

\*\*Timelines for documentation review are reliant upon receipt of documentation that is accurate and complete. This can be completed in parallel with construction schedule.

\*\*\* Meter procurement requires 8 weeks lead time and will commence after the Interconnecting Customer provides an acceptable wireless signal test or dedicated phone line.

\*\*\*\* If assets require registration with ISO-NE, this shall be completed prior to Authorization to Interconnect.

**General Roles and Responsibilities**

It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer and the Company will fully cooperate with each other in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion, or that impose additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification

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Required Approvals or the imposition of any unsatisfactory term or condition, however, the Interconnecting Customer shall be allowed to appeal the imposition of any unsatisfactory terms or conditions associated with Third Party Rights and Approvals. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company's Terms and Conditions for Distribution Service, tariff R.I.P.U.C No. 2180, as amended from time to time.

### **Roles and Responsibilities Regarding Interconnecting Customer Work**

*The roles and responsibilities listed below for interconnecting customer's work is specific to this project.*

#### **1. GENERAL REQUIREMENTS FOR INTERCONNECTION CUSTOMER WORK**

- 1.1. Interconnection Customer shall perform the civil and electrical design in accordance with the Complete Overhead July 2021 Edition (the "Overhead Standard") along with the Complete Underground July 2021 Edition (the "Underground Standard"), which are both incorporated in this Attachment 2 by reference. Upon completion of the design by Interconnection Customer, Company will have 10 business days to review each separately in accordance with these standards.
- 1.2. Upon completion of the electrical design Interconnection Customer will be solely responsible for ordering all material in accordance with the Complete Overhead July 2021 Edition along with the Complete Underground July 2021 Edition, EXCEPT the Primary Meters (approx. [ ]), and the Reclosers (approx. [ ]).
- 1.3. All material ordered/obtained by Interconnection Customer will comply with the product numbers as defined through Company's Stores Program.
- 1.4. All cable procured by Customer will meet the standards set in MS4168 and be properly parallel wound.
- 1.5. Prior to construction of the Interconnection Customer Work Customer will conduct a pre-construction meeting to include the Company team including project management, engineering, construction management, safety etc.
- 1.6. Prior to any cable being installed as part of the Interconnection Customer Work, all duct lines will be proved out and man-drilled by Interconnection Customer with a Company supervisor on site to witness.
- 1.7. Interconnection Customer will pull and splice cable within non energized manholes and witnessed by a Company RCS. Cable phasing will be verified and labeled by Interconnection Customer according to the NG-EOP UG014. Standard phase tags will be used by Interconnection Customer. Tan delta acceptance testing will be performed by Interconnection Customer according to NG-EOP UG004. All test results will be provided by Interconnection Customer to Company.
- 1.8. Upon final completion of installation of assets within each manhole for which Interconnection Customer is responsible, 360 degree images will be taken by Interconnection Customer and provided to Company as documentation that all assets within the manhole were installed per standards.
- 1.9. Interconnection Customer represents to Company that it has fully acquainted itself with, and has carefully examined all documents and conditions relevant to the Interconnection Customer Work to insure that they are sufficient to properly complete the work; all relevant plans, surveys, measurements, dimensions, calculations, and estimates or other information provided by Company; the location of the work, the character of equipment, materials and facilities needed preliminary to and during the prosecution of the Interconnection Customer Work; and the general and local conditions (including environmental conditions and labor relations) which can affect the Interconnection Customer Work.

#### **2. SHIPMENT AND TITLE**

- 2.1. Interconnection Customer shall deliver, receive, unload, store in a secure place, and deliver from storage all equipment and material (whether furnished by Company or the Interconnection Customer) required for

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the performance of the Interconnection Customer Work, in accordance with all manufacturers' recommendations. Receiving of equipment and materials (whether furnished by Company or Interconnection Customer) shall include inspection by Interconnection Customer for correctness of quantity, quality, and damage, all of which shall be reported. Interconnection Customer shall bear the cost of all packaging and shipment of equipment and material to the site of the Interconnection Customer Work, of all unloading, storage, protection and installation of equipment and material at such site, and of any insurance on the equipment and material prior to completion of the Interconnection Customer Work.

- 2.2. Upon completion of the Interconnection Customer Work, Interconnection Customer shall convey to Company good, clear and marketable title to all goods and fixtures constituting Interconnection Customer Work, free from any defects, liens, encumbrances and claims of any kind, and shall indemnify, defend and hold harmless Company and warrant and defend title against any claims or demands of third parties; and shall take such action at Interconnection Customer's sole expense as may be necessary to discharge any defect in title, or lien or encumbrance on such goods or fixtures.
- 2.3. Location of laydown area(s) shall be agreeable to all parties including applicable access of Company. equipment include but not limited to cable pulling equipment.

### **3. RISK OF LOSS**

- 3.1. Risk of loss or damage to all goods and fixtures constituting Interconnection Customer Work shall remain with Interconnection Customer until completion of the Interconnection Customer Work, regardless of whether title has passed. Interconnection Customer shall bear the risk of loss or damage to any such goods or fixtures that occurs prior to transfer of risk of loss, except to the extent such damage or loss is caused by the negligence or willful misconduct of Company.
- 3.2. Interconnection Customer shall be solely responsible for storage and protection of all goods and fixtures constituting Interconnection Customer Work (whether furnished by Company or Interconnection Customer) against deterioration or damage from any cause, vandalism, and theft until completion of the Interconnection Customer Work.
- 3.3. Interconnection Customer shall be responsible for the security of all (1) materials and equipment under its custody and control, and (2) the sites over which it has care, custody, and control and in which it is performing the Interconnection Customer Work. Interconnection Customer shall cooperate with Company regarding all security measures instituted at the site(s) of the Interconnection Customer Work.

### **4. WARRANTY/REMEDY**

- 4.1. Interconnection Customer warrants to Company that: 1) the Interconnection Customer Work shall conform to the Overhead Standard, and the Underground Standard, this Agreement, and the Interconnection Tariff; 2) all services constituting Interconnection Customer Work shall be performed by qualified, competent, and experienced personnel, and in accordance with generally accepted practices in the electric construction industry; and 3) all portions of the Interconnection Customer Work, including but not limited to construction, installation of goods, refurbishment, and repairs, shall be free from defects in material, workmanship and design.
- 4.2. If the Interconnection Customer Work fails to conform to the warranties set forth in this agreement, Interconnection Customer shall repair or replace the nonconforming Work, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.

### **5. REVIEW AND QUALITY ASSURANCE**

- 5.1. Interconnection Customer shall inspect all Interconnection Customer work and make or cause to be made all tests and reviews required by this Agreement.
- 5.2. Company shall have the right to review Interconnection Customer Work and any other work covered by this Agreement and, at no cost to Company, the right to inspect and/or audit any inspection records of Interconnection Customer or its subcontractors inspection records and associated costs pertaining to this Agreement. In the event the work or associated costs are found to be deficient or not in accordance with this Agreement, Company shall be entitled to seek reimbursement based on the Interconnection Tariff.



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- 5.3. Company may require periodic reviews of all engineering and design documents and drawings. Such reviews may occur at various stages of completion, typically at 30%, 60%, and 90% complete, up to and including, final design Issue for Construction (IFC) drawings. Interconnection Customer shall submit all engineering work for review in accordance with the Project Schedule, and in an electronic format acceptable to Company. Interconnection Customer shall allow a minimum of fourteen (14) business days for each such review by RIE from the date of receipt by the Company of all required documents and drawings.
- 5.4. Company shall advise Interconnection Customer of errors, or variations from the requirements of the this Agreement, and of defects in the Interconnection Customer Work, but it is expressly agreed that any omission on the Company's part to advise Interconnection Customer of any such errors, variations, or defects or to provide any instructions or explanations shall not give Interconnection Customer any right or claim against the Company, and shall not in any way relieve Interconnection Customer from its obligation to provide the Interconnection Customer Work in accordance with this Agreement.
- 5.5. All trenches and excavation must be reviewed by a Company Project and Construction Management representative against and to conform to the Underground Standards. As an example, but not limited to, all trenches must be free from water and debris with manholes having one (1') foot of three quarter (3/4") inch stone.
- 5.6. Company Project and Construction Management will have the right to review all construction efforts against and to conform to the Underground Standards. In exception, earth pouring will not be permitted and all duct lines must be formed and cannot be stripped until a 12hr. cure time has been achieved.
6. SAFETY
  - 6.1. Interconnection Customer shall provide reasonably adequate safeguards, safety devices and protective equipment and enforce their use and take any other needed actions to protect the life, health and safety of the public and to protect the portion of the site(s) of the Interconnection Customer Work for which it has care, custody and control in connection with its performance of the Interconnection Customer Work.
  - 6.2. Interconnection Customer shall follow all current and applicable OSHA policies, procedures and standards during construction.
7. RECORDS/DOCUMENTS/INTELLECTUAL PROPERTY
  - 7.1. Interconnection Customer shall, and shall require its subcontractors, for Company's benefit, at their own expense, to maintain a method of accounting in accordance with generally accepted accounting procedures and practices with respect to all matters pertinent to this Agreement. For Interconnection Customer Work performed on a time and materials or cost plus basis under the Agreement, Interconnection Customer shall maintain timesheets and invoices applicable to such portion of the Interconnection Customer Work performed on a time and materials or cost plus basis and shall make such timesheets and invoices available to Company or its authorized representative for inspection and audit and shall be kept in a manner which (1) adequately permits evaluation and verification of any invoices, payments or claims based on Interconnection Customer's actual costs incurred in the performance of the portion of the Work performed on a time and materials or cost plus basis.
  - 7.2. Interconnection Customer shall supply all documents in order to complete the Interconnection customer Work including but not limited to drawings; studies; surveys; inventories; reports; computer models; testing results; and data files collectively referred to in this Section as "Documents", in quantities and types, at times, according to instructions, and in the manner set forth in this Agreement. Any Document, which is prepared by Interconnection Customer in connection with this Agreement, shall be submitted in accordance with this Agreement.
  - 7.3. All documents prepared, procured, or developed by Interconnection Customer that are specific to the Interconnection Customer Work and furnished to Company shall be the property of Company and may be used by Company without restriction, whether during the term of this Agreement or thereafter.
  - 7.4. Any and all works, expressions, inventions, ideas, discoveries, improvements or developments (whether

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or not patentable), as well as all copyrights, patents or trademarks thereof, that may be conceived or made by Interconnection Customer or Interconnection Customer's subcontractors, vendor(s), supplier(s) or any other party employed by Interconnection Customer or Subcontractor to Interconnection Customer of any tier, to satisfy its obligation under this Agreement shall remain the property of Interconnection Customer or applicable owner. Interconnection Customer shall provide Company with a perpetual, non-transferrable, royalty-free, non-exclusive license to use such intellectual property incorporated into the Interconnection Customer Work for the purpose of operation and maintenance of the Interconnection Customer Work. Such license shall not include rights to derivative works or source code.

### 8. COMPLIANCE WITH LAWS AND STANDARDS

8.1. Interconnection Customer shall, in connection with any work provided by Interconnection Customer hereunder, comply with all, permits, easements and associated laws required to complete the Interconnection Customer Work.

### 9. ENVIRONMENTAL COMPLIANCE

9.1. Interconnection Customer shall conduct all Interconnection Customer Work in such a manner to minimize the impact upon the natural environment and shall comply fully with applicable laws and permits for the protection and preservation of the environment, as may be amended from time to time, and all applicable Environmental Procedures and Guidance prescribed by Company in writing as applicable to the Interconnection Customer Work, including without limitation, the Resource Conservation and Recovery Act, the Hazardous Materials and Transportation Act, the Occupational Safety and Health Act of 1970 ("OSHA"), regulations of the Environmental Protection Agency, and the Department of Transportation. Interconnection Customer shall impose the requirements of this Section upon its Subcontractor and Suppliers who are supplying Work at the Site.

### Attachment 3: Rhode Island Energy only Costs of System Modifications and Payment Terms

This application is one of seven projects studied together with total system size of 40,700 kw (the "related projects"). This application's size is 750kw and is 1.8% of the total aggregated related project size. The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if one of the related project applications (RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531) does not move forward with the interconnection of a facility to the Company's electric power system, the total common modification costs on the Company's system will be re-estimated and reallocated among the remaining related projects, as determined by the Company in its reasonable discretion. Note the Company will not proceed with construction unless it has received adequate payment from all applicable customers within the related projects group.

The total Company system modification costs (excluding the third party ductbank and Revity ductbank) that will be performed by the Company and are associated with all related project applications are: **\$3,597,710** (+/- 25%). As of the ISA execution date, the system modification cost responsibility for this ISA is **\$64,758.78** (+/- 25%)

- Total cost of common system modifications on the Interconnecting Customer's (or other private) property and on the Company's distribution System, specifically 3309 cable pulling as mentioned in Attachment 2 above: **\$1,009,165.40** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593, and the Interconnecting Customer will be responsible for 1.8% share or **\$18,164.98**.
- **WORK TO BE PERFORMED BY RIE: WE ARE ONLY DETERMINING THE MATERIAL AND LABOR COSTS FOR THE PORTION RIE WILL BE DOING. INTERCONNECTING CUSTOMER IS RESPONSIBLE FOR PURCHASING ALL MATERIALS EXCEPT (METERS AND RECLOSERS)**
- Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (Load encroachment) above is **\$17,600** (includes capital, removal, and O&M costs).

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The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 1.8% share or **\$316.80**.

- Total cost of the donated property taxes associated with the REVITY DUCTBANK construction self-performed by Customer civil construction is **\$516,708**. The cost for the donated property will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531. RI-29048593 will be responsible for 1.8% or **\$9,300.74**. - *This cost has been added to the gross tax adder*
- Total cost of common system modifications on the Company's distribution System, specifically protective device settings as mentioned in Attachment 2 above is **\$1,600** (includes capital, removal, and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 1.8% share or **\$28.80**.
- Cost of witness testing, engineering review, EMS Integration, and implementation of protective device settings: **\$292.50**
- Order Charges including (Construction support/inspection, Engineering support for review and approval, cable testing reviews, weekly project review meetings, civil design/reel plan review and approval, electrical design review and approval is **\$1,731,262.33**. The cost will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253. RI-29048593 will be responsible for 1.8 % share or **\$31,162.72**

### WORK PERFORMED BY THIRD PARTY:

- In order to safely and reliably interconnect the Related Projects, the THIRD PARTY DUCTBANK and REVITY DUCTBANK must also be constructed. The total third party cost provided to construct the THIRD PARTY DUCTBANK is **\$12,023,525** as of the date of this agreement. The Company will facilitate the sharing of costs of the THIRD PARTY DUCTBANK with all parties that occupy a common path of the THIRD PARTY DUCTBANK based on the distance of the common path and a pro rata megawatt share of the common path. The common path that will be occupied by all parties of the THIRD PARTY DUCTBANK is 52.0% of the total path. Based on that percentage, the Company will facilitate the sharing of **\$6,128,924**. The pro rata megawatt share of this amount for all Related Project applications referenced herein is 58.226% of this figure or **\$3,667,000** including tax. This application's cost responsibility for the THIRD PARTY DUCTBANK will be **\$66,006** (such amount, the "Interconnecting Customer's Cost Share Amount").
- Tax gross-up adder on capital costs is or **\$14,792.98**. *(A 2021 tax rate of 11.08% is expected to apply to contributions in aid of construction ("CIAC") payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2019 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company's demand.*

The Interconnecting Customer understands and agrees that, notwithstanding the costs detailed in this agreement, if any other related project does not move forward with its interconnection to the Company's electric power system, the facility's interconnection may need to be restudied, and the system modification costs will be re-estimated for the facility and for the related projects, as determined by the Company in its reasonable discretion. In such a case, the Interconnecting Customer shall be responsible for the full amount of any study costs and increase in the costs in order to continue with the facility's interconnection under this agreement, including its pro-rata share of any re-estimated and re-allocated costs.

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The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the impact /group study, the Company reserves the right to adjust those estimated costs as authorized under this agreement, the tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The total system modifications costs and the facility system modification costs do not include any costs for third party rights and approvals (as defined in attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the total system modifications costs and the facility system modification costs and must be paid directly by the Interconnecting Customer to the appropriate third party

### ISO-NE planning study

Rhode Island Energy transmission planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO-NE) planning procedure 5-6 "scope of study for system impact studies under the generation interconnection procedures" and Rhode Island Energy tgp28 "transmission planning guide." Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

### ISO-NE operating requirement

This is part of a group of generating facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5mw and will be required to comply with ISO-NE's requirements, including operating procedure no. 14. Prior to the Company providing authorization to interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in telephone Company maintenance areas. These costs will be billed directly to the Interconnecting Customer from the telephone Company.

### **Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2180):

- The first payment is:
  - (25%) of **\$64,758** for services rendered by RIE is **\$16,189 + \$66,006** (cost sharing for third party DUCTBANK work), **or \$82,195** is due within 15 business days from the receipt of the first payment invoice. The second invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, estimated to be on or around the completion of electrical design. An invoice, including payment instructions, will be sent to the Interconnecting Customer. A total of **\$6,401** was paid prior to this amendment. The new balance is **\$75,794**
- The second payment (75%) of **\$48,568** is due within 15 business days from the receipt of the second payment invoice. The third invoice will be sent when Rhode Island Energy has received all permits and prior to scheduling the construction of the project. An invoice, including payment instructions, will be sent to the Interconnecting Customer.

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If the design of the System Modifications changes during the design as a result of permitting or access issues, the Company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 4/21/2021. The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

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R.I.P.U.C. No. 2258

**Exhibit H – Interconnection Service Agreement**

1. **Parties.** This Interconnection Service Agreement (“Agreement”), dated as of 9/11/2023 (“Effective Date”) is for application number “28228074” and Case Number “197003” is entered into, by and between **The Narragansett Electric Company (doing business as Rhode Island Energy)** a Rhode Island corporation with a principal place of business at **280 Melrose St., Providence, RI 02907** (hereinafter referred to as the “Company”), and **Studley Solar, a LLC** with a principal place of business (or residence) at **189 Weaver Hill Road, West Greenwich, RI 02817** (“Interconnecting Customer” or “Customer”). (The Company and Interconnecting Customer are collectively referred to as the “Parties”). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Tariff which is hereby incorporated by reference.
2. **Basic Understandings.** This Agreement provides for parallel operation of an Interconnecting Customer’s Facility with the Company EDS to be installed and operated by the Interconnecting Customer at: **189 Weaver Hill Road, West Greenwich RI, 02817**. A description of the Facility is located in Attachment 2. If the Interconnecting Customer is not the Customer, an Agreement between the Company and the Company’s Retail Customer, attached as Exhibit J to the Interconnection Tariff, must be signed and included as an Attachment to this Agreement.

The Interconnecting Customer has the right to operate its Facility in parallel with the Company EDS immediately upon successful completion of the protective relays testing as witnessed by the Company and receipt of written notice from the Company that interconnection with the Company EDS is authorized (“Authorization Date”).

3. **Term.** This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.
4. **Termination.**
  - 4.1 This Agreement may be terminated under the following conditions.
    - 4.1.1 The Parties agree in writing to terminate the Agreement.
    - 4.1.2 The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Company.
    - 4.1.3 The Company may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.
    - 4.1.4 The Company may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.
    - 4.1.5 The Company, upon 30 days’ notice, may terminate this Agreement if there are any changes in Commission regulations or state law that have a material adverse effect on the Company’s ability to perform its obligations under the terms of this Agreement.

4.2 **Survival of Obligations.** The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.

4.3 **Related Agreements.** Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

Kathy Castro

4.4

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Signing Customer Initials:



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- 5. General Payment Terms.** The Interconnecting Customer shall be responsible for the System Modification costs and payment terms identified in Attachment 3 of this Agreement and any approved cost increases pursuant to the terms of the Interconnection Tariff. If the system modifications exceed \$25,000, Attachment 3 will include a payment and construction schedule for both parties. Interconnecting Customers shall be directly responsible to any Affected System operator for the costs of any system modifications necessary to the Affected Systems.

**5.1 Cost or Fee Adjustment Procedures.** The Company will, in writing, advise the Interconnecting Customer in advance of any expected cost increase for work to be performed up to a total amount of increase of 10% only. Any such changes to the Company's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Company's notice of increase, authorize such increase and make payment in the amount up to the 10% increase cap, or the Company will suspend the work and the corresponding agreement will terminate.

**5.2 Final Accounting.** The Company within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement and all Company work orders have been closed, shall provide Interconnecting Customer with a final accounting report of any difference between the (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications and for any Impact or Detailed Study performed by the Company, and (b) Interconnecting Customer's previous aggregate payments to the Company for such System Modifications and studies. Costs that are statutorily-based shall not be subject to either a final accounting or reconciliation under this provision (e.g., statutorily set study fees for the ISRDG), but may be reconciled at any time only if the costs exceed the statutory fee, and the Company seeks to collect actual costs in accordance with the applicable statute. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement for the System Modifications and in the Impact and/or Detailed Study Agreements (as applicable) for the studies performed by the Company exceeds Interconnecting Customer's previous aggregate payments, the Company shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Company within forty-five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this applicable agreement, the Company shall refund to Interconnecting Customer an amount equal to the difference within forty- five (45) days of the provision of such final accounting report.

## **6. Operating Requirements**

**6.1 General Operating Requirements.** Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Company's Interconnection Tariff. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Company has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Company EDS, the Company has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Company may require disconnection as outlined in Section 7.0 of the Interconnection Tariff. The cost of this testing will be borne by the Company unless the Company demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

**6.2 No Adverse Effects; Non-interference.** Company shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other Customers served from the same Company EDS or if operation of the Facility could cause damage to Company EDS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547- 2003, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Company will operate the EDS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating

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Signing Customer Initial



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through the Company EDS, and such normal disturbances shall not constitute unreasonable interference unless the Company has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Company EDS, and outages on the Company EDS. If the Interconnecting Customer demonstrates that the Company EDS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Company deviation from Good Utility Practice, the Company shall take appropriate action to eliminate the adverse effect.

**6.3 Safe Operations and Maintenance.** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Company and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Company's EDS, personnel, and other persons from damage and injury.

**6.4 Access.** The Company shall have access to the disconnect switch of the Facility at all times.

**6.4.1 Company and Interconnecting Customer Representatives.** Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

**6.4.2 Company Right to Access Company-Owned Facilities and Equipment.** If necessary for the purposes of the Interconnection Tariff and in the manner it describes, the Interconnecting Customer shall allow the Company access to the Company's equipment and the Company's facilities located on the Interconnecting Customer's or Customer's premises. To the extent that the Interconnecting Customer does not own all or any part of the property on which the Company is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Tariff, the Interconnecting Customer shall secure and provide in favor of the Company the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

**6.4.3 Right to Review Information.** The Company shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Company EDS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.6 in the Interconnection Tariff.

## **7. Disconnection**

### **7.1 Temporary Disconnection**

**7.1.1 Emergency Conditions.** Company shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Company, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Company EDS or to the electric systems of others to which the Company EDS is directly connected. Company shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Company promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Company EDS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

**7.1.2 Routine Maintenance, Construction and Repair.** Company shall have the right to disconnect the Facility from the Company EDS when necessary for routine maintenance, construction and repairs on the Company EDS. The Company shall provide the Interconnecting Customer with a minimum of seven calendar days planned outage notification consistent with the Company's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Company at the

PCC, the Interconnecting Customer will provide a minimum of seven days' notice to the Company. Any





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additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Company shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

**7.1.3 Forced Outages.** During any forced outage, Company shall have the right to suspend interconnection service to effect immediate repairs on the Company EDS; provided, however, Company shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Company may interrupt Interconnection Service and disconnect the Facility from the Company EDS without such notice.

**7.1.4 Non-Emergency Adverse Operating Effects.** The Company may disconnect the Facility if the Facility is having an adverse operating effect on the Company EDS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of 45 days to correct such adverse operating effect has elapsed.

**7.1.5 Modification of the Facility.** Company shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Company.

**7.1.6 Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Company shall cooperate with each other to restore the Facility and the Company EDS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

**7.2 Permanent Disconnection.** The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Company.

**7.2.1** The Company may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

- 8. Metering.** Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Tariff.
- 9. Assignment.** Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without the Company's written consent. Any assignment that the Interconnecting Customer purports to make without the Company's written consent shall not be valid. The Company shall not unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement. Notwithstanding the above, the Company's consent will not be required for any assignment made by the Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction. In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless and until the assignee assumes in writing all obligations of this Agreement and notifies the Company of such assumption. The Interconnecting Customer must sign a consent agreement to complete the assignment to a new system owner and execute Exhibit I when the Interconnecting Customer is still going to be the retail delivery customer or property owner.
- 10. Confidentiality.** Company shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Tariff, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.
- 11. Insurance Requirements.**

#### **11.1 General Liability.**

11.1(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the



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Agreement, general liability insurance with a combined single limit of not less than:

- i. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.
- ii. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one  
(1) MW and less than or equal to five (5) MW;
- iii. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;
- iv. Five hundred thousand dollars (\$500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for eligible net metered customers which are exempt from insurance requirements.

11.1(b) No insurance is required for a Facility with a Gross Nameplate Rating less than or equal to 50 kW that is eligible for net metering. However, the Company recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

11.1(c) Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

11.1(d) The general liability insurance required to be purchased in this Section may be purchased for the direct benefit of the Company and shall respond to third party claims asserted against the Company (hereinafter known as "Owners Protective Liability"). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Company and the Company will be designated as the primary and "Named Insured" under the policy.

11.1(e) The insurance hereunder is intended to provide coverage for the Company solely with respect to claims made by third parties against the Company.

11.1(f) In the event the State of Rhode Island, or any other governmental subdivision thereof subject to the claims limits of Rhode Island General Laws Chapter 9-31 (hereinafter referred to as the "Governmental Entity") is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance company from interposing the claims limits of Rhode Island General Laws Chapter 9-31 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Company. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of Rhode Island General Laws Chapter 9-31 by the Governmental Entity.

**11.2 Insurer Requirements and Endorsements.** All required insurance shall be carried by reputable insurers qualified to underwrite insurance in Rhode Island having a Best Rating of "A-". In addition, all insurance shall, (a) include Company as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Company shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to Company prior to cancellation, termination, or material change of such insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (e) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Company as required above.

**11.3 Evidence of Insurance.** Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.



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The Interconnecting Customer is responsible for providing the Company with evidence of insurance in compliance with the Interconnection Tariff on an annual basis.

Prior to the Company commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Company certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Company a certificate of insurance for any policy written on a "claims-made" basis. The Interconnecting Customer will maintain extended reporting coverage for three years on all policies written on a "claims-made" basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Company.

**11.4** All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued, updated and submitted yearly to the following:

The Narragansett Electric  
Company Attention: Risk  
Management  
280 Melrose Street,  
Providence RI, 02907

- 12. Indemnification.** Except as precluded by the laws of the State of Rhode Island, Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.
- 13. Limitation of Liability.** Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.
- 14. Amendments and Modifications.** No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.
- 15. Permits and Approvals.** Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the interconnecting customer will notify the Company that it has initiated the permitting process. Prior to the commercial operation of the Facility the Customer will notify the Company that it has obtained all permits necessary. Upon request the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Company.
- 16. Force Majeure.** For purposes of this Agreement, "Force Majeure Event" means any event:
  - a. that is beyond the reasonable control of the affected Party; and
  - b. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lighting, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The



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affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.

**17. Notices.**

17.1 Any written notice, demand, or request required or authorized in connection with this Agreement (“Notice”) shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person specified below:

If to Company: **Rhode Island Energy  
Attention: Distributed Generation  
280 Melrose Street, Providence RI, 02907  
CAP@RIEnergy.com**

If to Interconnecting Customer: **Studley Solar, LLC  
260 West Exchange Street, Suite 102A  
Providence RI 02903  
401-349-1229 x700  
frank@edp-energy.com**

17.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 17.1.

17.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party’s Notice to the other.

**18. Default and Remedies**

18.1 **Defaults.** Any one of the following shall constitute “An Event of Default.”

- (i) One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, and such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or
- (ii) One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.

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**18.2 Remedies.** Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:

- a. Continue to perform and enforce this Agreement;
- b. Recover damages from the defaulting Party except as limited by this Agreement;
- c. By written notice to the defaulting Party terminate this Agreement;
- d. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.

**19. Entire Agreement.** This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Tariff. Together the Agreement and the Interconnection Tariff represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Company's Interconnection Tariff.

**20. Supercedence.** In the event of a conflict between this Agreement, the Interconnection Tariff, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Tariff, as the same may be amended from time to time, shall control. In the event that the Company files a revised tariff related to interconnection for Commission approval after the effective date of this Agreement, the Company shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.

**21. Governing Law.** This Agreement shall be interpreted, governed, and construed under the laws of the State of Rhode Island without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

**22. Non-waiver.** None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

**23. Counterparts.** This Agreement may be signed in counterparts.

**24. No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care with respect to, or any liability to, any person not a party to this Agreement.

**25. Dispute Resolution.** Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Tariff.

**26. Severability.** If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.

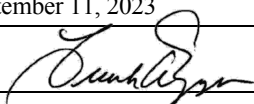



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27. **Signatures.** IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to be executed under seal by their duly authorized representatives.

Studley Solar, LLC:  
Name: Frank A. Epps  
Title: Manager  
Date: September 11, 2023  
Signature: 

The Narragansett Electric Company (d/b/a Rhode Island Energy):  
Name: Kathy Castro  
Title: Director Engineering and Asset Mgt.  
Date: September 19, 2023  
Signature: 

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**Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling**

Interconnecting Customer has proposed a 9,200 kW photovoltaic system located at 189 Weaver Hill Road, West Greenwich, RI 02817. The proposed Facility is an Independent Power Producer (“IPP”). Facilities will interconnect to the Rhode Island Energy electric system via the Kent County Substation, 34.5 kV distribution feeder 3310, (“Point of Interconnection” or “POI”).

**Description of proposed design/configuration:**

- Two (2) Customer owned SMA 4600-UP-US, three phase inverters for an assumed total of 9,200kW/kVA of inverter-based PV
- Two (2) Customer owned 4,600 kVA, 34.5kV wye-ground, 600V delta secondary pad-mounted interface transformer with an impedance of  $Z = 5.75\%$  along with X/R ratio of 11
- One (1) Customer owned pad-mounted switchgear 35kV, 600A, 200kV BIL G&W Viper recloser with SEL-651R relay assembly with 8-hour battery backup
- One (1) Customer owned GOAB switch, S&C Model #147513, 200kV BIL, 40kA with visible, lockable blades and utility accessible 24/7

**Metering:** The company will install (1) pole-mounted primary meter, please refer to ESB 750 and ESB 756 Appendix D for service installation and primary meter installation.

**PCC:** The Company’s Design Personnel will determine the exact location of the Company’s facilities and the Customer’s gang operated disconnect. The Customer’s gang operated disconnect must be accessible by the Company’s personnel at all times, and be capable of being locked open and tagged by Company personnel. The Point of Common Coupling (PCC) will be designated as the Customer’s side of the Company’s primary meter. The Interconnecting Customer must install their Facilities up to the Company revenue meter. The Interconnecting Customer must provide sufficient conductor to allow the Company to make final connections at the meter pole. The Company will provide final connection of the Interconnecting Customer conductors to the Company meter.



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### **Attachment 2: Description of System Modifications**

Rhode Island Energy System Modifications required for the interconnection of 9,200 kW (AC) application as identified in the impact study are as follows:

#### **On the Customer's property:**

- Install ~250 feet of 3-477 AL Bare conductor
- Install one (1) 35 kV load break switch
- Install two (2) single-phase transformers
- Install one (1) primary meter

#### **On the Company's distribution system:**

##### *Facility Specific Distribution Modifications*

- Install ~4100 circuit feet 3-1/c 500 kcmil CU EPR 35 kV cable from the first 3-way manhole on Weaver Hill Road to the 3-way manhole at EDP 10 MW POI located at 189 Weaver Hill Road.
- Install ~200 feet of 3-1/c 500 kcmil CU EPR 35kV cable from the 3-way MH at EDP 10MW POI located at 189 Weaver-Hill Road to proposed riser pole on Customer property.

##### *Common Distribution Modifications*

- Install ~16,100 circuit feet of 3-1/c 1000 kcmil CU EPR 35 kV cable from proposed riser pole on Hopkins Hill Road to 3-way manhole at the intersection of Nooseneck Hill Road/Weaver Hill Road. (Previously installed by Green Development)
- Install ~700 circuit feet 3-1/c 500 kcmil CU EPR 35 kV cable from 3-way manhole at the intersection of Weaver Hill Road to the first 3-way manhole on Weaver Hill Road
- Install ~1,400 feet of overhead 3-477 AL Bare conductor and associated equipment on Nooseneck Hill Rd
- Install ~410 circuit feet of 3-477 AL Bare Conductor, two (2) single phase transformers, one (1) 35kV recloser, one (1) 35kV disconnect switch, one (1) 35kV load break switch, and one (1) riser at the tap for the proposed line extension to the facility on Hopkins Hill Rd, Coventry RI

#### **Civil Construction (design and installation performed by third parties)**

- Install MH and duct system (~14,300 feet) from proposed riser on Hopkins Hill Road to 3-way MH at intersection on Nooseneck Hill Road/Weaver Hill Road
- Install manhole and duct system (~600 feet) from 3-way manhole at intersection Hill Road/Weaver Hill Road to first 3-way manhole on Weaver Hill Road.

##### *To be designed and self-built by Customer*

- Install MH and duct system (~3,700 feet) from the first 3-way MH on Weaver Hill Road to 3-way MH at EDP 10MW POI located at 189 Weaver Hill Road (to be self-built by Customer).
- Install MH and duct system (~100 feet) from 3-way MH at EDP 10MW POI located at 189 Weaver Hill Road to proposed riser pole on Customer Property

#### **At the Company's substation:**

##### *Common substation modifications:*

- Add load encroachment settings to the Kent County T7 Directional Overcurrent Relay



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It will be the responsibility of the Interconnecting Customer, at its sole cost and expense, to secure and obtain in favor of itself and the Company, the following: any and all rights, consents, permits, approvals, and easements (free and clear from any encumbrances), as are required for the Company’s System Modifications on any Interconnecting Customer-owned property or any third-party owned property (“Third Party Rights and Approvals”). The Interconnecting Customer shall use the Company’s standard form when obtaining all Third Party Rights and Approval, as applicable. The Company will seek to obtain, at the Interconnecting Customer’s sole cost and expense, any and all rights, consents, permits, approvals, and easements for the System Modifications on any Company owned property or within any public roadway as the Company determines necessary in its sole discretion (“Other Rights and Approvals”; together with Third Party Rights and Approvals referred to as “System Modification Required Approvals”). The Interconnecting Customer will fully cooperate with the Company in obtaining the Other Rights and Approvals. The Company shall not be required to accept any System Modification Required Approvals that are not in form or on terms satisfactory to the Company in its sole discretion or that additional liabilities or costs on the Company. The Company shall not be required to appeal or challenge the denial of any System Modification Required Approvals or the imposition of any unsatisfactory term or condition. The Company shall not be obligated to commence the construction of the System Modifications unless and until it has received all System Modification Required Approvals in accordance with this provision, and Sections 5 and 15 of this Agreement, above, and the Company’s Standards for Connecting Distributed Generation, tariff R.I.P.U.C No. 2258, and Terms and Conditions for Distribution Service, tariff R.I.P.U.C. No. 2243, as amended from time to time.



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**Attachment 3: Costs of System Modifications and Payment Terms**

In order to safely and reliably interconnect this application, this Facility will utilize an already constructed ductbank, referred to herein as the 1<sup>st</sup> THIRD PARTY DUCTBANK. This 1<sup>st</sup> THIRD PARTY DUCTBANK has a length of 28,568 feet. Upon completion of construction of that ductbank, a third-party audit was conducted on the 1<sup>st</sup> THIRD PARTY DUCTBANK which verified the actual cost of \$12,023,525. The Company will facilitate the sharing of costs of the 1<sup>st</sup> THIRD PARTY DUCTBANK with all interconnecting customers that occupy a common path of the 1<sup>st</sup> THIRD PARTY DUCTBANK based on the costs incurred on the common path and a pro rata megawatt share of the common path. The costs incurred on the common path were \$5,892,962. EDP's pro rata megawatt share (9.2 MW of 69.9 MW) is 13.162%, costing \$775,612. The Company will facilitate the sharing of costs to each prior interconnecting customer that occupies a common path of the ductbank.

A 2<sup>nd</sup> THIRD PARTY DUCTBANK, must also be constructed. This 2<sup>nd</sup> THIRD PARTY DUCTBANK is currently under construction by a separate interconnecting customer and has an approximate length of 600 feet that EDP will utilize for this application. The Company will facilitate the sharing of costs of the 2<sup>nd</sup> THIRD PARTY DUCTBANK with all interconnecting customers that occupy a common path of the 2<sup>nd</sup> THIRD PARTY DUCTBANK based on the costs incurred of the common path and a pro rata megawatt share of the common path. The common path of the 2<sup>nd</sup> THIRD PARTY DUCTBANK will be occupied by the separate interconnecting customer and EDP and the pro rata megawatt share (9.2 MW of 49.9 MW) is 18.437%. The Company will facilitate cost sharing based on the cost incurred on the common path and a pro rata megawatt share once the ductbank is fully constructed and the costs are verified through an audit.

A 3,800-foot ductbank must be constructed along Weaver-Hill and will be used solely for this application; (the "EDP DUCTBANK"). The EDP DUCTBANK has a length of 3,800 feet, which EDP will self-build. The costs associated with this self-build are not included in the total estimated cost presented in Exhibit H.

During construction of the 2<sup>nd</sup> THIRD PARTY DUCTBANK, the Company will request the entity constructing the 2<sup>nd</sup> THIRD PARTY DUCTBANK to provide a cost summary (including a detailed accounting ledger for each line item presented on the cost summary) with the following supporting information: vendor name, date/dates of service, detailed description of service, copy of the cancelled check(s), and associated contract/purchase order/timeslip/certified payroll/etc. documents. Upon the receipt of all required documentation, the Company will hire a third party to perform an audit and verify the proposed costs incurred by the third party and will adjust the Interconnecting Customer Cost Share Amount to reflect such reconciliation (which adjustment shall be reflected in an amended interconnection service agreement) for cost line items that, in whole or in part, do not qualify as an approved cost.

The Company will hire a third party to perform an audit and verify the actual costs incurred to construct the EDP DUCTBANK and agrees that it will facilitate the sharing of such costs with all future parties that occupy a common path of the EDP DUCTBANK based on the distance of the common path and a pro rata megawatt share, and that any such cost sharing amount that is collected by the Company shall be disbursed to EDP LLC.

To the extent that any System Modification necessary to interconnect the Facility accelerates a System Improvement, a portion of the total costs associated with this application may be subject to cost sharing with the Company and the costs identified may be reimbursed in part or in whole, subject to approval by the Rhode Island Public Utilities Commission.



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At present, System Modification Costs associated with this application (excluding the EDP DUCTBANK) are: **\$8,437,085+/- 25%** and itemized as follows:

Rhode Island Energy System Modification	Conceptual Cost +/-25% Planning Grade Cost Estimate not including Tax Liability				Associated Tax Liability Applied to Capital	Total Customer Costs includes Tax Liability on Capital Portion
RIE - Civil Work	Pre-Tax Total	Capital	O&M	Removal	11.08%	Total
Approximate donated property tax. (See Note #1)	\$0	\$0	\$0	\$0	\$82,718	\$82,718
RIE Supervision and Design Support for Customer Underground Civil Construction.	\$165,000	\$165,000	\$0	\$0	\$18,282	\$183,282
Distribution Civil work, 3310 circuit (Cost Sharing applied. See Note #2)	\$1,416,042	\$1,416,042	\$0	\$0	\$156,897	\$1,572,939
<b>SUBTOTAL</b>	<b>\$1,581,042</b>	<b>\$1,581,042</b>	<b>\$0</b>	<b>\$0</b>	<b>\$257,897</b>	<b>\$1,838,939</b>

RIE - Line Work, Customer Property	Pre-Tax Total	Capital	O&M	Removal	11.08%	Total
Equipment at Point of Common Coupling, 3310 Circuit.	\$310,038	\$310,038	\$0	\$0	\$34,352	\$344,390
<b>SUBTOTAL</b>	<b>\$310,038</b>	<b>\$310,038</b>	<b>\$0</b>	<b>\$0</b>	<b>\$34,352</b>	<b>\$344,390</b>

RIE - Line Work, Mainline	Pre-Tax Total	Capital	O&M	Removal	11.08%	Total
Distribution Line work, 3310 Circuit. (Cost Sharing applied. See Note #3)	\$5,621,801	\$5,612,059	\$5,272	\$4,470	\$621,816	\$6,243,617
<b>SUBTOTAL</b>	<b>\$5,621,801</b>	<b>\$5,612,059</b>	<b>\$5,272</b>	<b>\$4,470</b>	<b>\$621,816</b>	<b>\$6,243,617</b>

RIE - Substation Work (Distribution Level)	Pre-Tax Total	Capital	O&M	Removal	9.90%	Total
Add Load Encroachment to the Kent County T7 Directional Overcurrent Relay. (Cost Sharing applied. See Note #4)	\$2,400	\$2,250	\$150	\$0	\$238	\$2,638
<b>SUBTOTAL</b>	<b>\$2,400</b>	<b>\$2,250</b>	<b>\$150</b>	<b>\$0</b>	<b>\$238</b>	<b>\$2,638</b>

Witness Testing & EMS	Pre-Tax Total	Capital	O&M	Removal	NA	Total
Witness Testing.	\$2,500	NA	\$2,500	NA	NA	\$2,500
EMS integration.	\$5,000	NA	\$5,000	NA	NA	\$5,000
<b>SUBTOTAL</b>	<b>\$7,500</b>	<b>\$0</b>	<b>\$7,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,500</b>

	Pre-Tax Total	Capital	O&M	Removal	Tax	Total
<b>Totals</b>	<b>\$7,522,781</b>	<b>\$7,505,389</b>	<b>\$12,922</b>	<b>\$4,470</b>	<b>\$914,303</b>	<b>\$8,437,085</b>

The Narragansett Electric Company (d/b/a Rhode Island Energy)

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**Exhibit H – Interconnection Service Agreement**

- Note #1: Total cost of the approximate donated property tax is **\$82,718**. The approximate donated property tax for the Customer installation of (1) – 3-way manhole, (5)- 2-way manholes, (100 feet) 2-way 6” PVC – DB concrete encased ductbank, (3700 feet) – 4-way, 6” PVC – DB concrete encased ductbank and associated equipment. Customer is responsible for performing, any and all, temporary and permanent restoration.
- Note #2: Total cost shared value of common system modifications on the Company’s distribution system, specifically the installation of the manhole and duct system (1<sup>st</sup> THIRD PARTY DUCTBANK and 2<sup>nd</sup> THIRD PARTY DUCTBANK) is **\$1,416,042** (includes capital costs). The common path of the 1<sup>st</sup> THIRD PARTY DUCTBANK utilized by all three parties cost \$5,892,962 to build. The cost for this modification will be shared on a pro-rata basis with RI-2782578, RI-27888883, RI-29048593, RI-29018573, RI-29048568, RI-29048550, RI-29048531, RI-29048488, RI-25999253. RI-28228074 will be responsible for **13.162%** or **\$775,612**. The common path of the 2<sup>nd</sup> THIRD PARTY DUCTBANK utilized by two parties is estimated at 600’ and has an estimated cost share value of **\$640,430**, shared with RI-29048593, RI-29018573, RI-29048568, RI-29048550, RI-29048531, RI-29048488, RI-25999253.
- Note #3: Total estimated value for distribution line work on the Company’s distribution system on the 3310 circuit is **\$5,621,801**. It is estimated that this application will be responsible for a cost share amount of **\$2,295,104**. The cost for this modification will be shared on a pro-rata basis with RI-27825278, RI-27888883, RI-29048593, RI-29018574, RI-29048568, RI-29048550, RI-29048531, RI-29048488, RI-29599253. The cost-shared value is subject to change and will be determined once all prior projects of the aforementioned Work Request Numbers are fully interconnected and costs are reconciled.
- Note #4: Total cost of common system modifications (NECO) at the distribution side of the Kent County Substation as mentioned in Attachment 2 (load encroachment) above is **\$16,000** (includes capital and O&M costs). The cost for this modification will be shared on a pro-rata basis with RI-29048593, RI-29048574, RI-29048568, RI-29048550, RI-29048488, RI-29599253, RI-29048531, RI-27780479, RI-27780375, and RI-28228074. RI-28228074 will be responsible for **15%** or **\$2,400**.
- Tax gross-up adder on capital costs is **\$914,303**. *(A 2023 tax rate of 11.08% is expected to apply to contributions in aid of construction (“CIAC”) payments received by The Narragansett Electric Company from the Interconnecting Customer, and a 2013 tax rate of 9.90% is expected to apply to CIAC payments associated with substation modifications for interconnections. The calculation of the tax gross-up adder is included in this cost estimate on the basis of tax guidance published by the Internal Revenue Service, but tax rates and decisions are ultimately subject to IRS discretion. By signing this agreement, the Interconnecting Customer understands and agrees that the tax has been estimated for convenience and that the Interconnecting Customer remains liable for all tax due on CIAC payments, payable upon the Company’s demand.*

The system modification costs were developed by the Company with a general understanding of the project and based upon information provided by the Interconnecting Customer in writing and/or collected in the field. The cost estimates were prepared using historical cost data, data from similar projects, and other assumptions, and while they are presumed valid for 60 business days from the date of the Impact /Group Study, the Company reserves the right to adjust those estimated costs as authorized under this Agreement, the Tariff, or by law and to require the Interconnecting Customer to pay any such additional costs.

The Total System Modifications Costs and the Facility System Modification Costs do not include any costs for Third Party Rights and Approvals (as defined in Attachment 2) or any Verizon system modification costs and charges (and fees for services related thereto), for which the Interconnecting Customer may be directly responsible. These costs, to the extent applicable, are in addition to the Total System Modifications Costs and the Facility System Modification Costs and must be paid directly by the Interconnecting Customer to the appropriate third party.



The Narragansett Electric Company (d/b/a Rhode Island Energy)

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**Exhibit H – Interconnection Service Agreement**

**ISO-NE Planning Study**

Rhode Island Energy Transmission Planning has studied the impact of the proposed project in accordance with the ISO New England Inc. (ISO- NE) Planning Procedure 5-6 “Scope of Study for System Impact Studies under the Generation Interconnection Procedures” and Rhode Island Energy TGP28 “Transmission Planning Guide.” Rhode Island Energy Transmission Planning has determined that there are no adverse impacts to the transmission system.

**ISO-NE Operating Requirement**

This is part of a group of generating Facilities within close proximity, as determined by ISO-NE, which equals or exceeds an aggregate of 5MW and will be required to comply with ISO-NE’s requirements, including Operating Procedure No. 14. Prior to the Company providing Authorization to Interconnect, the Interconnecting Customer will be required to provide evidence that it has complied with all applicable ISO-NE registration requirements. Additionally, ISO-NE may determine that there are additional system upgrade costs.

Additional costs may be involved if the required pole work takes place in Telephone Company Maintenance Areas. These costs will be billed directly to the Interconnecting Customer from the Telephone Company.

**Payment Terms:**

System Modifications Costs may be paid in full if less than \$25,000, or if greater than \$25,000 in scheduled payments (per Section 5.5 of R.I.P.U.C No. 2258):

- The first payment (5% plus 1<sup>st</sup> THIRD PARTY DUCTBANK cost share) of **\$934,054.55** is due when the first invoice is received after Exhibit H - Interconnection Service Agreement is returned to the Company with Interconnecting Customer signature. The invoice also includes the total cost share amount the Interconnection Customer owes for the 1<sup>st</sup> THIRD PARTY DUCTBANK, see note #2 above. The invoice, including payment instructions, will be sent to the Interconnecting Customer. Proof of payment is required.
- The second payment (20%) of **\$633,770.19** is due within 15 business days from the receipt of the second payment invoice. The second invoice will be sent approximately 12 weeks from the signing of the ISA, when the electrical and civil design have been completed by both Customer and company which his estimated to be around 11/6/2023. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- The third payment (75%) of **\$2,376,638.23** is due within 15 business days from the receipt of the third payment invoice. The third invoice will be sent when Rhode Island Energy has completed the design and when the long-lead time material items are ready to be ordered, or no later than 10/13/2023. An invoice, including payment instructions, will be sent to the Interconnecting Customer.
- A fourth payment (2<sup>nd</sup> THIRD PARTY DUCTBANK cost share) of **\$118,629.19** that is associated with this application’s cost sharing responsibility for the 2<sup>nd</sup> THIRD PARTY DUCTBANK will be due after the 2<sup>nd</sup> THIRD PARTY DUCTBANK is constructed, and the costs are audited/verified.
- The 3310 Cable, Note #3 above, is being cost-shared on a pro rata share MW basis between RI-27825278, RI-27888883, RI-29048593, RI-29018574, RI-29048568, RI-29048550, RI-29048531, RI-29048488, RI-29599253. The cost for this modification may be subject to, upon final reconciliation an additional cost of **3,695,295.03** to cover the actual cost of the 3310 Cable in the event the aforementioned Work Requests do not interconnect.

If the design of the System Modifications changes during the design as a result of permitting or access issues, the company reserves the right to adjust the cost of the Systems Modifications prior to issuing the second and final invoice.

A more detailed breakdown of estimated costs may be found within the System Impact Study dated 9/20/2022

The physical construction of system modifications will not commence until full payment is received. Nothing herein shall prevent the Interconnecting Customer from making any payment, or the full payment, due to the Company earlier than the dates provided above. Funds received may be immediately expended or committed as determined by the Company in its sole discretion.

The Narragansett Electric Company (d/b/a Rhode Island Energy)

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**Exhibit H – Interconnection Service Agreement**

**Attachment 4: Special Operating Requirements, if any**

The generating system may only normally generate onto the 3310 feeder and Rhode Island Energy Regional Control Center must first give permission to the Interconnecting Customer to allow the operation of their system. The generator may not be allowed to operate with the local electrical power system (EPS) in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy's EPS, Rhode Island Energy may choose to disconnect the customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.

1. The Interconnecting Customer is required to adhere to the following standards which are incorporated in their entirety by reference:
  - a. Rhode Island Energy Standards for Interconnecting Distributed Generation (R.I.P.U.C. 2258), available at: [http://www.nationalgridus.com/non\\_html/RI\\_DG\\_Interconnection\\_Tariff.pdf](http://www.nationalgridus.com/non_html/RI_DG_Interconnection_Tariff.pdf)
  - b. Electric System Bulletin 750 "Specifications for Electrical Installations". ESB 750, available at: [http://www.nationalgridus.com/non\\_html/shared\\_constr\\_esb750.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb750.pdf)
  - c. Electric System Bulletin 756 "Requirements for Parallel Generation Connected to a Rhode Island Energy - Owned EPS". ESB756D, available at: [www.nationalgridus.com/non\\_html/shared\\_constr\\_esb756.pdf](http://www.nationalgridus.com/non_html/shared_constr_esb756.pdf)
2. The Interconnecting Customer is required to address any outstanding requirements (that are not explicitly addressed herein), which are described in the most recent application review memo and/or study report (which is hereby incorporated in its entirety) provided by the Company on or prior to the Effective Date of this Interconnection Service Agreement.
  - a. If the Effective Date of this Interconnection Service Agreement precedes the issuance of a required Detailed Study by the Company, the Interconnecting Customer is also required to address any outstanding requirements described in the Detailed Study Report upon its issuance.
3. Interconnecting Customer shall adhere to the requirements identified in the Impact Study dated 9/20/2022
4. Interconnecting Customer shall provide Compliance Documentation, including photographs, as requested by, and to the satisfaction of, the Company.
5. Interconnecting Customer may not be allowed to operate with the local EPS in an abnormal state. To ensure the safe and reliable operation of Rhode Island Energy EPS, Rhode Island Energy may disconnect the Customer at the PCC when abnormal system conditions develop and/or circuit reconfiguration takes place on the EPS.
6. Per section 6.4 of this agreement, Interconnecting Customer shall provide an external AC UTILITY DISCONNECT, accessible at all times by Rhode Island Energy personnel.
7. Interconnecting Customer's AC UTILITY DISCONNECT switch shall be labeled "AC UTILITY DISCONNECT".
8. The AC UTILITY DISCONNECT shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Company side by Company personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Company shall have the right to open this disconnect switch in accordance with the Interconnection Tariff. The switch has to be installed at the DR output on the current carrying lines. Shunt mechanisms are not permitted.
9. If the AC UTILITY DISCONNECT switch is not adjacent to the meter and/or PCC, Interconnecting Customer shall provide a permanent plaque locating the switch.
10. All plaques as described in NEC 705.10, 705.12 (7), 690.56, 692.4 and 705.70 shall be installed, as applicable.
11. All Interconnecting Customer-Owned meters shall be labeled "CUSTOMER-OWNED METER"
12. Interconnecting Customer shall install a permanent plaque or directory at the revenue meter and at the PCC with a warning about the generator(s) installed.



The Narragansett Electric Company (d/b/a Rhode Island Energy)

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**Exhibit H – Interconnection Service Agreement**

13. Interconnecting Customer shall be responsible for providing necessary easements and/or environmental and/or municipal permits, as requested by the Company.
14. For systems greater than 25kW, Interconnecting Customer shall provide a means of communication to the Rhode Island Energy revenue meter. This may be accomplished with an analog/POTS (Plain Old Telephone Service) phone line (capable of direct inward dial without human intervention or interference from other devices such as fax machines, etc.), or – in locations with suitable wireless service, a wireless meter. Feasibility of wireless service must be demonstrated by Interconnecting Customer, to the satisfaction of Rhode Island Energy. If approved, a wireless -enabled meter will be installed, at the customer's expense. If and when Rhode Island Energy's retail tariff provides a mechanism for monthly billing for this service, the customer agrees to the addition of this charge to their monthly electric bill. Interconnecting Customer shall have the option to have this charge removed, if and when a POTS phone line to Rhode Island Energy's revenue meter is provided.
15. For systems with redundant relaying, Company witness testing will be required. Customer shall develop, and provide for approval, a functional test procedure, including settings for relaying scheme. Witness test plan must be approved by Company prior to scheduling Company personnel for witness test.
16. Interconnecting Customer may only generate onto the feeder referenced in the Impact Study. Rhode Island Energy's Regional Control Center must first give permission to the customer to allow the operation of their system.
17. Interconnecting Customer's protection scheme submitted for review must meet Rhode Island Energy's specific protection requirements. Interconnecting Customer shall submit a PE stamped one-line, including relay settings, that meets the requirements specified within this document to Rhode Island Energy for review and approval, before a Witness Test plan can be reviewed. Please refer to "Expedited/Standard Process Completion Documentation Checklist", per Company's website for additional required documentation.
18. In order to minimize the impact of the proposed generation on the EPS and area customers, Rhode Island Energy will require that the reactive contribution of the PV interconnection be maintained between a 99% leading and lagging power factor at the PCC during the normal operation of the PV array. In addition, The PV interconnection shall not contribute to greater than a 3.0% change in voltage on the Rhode Island Energy EPS under any conditions.
19. The Customer shall be responsible for obtaining all easements and permits required for any line extension not on public way in accordance with the Company's requirements. The Customer shall provide unencumbered direct access to the Company's facilities along an accessible plowed driveway or road, where the equipment is not behind the Customer's locked gate. In those cases where Company equipment is required to be behind the Customer's locked gate, double locking, with both the Company's and Customer's locks shall be employed.
20. The Interconnecting Customer is responsible for coordinating with Verizon for any Verizon work. These costs will be billed directly to the customer from Verizon. It will be the responsibility of the customer to obtain any and all easements and required permitting for work that takes place on private property.



The Narragansett Electric Company (d/b/a Rhode Island Energy)

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**Exhibit H – Interconnection Service Agreement**

**Attachment 5: Agreement between the Company and the Company's Retail Customer**

If the Company's Retail Customer (account holder) is not the owner (and/or operator) of the Facility, then Exhibit I - Agreement Between the Company and the Company's Retail Customer - shall be signed by the Company's Retail Customer and executed by the Company and shall be considered part of this Interconnection Service Agreement. It shall be the responsibility of the Interconnecting Customer to notify the Company if the Exhibit I associated with this application changes.

**Attachment 6: System Modifications Construction Schedule**

Below is an estimated construction schedule. This schedule is conceptual and shows the duration of the facility's milestones from a "start-date" to an "in-service" date, in calendar days. This conceptual schedule is based upon assumptions and knowledge regarding the project, the site, and activities as of the date of the impact study. These estimations of construction time frames and total duration do not include any time that the Company's performance is on hold, delayed, or interrupted, including, without limitation, while waiting on information or on the performance of obligations by the Interconnecting Customer and/or third parties (including, without limitation, Verizon, ISO-NE, Railroad), as a result of unknown environmental and/or permitting issues, events of force majeure, and/or as a result of required transmission outages.

The start-date for this construction schedule is deemed to have occurred once: (1) the Interconnection Service Agreement ("ISA") has been executed (i.e., signed) by both Rhode Island Energy ("Company") and the Interconnecting Customer ("Customer"); and (2) the first payment has been submitted by the Customer to the Company, provided, however, that the Company shall not be required to provide any services or order any equipment without receiving adequate payment therefore from the Interconnecting Customer or will it be required to initiate any construction before it has received full payment from the Interconnecting Customer.





The Narragansett Electric Company (d/b/a Rhode Island Energy)

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**Exhibit H – Interconnection Service Agreement**

**Attachment 6 - Appendix A: System Modifications Construction Schedule**

Total Duration for Construction: 124 weeks

Milestone	Estimated Duration	Responsible Party
<b>First Payment</b>	<b>Start</b>	<b>Customer</b>
EDP Civil Design	3 weeks	Customer
RIE Civil Design Review	3 Weeks	RIE
EDP Electrical Design	3 weeks	Customer
RIE Electrical Design Review	3 weeks	RIE
<b>Second Payment</b>		<b>Customer</b>
Secure Required Permits/Easements and Petition for Rhode Island Energy Work	16 weeks	RIE and Customer
Procurement	52 weeks	Customer
<b>Submit Final Payment</b>	<b>As per ISA</b>	
Customer Construction	29 weeks	Customer
RIE Construction	7 weeks	RIE
Witness Testing & Completion Documents	4 weeks	RIE/Customer
Meter Installation & ATI	4 weeks	RIE/Customer

\* Milestones may be contingent on Verizon schedule and/or ISO-NE approval of outages. Customer is responsible to coordinate directly with Verizon. This schedule does not include any Design or Construction Time required by Verizon.

\*\* This schedule is contingent on the construction of the manhole and duct bank system. If Rhode Island Energy is required to design and construct this manhole and duct bank system, this schedule will change.





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LEGEND	
Al	Aluminum wire or cable
ARP	Asset Replacement Program
Cal/cm <sup>2</sup>	Calories/square centimeter
CAPEX	Capital expenditure (budget expenditure type)
CKAIDI	Circuit Average Interruption Duration Index
CKAIFI	Circuit Average Interruption Frequency Index
Cu	Copper wire or cable
DPG	Distribution Planning Guide rev 1, dated February 2011
EMS	Energy Management System
GIS	Geographic Information System
ISO	Independent System Operator
kV	Kilovolts
LTC	Load Tap Changer
MVA	Megavolt Ampere
MVAR	Megavolt Ampere Reactive
MW	Megawatts
MWh	Megawatt hour
NE	New England
OPEX	Operations/Maintenance expenditure (budget expenditure type)
PT	Potential Transformer
RAPR	Remote Access Pulse Recorder
R.O.W	Right of Ways
SAIFI	System Average Interruption Frequency Index
SAIDI	System Average Interruption Duration Index
SN	Summer Normal Rating of Equipment
SE	Summer Emergency Rating of Equipment
Spca	Spacer Cable

## **1. EXECUTIVE SUMMARY**

A comprehensive study of the Central RI West area was performed to identify existing and potential future distribution system performance concerns. System evaluation included comparison of equipment loading to thermal (capacity) limits, contingency response capability (Distribution Planning Criteria), voltage performance (ANSI A/B requirements), breaker operating capability, regulator operating capability, distribution arc flash review, reactive compensation performance, asset condition, system reliability, safety, and environmental issues. The recommendations provide a comprehensive solution to address all the system performance concerns existing and anticipated in the study area through 2035.

An alternative analysis was conducted to determine the facilities necessary to address the identified issues providing best system performance at the least cost. The alternative analysis considered Non-Wire Alternatives (NWA) in addition to traditional wire solutions.

There are several common items necessary to address safety and asset condition issues at various substations - specifically, Coventry #54, Hope #15, and Division St. # 61. These projects include replacements of transformers, air breaks, lightning arresters, regulators, and various other pieces of equipment at each substation due to age and reliability concerns. Common items also include the reconductor of sections of five (5) feeders (Coventry 54F1, Division St. 61F2, Chase Hill 155F8, Natick 29F1, and New London 150F6) to address a combination of overloaded line sections, asset condition issues, and outage issues. Finally, there is a common project to create a backup tie to the Warwick Mall.

A primary area of concern addressed within this study is the Drumrock 23kV system. The primary drivers of concern in this area are asset condition issues at the Anthony #64, Warwick Mall #28, and Natick #29 substations. Asset condition issues are similar to those addressed at the common item substations including the need to replace transformers, air breaks, circuit breakers, regulators, lightning arresters, and various other equipment. The option to add four (4) additional feeders at the New London Substation and remove all equipment at Anthony #64, Warwick Mall #28, and Natick #29 substations was investigated but the least cost option, and therefore recommended plan, is to replace the necessary equipment with asset condition issues at the named substations instead.

The final area of concern addressed within this study is the Kent County 34.5kV system with a summer normal overload at Hopkins Hill (63F6) as well as a highly loaded feeder at Coventry (54F1). Two (2) new substation locations were investigated to be utilized to build a modular substation/feeder to offload these two feeders – one at Weaver Hill Road, West Greenwich and one near Pine Hill Road, Exeter. The least cost recommended option is the Weaver Hill Road option to extend the 3309 and 3310 lines from Nooseneck Hill and Weaver Hill Roads, West Greenwich to a Rhode Island Energy owned property off pole #64 Weaver Hill Road and install a 7.5/9.375 MVA transformer and one modular feeder position to be supplied by 3309 preferred/3310 alternate with distribution line work for a new feeder to be made up of parts of Coventry 54F1 and Hopkins Hill 63F6.

The spending by fiscal year for all study recommendations is shown in **Error! Reference source not found.**-1 below.

Table 1-1 Cost Summary for all Central R.I. West Area Study Plans

	Dline Spending Profile (\$M)					
	FY24	FY25	FY26	FY27	FY28	Total
CapEx	\$4.153	\$4.724	\$5.905	\$5.905	\$3.543	\$24.231
OpEx	\$0.001	\$0.001	\$0.001	\$0.001	\$0.001	\$0.005
Removal	\$0.001	\$0.001	\$0.002	\$0.002	\$0.001	\$0.007
<b>Total</b>	<b>\$4.155</b>	<b>\$4.727</b>	<b>\$5.908</b>	<b>\$5.908</b>	<b>\$3.545</b>	<b>\$24.243</b>

	DSub Spending Profile (\$M)					
	FY24	FY25	FY26	FY27	FY28	Total
CapEx	\$4.045	\$5.393	\$6.742	\$6.742	\$4.045	\$26.966
OpEx	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000
Removal	\$0.123	\$0.164	\$0.205	\$0.205	\$0.443	\$1.139
<b>Total</b>	<b>\$4.168</b>	<b>\$5.557</b>	<b>\$6.946</b>	<b>\$6.946</b>	<b>\$4.488</b>	<b>\$28.105</b>

## **2. INTRODUCTION**

### **2.1 Purpose**

A comprehensive study of the Central RI West area was performed to identify existing and potential future distribution system performance concerns. System evaluation included comparison of equipment loading to thermal (capacity) limits, contingency response capability (Distribution Planning Criteria), voltage performance (ANSI A/B), breaker operating capability, regulator operating capability, distribution arc flash review, reactive compensation performance, asset condition, system reliability, safety, and environmental issues. The recommendations provide a comprehensive solution to address all the system performance concerns existing and anticipated in the study area thru 2035.

### **2.2 Problem**

A study's initial system assessment is typically based on the needs identified through the Annual Planning process and substation Asset Condition Reports. This assessment revealed a variety of issues in the Central RI West area. Consultation with Operations personnel to review asset information was also conducted.



**3. BACKGROUND**

**3.1 Scope**

**3.1.1 Geographic Scope**

The Central RI West study area consists of the towns of West Greenwich, East Greenwich, Coventry, Exeter, and West Warwick. The study area is bounded by non-Rhode Island Energy territory (Connecticut) to its west, to the north by the towns of Foster, Scituate, and Cranston, to the east by the towns of Warwick and North Kingstown to the south by the towns of Hopkinton, Richmond, and South Kingstown. Interstate 95 and Route 4 are two major highways that are present in area. The study area is shown geographically in Appendix 7.1.

**3.1.2 Electrical Scope**

Six (6) 115kV transmission lines and four (4) 34.5 kV and three (3) 23kV sub-transmission lines supply the ten (10) substations in the area. The substation supply and nominal voltages are as follows:

- [REDACTED]
- New London #150 (115/12kV); supplied by [REDACTED]
- Tiogue Ave #100 (34/12kV); supplied by 3309
- Hopkins Hill #63 (34/12kV); supplied by 3310 and 3311
- Division St #61 (34/12kV); supplied by 3311 and 3312
- Coventry #54 (23/12kV); supplied by 2232
- Hope #15 (23/12kV); supplied by 2230 and 2232
- Anthony #64 (23/12kV); supplied by 2230
- Natick #29 (23/12kV); supplied by 2266
- Warwick Mall #28 (23/12kV); supplied by 2266

These substations are the source of twenty-nine (29) distribution feeders in the area that serve approximately 44,100 customers. One-line diagrams of the transmission system, sub-transmission system, and ten (10) substations in the study area can be found in Appendix 7.2.

**3.2 Area Load and Load Forecast**

The study area is summer peaking and summer limited, during which the peak electrical demand is approximately 200MVA. This study used the 2020 forecast developed by Rhode Island Energy, the “2020 New England Electric Peak Forecast”. It utilized the 95/5 extreme weather scenario case after Distributed Energy Resource Impacts. This includes forecast impacts from distributed generation, energy efficiency, demand response, electric vehicles, and heating electrification. Table 3.1 shows the forecasted load growth rate for the study area from 2020 to 2035.

TABLE 3.1 – Forecasted Load Growth Rate from 2020 to 2035 for Study Area

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
11.9%	-0.2%	0.6%	0.5%	0.4%	0.2%	0.2%	0.2%	0.2%	0.2%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	0.0%

**Distributed Generation (DG)**

The impacts of existing DG are included in the load readings and used as the foundation for analysis. Existing records showed eleven large photovoltaic sites (>500kW) totaling 42.75MW in the study area shown in Table 3.2 below.

TABLE 3.2 – Area Distributed Generation

Feeder	Application Date	Nameplate Rating (kW)	DG Type	Application Number
56-3311	03/04/2017	8,000	Solar	23725379
56-3311	03/04/2017	8,000	Solar	23725394
56-3311	03/04/2017	8,000	Solar	23725409
56-54F1	02/21/2013	4,500	Wind	14462941
56-2232	08/04/2014	4,500	Wind	17600293
56-63F6	10/14/2011	2,000	Solar	12841229
56-63F6	11/21/2017	1,750	Solar	25436656
56-54F1	08/28/2013	1,500	Wind	15640455
56-2232	07/29/2014	1,500	Wind	17599370
56-2232	09/23/2013	1,500	Wind	15772951
56-2232	01/16/2013	1,500	Wind	14319785

**3.3 Active Projects**

No current active projects were identified.

**3.4 Other Studies**

The Company completed Engineering Reliability Reviews (ERRs) on the 2230 and 2232 Subt circuits. Solutions from those ERRs are included in Common Plan Items in Section 5.

### **3.5 Limitations on Infrastructure Development**

No significant limitations on infrastructure development were identified prior to plan development.

### **3.6 Assumptions & Guidelines**

The Distribution Planning Guide rev 1, February 2011 (“DPG”) was used when performing this study. The guide describes the normal and contingency analysis, as well as considerations for safety, the environment, reliability, reactive compensation, load balance, voltage, and efficiency. This guide was adopted by RI Energy from National Grid for use in distribution planning studies.

Arc Flash Information Tables were developed to supplement EOP G035 - Arc Flash Awareness and Mitigation and assist in the selection of appropriate PPE for compliance with OSHA regulations at 29 CFR 1910.269 and 1926 Subpart V. The incident energy and recommended work method in the information tables were assessed to determine if solutions were necessary through the area study.

The Distribution Planning department uses the Siemens PTI PSS/e loadflow program to analyze the transmission and sub-transmission system. This is the same program that is used by ISO NE and Rhode Island Energy’s Transmission Planning department.

The CYMdist 8.2 Revision 7.0 program was used to analyze radial three-phase unbalanced systems (distribution feeders) and PSSE version 33.9.0 was used to analyze looped three-phase unbalanced systems (sub-transmission lines). Databases are extracted from the GE-SmallWorld GIS System into a Microsoft Access format.

The ASPEN program was used to determine short circuit duty values at all substations.

**4. PROBLEM IDENTIFICATION**

**4.1.1 Asset Condition Substation Asset Condition**

In collaboration with Substation Operations, Substation Operations & Maintenance Services, Substation Engineering, and Asset Management a determination was made that the substations listed below require no significant asset condition work or that the issues identified would be addressed in advance of the area study timeline. The asset condition reports for these substations were completed on 03/09/2019.

- Hopkins Hill #63
- [REDACTED]
- New London #150
- Tiogue Ave #100

Asset condition assessments were reviewed for the following substations. One-line diagrams for all substations can be found in Appendix 7.2.

<u>Substation</u>	<u>Report Completion Date</u>
Anthony #9, Coventry #54, Division St. #61, and Hope #15	01/14/2019
Natick #29, and Warwick Mall #28	03/04/2019

All issues were validated with Substation Operations, Substation Operations & Maintenance Services, and Asset Management. Below is a comprehensive summary of updated issues identified in the asset condition reports that includes various consultations with study team members.

Anthony #64

- The 23kV oil circuit breakers (OCBs) are manufactured by ITE. These are rated at 600A continuous current and 11kA I<sub>sc</sub>. Each breaker contains seventy-four (74) gallons of oil with traces of PCBs in oil. The 2230 is all original. The 2232 had the bushings replaced in the past. Both breakers are at the end of their design life cycle.
- The 23kV cap bank and associated equipment are mounted on wood poles that are in poor condition due to deterioration. This equipment is also not constructed according to the latest Rhode Island Energy standards.
- The 1T23 and 2T23 airbreak switches have a high degree of corrosion on the live parts. Traces of corrosion are visible on the insulators and are posing a high risk of flashover.
- The UG feeder getaway cables are 1970’s XLPE type. These are known for poor reliability and failures resulting in customer outages. These cables are identified as needing replacement in the underground cable replacement program.
- Both transformers are GE 23/13.2kV 6.15/7.687 MVA (T1) and 5/6.25MVA (T2) units. There are elevated combustible gases present indication of deterioration as well of cellulose insulation.
- The 23-bus equipment is mounted on pole and crossarm construction which should be updated to the most current design and standard due to asset deterioration.

- The 642 disconnect switches are original to the station, are in poor condition and are mounted on pin type insulators, which are prone to failure.
- The lightning arresters are original silicon-carbide type which are subject to moisture ingress risk.
- Animal protection is not present Retired 4 kV equipment and foundations are still present. .

#### Coventry #54

- The 541 motorized air-break (MOAB) was manufactured by ITE CIRCUIT BREAKER CO and is MO9-3A type. Both the 541 MOAB and 546 air-break switches are original to the station and are showing aging signs in the form corrosion.
- This station needs all the lightning arresters replaced due to the fact these are original the station and are silicon-carbide type subject to moisture ingress risk
- The #1 transformer has emerging asset issues. There are a couple of small oil leaks on the transformer main tank. There is no oil containment. Transformer animal protection is not present on all bushings.
- The 542 loadbreak is original to the station and showing aging signs in the form corrosion.
- Animal protection is not present on the Pts.
- The 541 MOAB control cabinet has some rust forming on the outside.

#### Division St. #61

- Both power transformers are 34.5-12.470Y kV 12/16/20 MVA units manufactured by Malone. The T1 is in better condition than T2 however both are showing signs of aging after long operational life cycle. Both transformers have small oil leaks and utilize arcing type LTCs that require periodic out of service maintenance to keep these units operational.
- There is no oil containment, and the station is in an environmentally sensitive area.
- The 3312-1T and 3311-2T MOABs were manufactured by ITE Circuit Breaker Company and are TTL-49 type. Both switches are original to the station and are showing aging signs.
- There are several live parts throughout the station without bushing covers and animal protection
- The lightning arresters are mostly original and are at the end of design life cycle.

#### Hope #15

- The #1 transformer is a GE 23/13.2kV 5/6.25MVA unit has emerging asset issues. It is unable to hold head space pressure and moisture from outside is impacting the transformer oil characteristics.
- There are several butyl type PTs throughout the yard.
- The lightning arresters are original silicon-carbide type and subject to moisture ingress risk

#### Natick #29

- The 29F2 single phase step voltage regulators were manufactured in 1985. Units have advanced corrosion in numerous spots that include welded connections, control cabinet,

position indicator, oil level sight glass, cover and mounting hardware, and subbase assembly. Regulators are at the end of design life expectancy.

- The 2266 and 2230 MOAB disconnects are original installation from 1971. The AC Motor mechanisms are obsolete. The control cabinets have cloth wrapped wiring, uncovered contacts and stack switch exposed to oxidation. Several Trouble Work Orders were noted to troubleshoot, and repair disconnects that would not close. There is corrosion evident in cabinet and operating linkage. The units have exceeded design life expectancy.
- The 66-30 gang operated air break is original installation from 1971. Problems have been noted with failure of the insulators during operation and the unit is at end of design life.
- Service transformer Banks No.1 and No.2 are identified as GE and McGraw, 23kV-120/240V, single-phase, 10 KVA units and are showing corrosion of tank cover and weld joints. These are estimated as original installation in 1971. There are exposed conductors on SS No.2. and PCB status is unknown.
- Both the 23kV and 12.47kV BUS are constructed as copper strain bus suspended by degrading vintage brown porcelain dead end bells supporting conductors to various equipment.
- 

Warwick Mall #28

- The No. 1 Transformer is a GE, 3 phase, non LTC, 22.9kV-13.2kV, (Δ-Y), 5/6.25 MVA transformer manufactured in 1979. The headers on radiators and weld joints are corroded and inclined to start weeping based on condition.
- The 2266 and 2230 MOAB disconnects were manufactured by ITE Circuit Breaker Company and are type MO-9-3A, 23kV with original installation in 1970. The AC Motor mechanism is obsolete, and the control cabinet was exposed to flooding in 2010 and restored to service. There have been issues with air break not closing properly and a transfer scheme issue required auto/manual switch replacement. Units have exceeded design life expectancy.
- Air break gang operated manual disconnect 66-30 is also original installation in 1970. the unit has exceeded design life expectancy.
- 28F1 and 28F2 voltage regulators are approaching end of life design expectancy.
- Air break hook stick single phase disconnects 282-3, 282-4, 1-2-2, 66-1, and 30-1, HPL are known to have operation issues and prone to failure when operated. Live parts are constructed of copper and pressure springs anneal with heat over time making them susceptible to latching problems. Parts are no longer available and the entire disconnect must be replaced upon failure.
- Station Service Banks No.1 and No.2, identified as RTE, 34.4kV-120/240V, single-phase, 10 KVA were manufactured in 1970 and are showing signs of deterioration. The units are showing corrosion of tank cover and weld joints. Silicon carbide surge arresters are mounted on the 23kV structure for the incoming overhead circuits and are recommended for replacement in less than 5 years.

4.1.2 Distribution Line Asset Condition

### Division Street

Sections of distribution feeders were also identified by Operations as having asset condition issues. The Division St. 61F2 circuit has a 1.6 mile stretch along South Pierce Road and Howland Road in East Greenwich, RI with conductor in poor condition due to many splices.

### Chase Hill

The Chase Hill 155F8 tie with the Hopkins Hill 63F6 on New London Turnpike in Exeter, RI consists of approximately 4,700' of difficult to access conductor in poor condition.

## **4.2 Thermal Loading**

### **4.2.1 Normal Configuration - Thermal Loading**

Table 4.1 on the next page shows the projected normal feeder loading on the distribution system for the limiting element of each circuit. By the end of the study period (2035) there are three feeders forecasted to exceed summer normal (SN) capacity and another two forecasted to be loaded above 90% of SN rating. Loading of all distribution mainline sections were analyzed using the CYME software.

The Natick 29F1 circuit has a 1,000' stretch along Providence Street in West Warwick, RI which is currently 1/0 Cu with loading up to 106% of summer normal rating.

The New London 150F6 circuit has a 425' stretch along Providence Street in West Warwick, RI which is currently 1/0 Al with loading up to 155% of summer normal rating.

TABLE 4.1 - Projected Summer Normal Feeder and Sub-Transmission Loading

Substation	ID	OH Feeder UG Feeder	'20 % SN	'35 %SN
ANTHONY 64	T1	64F1	55%	55%
ANTHONY 64	T2	64F2	45%	45%
COVENTRY 54	T1	54F1	93%	94%
DIVISION ST 61	T1	61F1	76%	77%
DIVISION ST 61		61F3	84%	85%
DIVISION ST 61	T2	61F2	74%	75%
DIVISION ST 61		61F4	83%	84%
DRUMROCK 14		2230	54%	55%
DRUMROCK 14		2232	54%	55%
DRUMROCK 14		2266	68%	69%
HOPE 15	T1	15F1	39%	40%
HOPE 15	T2	15F2	90%	91%
HOPKINS HILL 63	T1	63F1	44%	45%
HOPKINS HILL 63		63F3	53%	60%
HOPKINS HILL 63		63F5	58%	59%
HOPKINS HILL 63	T2	63F2	73%	74%
HOPKINS HILL 63		63F4	78%	79%
HOPKINS HILL 63		63F6	102%	104%
KENT COUNTY 22	T1	3309	44%	45%
KENT COUNTY 22	T2	3310	28%	28%
KENT COUNTY 22	T7	3311	79%	80%
KENT COUNTY 22		3312	54%	55%
KENT COUNTY 22	T5	22F1	72%	73%
KENT COUNTY 22		22F3	56%	57%
KENT COUNTY 22	T6	22F2	83%	84%
KENT COUNTY 22		22F4	51%	52%
KENT COUNTY 22		22F6	78%	79%
NATICK 29	T1	29F1	104%	106%
NATICK 29	T2	29F2	71%	72%
NEW LONDON 150	T2	150F2	67%	68%
NEW LONDON 150		150F4	64%	65%
NEW LONDON 150		150F6	153%	155%
NEW LONDON 150		150F8	53%	54%
TIOGUE AVE 100	T1	100F1	81%	83%
WARWICK MALL 28	T1	28F1	40%	40%
WARWICK MALL 28	T2	28F2	30%	30%

Transformer Projected Overloads:

- None.

Supply Line Projected Overloads:

- None.

**4.2.2 Contingency Configuration - Thermal Loading**

A contingency analysis was performed for all transformers, supply lines, and feeders in the study area. This analysis calculates the load-at-risk ‘exposure’ or risk assuming a worst-case component failure. The assumptions made for this analysis include:

- One hour switching time to restore load up to emergency rating of neighboring feeders



- Overhead failed component can be repaired within four hours, a cable can be repaired within 12 hours, and a substation transformer can be replaced within 24 hours. Supply line and substation transformer outages can be repaired within 24 hours
- Some feeders are double circuited on the same pole plant, primarily near the substation. Since exposure is relatively small, a failure involving two feeders was not assumed in the calculations.
- The load-at-risk calculations utilize the summer emergency ratings of the equipment.

Table 4.2 on the next page shows the load-at-risk exposure for substation transformers, supply lines, and feeders in the area. There is no substation transformer or supply line in the area that is exposed to greater than 240MWhr of risk. The most significant load at risk in the area is with loss of the New London transformer. There are no feeders that are exposed to greater than the 16 MWhr risk.

TABLE 4.2 – Transformer and Line Contingency Load-at-Risk (MWhrs)

CENTRAL RI WEST AREA			XFMR Contingency	Line Contingency
Substation	ID	OH Feeder UG Feeder	'35 N-1 MWhrs	'35 N-1 MWhrs
ANTHONY 64	T1	64F1	3	3
ANTHONY 64	T2	64F2	3	3
COVENTRY 54	T1	54F1	11	11
DIVISION ST 61	T1	61F1	24	6
DIVISION ST 61		61F3		6
DIVISION ST 61	T2	61F2	24	5
DIVISION ST 61		61F4		10
DRUMROCK 14		2230		0
DRUMROCK 14		2232		0
DRUMROCK 14		2266		0
HOPE 15	T1	15F1	3	3
HOPE 15	T2	15F2	8	8
HOPKINS HILL 63	T1	63F1	0	5
HOPKINS HILL 63		63F3		5
HOPKINS HILL 63		63F5		5
HOPKINS HILL 63	T2	63F2	0	6
HOPKINS HILL 63		63F4		7
HOPKINS HILL 63		63F6		11
KENT COUNTY 22	T1	3309	0	0
KENT COUNTY 22	T2	3310	0	0
KENT COUNTY 22	T7	3311	0	0
KENT COUNTY 22		3312		0
KENT COUNTY 22	T5	22F1	0	6
KENT COUNTY 22		22F3		5
KENT COUNTY 22	T6	22F2	0	7
KENT COUNTY 22		22F4		5
KENT COUNTY 22		22F6		7
NATICK 29	T1	29F1	6	6
NATICK 29	T2	29F2	5	5
NEW LONDON 150	T2	150F2	110	6
NEW LONDON 150		150F4		6
NEW LONDON 150		150F6		7
NEW LONDON 150		150F8		5
TIOGUE AVE 100	T1	100F1	11	11
WARWICK MALL 28	T1	28F1	3	3
WARWICK MALL 28	T2	28F2	2	2

**4.3 Voltage Performance**

The CYME program models all three phases of each distribution feeder for its entire length starting at the substation. ANSI A/B voltage ranges are used to identify issues. ANSI A range is used for normal configurations and considers a +/-5% voltage band around nominal voltage. This equates to service voltage of 126V to 114V on a 120V base. Secondaries and services are not modeled. Therefore, a 3V drop in the distribution transformer and customer secondary wire can be assumed.

The PSSE program models all sub-transmission line for its entire length starting at the substation. Table 4.3 shows voltage criteria used in the analysis of sub-transmission lines.

Table 4.3 – Supply Line Voltage Criteria

<b>Supply Connections</b>	<b>SN (per unit)</b>	<b>N-1 (per unit)</b>
No direct customers	0.950-1.050	0.925-1.050
With direct customers	0.975-1.050	0.900-1.050
All substations with regulation	0.850-1.050	0.800-1.050

Only three phase mainline voltage performance was analyzed and the results from CYME and PSSE are shown in Table 4.4 on the next page. Sections of the Hopkins Hill 63F3 and Kent Co. 22F6 feeders showed voltages lower than specified criteria.

TABLE 4.4 – Voltage Performance

CENTRAL RI WEST AREA			VOLTAGE (3Ø section miles) Dline '35	Supply Voltage (pu)	
Substation	ID	OH Feeder, UG Feeder		SN	N-1
ANTHONY 64	T1	64F1	0.0		
ANTHONY 64	T2	64F2	0.0		
COVENTRY 54	T1	54F1	0.0		
DIVISION ST 61	T1	61F1	0.0		
DIVISION ST 61		61F3	0.0		
DIVISION ST 61	T2	61F2	0.0		
DIVISION ST 61		61F4	0.0		
DRUMROCK 14		2230		1.00	0.93
DRUMROCK 14		2232		1.00	0.96
DRUMROCK 14		2266		1.03	1.02
HOPE 15	T1	15F1	0.0		
HOPE 15	T2	15F2	0.0		
HOPKINS HILL 63	T1	63F1	0.0		
HOPKINS HILL 63		63F3	1.2		
HOPKINS HILL 63		63F5	0.0		
HOPKINS HILL 63	T2	63F2	0.0		
HOPKINS HILL 63		63F4	0.0		
HOPKINS HILL 63		63F6	0.0		
KENT COUNTY 22	T1	3309		1.03	1.03
KENT COUNTY 22	T2	3310		1.06	1.01
KENT COUNTY 22	T7	3311		1.04	0.99
KENT COUNTY 22		3312		1.04	1.03
KENT COUNTY 22	T5	22F1	0.0		
KENT COUNTY 22		22F3	0.0		
KENT COUNTY 22	T6	22F2	0.0		
KENT COUNTY 22		22F4	0.0		
KENT COUNTY 22		22F6	3.8		
NATICK 29	T1	29F1	0.0		
NATICK 29	T2	29F2	0.0		
NEW LONDON 150	T2	150F2	0.0		
NEW LONDON 150		150F4	0.0		
NEW LONDON 150		150F6	0.0		
NEW LONDON 150		150F8	0.0		
TIOGUE AVE 100	T1	100F1	0.0		
WARWICK MALL 28	T1	28F1	0.0		
WARWICK MALL 28	T2	28F2	0.0		

**4.4 Additional Analyses**

**4.4.1 Reliability Performance**

A reliability review was conducted to check feeder indices (CKAIDI and CKAIPI) against statewide targets. The SAIFI and SAIDI targets for Rhode Island are 1.05 and 71.9 minutes, respectively. Table 4.5 below shows feeders that had performance outside of criteria. Outages

that affected feeders with performance that exceeded these targets were mainly due to major storms or tree and animal contacts. Tree trimming is scheduled on a rotating basis to prevent these occurrences.

Substation	Feeder	SAIFI Avg	SAIDI Avg	Major Reasons/Causes
Hope	15F2	1.239	119.01	Tree/Animal
Tiougue Ave.	100F1	0.983	132.3	Tree/Animal
██████████	██████	██████	██████	██████████
Warwick Mall	28F1	1.190	71.59	Tree/Animal
Coventry	54F1	1.679	148.19	Tree/Animal
Division St.	61F1	0.453	128.74	Tree/Animal
Hopkins Hill	63F3	1.285	106.98	Tree/Animal
Hopkins Hill	63F4	0.935	79.72	Tree/Animal
Hopkins Hill	63F6	1.017	99.28	Tree/Animal
Anthony	64F1	1.026	99.28	Tree/Animal
Anthony	64F2	1.299	96.15	Tree/Animal

The Coventry 54F1, which is the area circuit with the worst SAIFI and SAIDI performance, experienced outage related issues due to tree contact - particularly the 4.5 miles along Route 117 from Victory Highway to Plainfield Pike in Coventry, RI.

**4.4.2 Arc Flash**

On April 1, 2014, the United States Department of Labor’s Occupational Safety and Health Administration (“OSHA”) issued final rule 1910.269 requiring the employer to assess the workplace to identify employees exposed to hazards from flames or electric arcs. 1910.269 proposed compliance dates of January 1, 2015 and April 1, 2015 for completion of the hazard assessment and implementation of the assessment results respectively. As the industry adjusted to these new requirements and calculation methods, the dates were adjusted to March 31, 2015 and August 31, 2015.

As described above, arc flash regulations were issued and analysis methods were reviewed and adjusted during the course of this study. A review of all distribution feeders at 15 kV or below using CYME fault current analysis and protection coordination values with ArcPro incident energy calculations provided an analysis of distribution feeders in compliance with OSHA requirements. Appendix 7.4 shows the results of the review that was completed in 2020. No feeders at 15 kV or below in the study area indicated incident energies above 8 calories per centimeter squared (cal/cm<sup>2</sup>).

Substation arc flash values were calculated by the Protection department for voltages over 15 kV. Results identify the Hazard Risk Category at each voltage level, which determines appropriate protective clothing to be worn for switching operations.

**4.4.3 Fault Duty/Short Circuit Availability**

The ASPEN program was used to calculate the maximum fault current on each feeder. These values were compared to the station breaker’s interrupting capability and voltage regulator

maximum fault current withstand. The table in Appendix 7.4 summarizes the results of this analysis. There were no cases where short circuit duty exceeded the capabilities of feeder breakers or regulators.

#### **4.4.4 Reactive Compensation**

Reactive compensation was analyzed at the low side of station transformers to determine if station capacitor banks are needed and at the first node of each feeder to determine if additional line capacitor banks are needed. Areas with PF less than 0.95, large customers with high VAR demand, and low voltage areas were the focus of this analysis. Red highlighted cells in Appendix 7.5 illustrate stations and lines where additional reactive compensation is needed.

**5. PLAN DESCRIPTION, COMPARISON, AND RECOMMENDATION**

The study solutions are comprised of two significant area plans for each sub-area (the Drumrock 23kV system and the Kent County 34.5 kV system) as well as a list of common items that are necessary in addition to the chosen two plans. In combination these three sets of solutions address all the issues identified in section 4. The following sections describe details of each plan, propose alternatives where relevant, and conclude with a comparison and recommendation. Each plan will also state alignment with programmatic work such as: EMS Expansion, Underground Cable Replacement, and Battery Replacement, etc. Lastly all devices, such as reclosers, capacitors, and regulators, will be installed using the latest control and communication standards in alignment with grid modernization concepts.

**5.1 Common Items**

The following items are common to all solutions and are required in addition to the recommended Drumrock 23kV area solution and the Kent County 34.5 kV area solution. Marked up one-line diagrams detailing the scope of each solution can be found in Appendix 9.6 and cost estimates are shown below.

Coventry #54 Substation Rebuild (Appendix 9.6.1)

A wide range of issues were identified at Coventry #54 substation in Section 4. The primary concerns are asset condition issues detailed in Section 4.1.

- Replace airbrakes/loadbreaks 541, 542, & 546
- Replace all lightning arresters
- Replace the No. 1 transformer
- Install Animal Protection on PTs
- Paint the 541 MOAB control cabinet

Spend (\$M)	Total
CapEx	\$ 3.253
OpEx	\$ -
Removal	\$ 0.174
Total	\$ 3.427

This project was screened for a non-wire’s alternative solution. It failed to qualify as it is asset condition.

Hope #15 Replace Relevant Equipment (Appendix 9.6.2)

A wide range of issues were identified at Hope #15 substation in Section 4. The primary concerns are asset condition issues detailed in Section 4.1.

- Replace the T1 transformer
- Replace all lightning arresters and PTs

Spend (\$M)	Total
CapEx	\$ 2.657
OpEx	\$ -
Removal	\$ 0.051
Total	\$ 2.708

This project was screened for a non-wire’s alternative solution. It failed to qualify as it is asset condition.

Division St. #61 Replace Transformers and Other Relevant Equipment (Appendix 9.6.3)

There are asset condition issues with the transformers at Division St. #61 substation as identified in Section 4.1.

- Replace both existing transformers – No. 1 and No. 2 and install appropriate oil containment
- Replace airbreaks 3311-2T and 3312-1T
- Replace all lightning arresters
- Install animal protection

Spend (\$M)	Total
CapEx	\$ 4.979
OpEx	\$ -
Removal	\$ 0.379
Total	\$ 5.358

This project was screened for a non-wire’s alternative solution. It failed to qualify as it is asset condition.

Coventry 54F1 Reconductoring (Appendix 9.6.4)

There are reliability issues on the Coventry 54F1 as identified in Section 4.4.1.

Assuming that all tree related outages on the sections of 54F1 could be avoided by this project, there is a 16% improvement in frequency performance (from 1.679 to 1.41) and a 17% improvement in duration (148.19 to 122.56 minutes).

Spend (\$M)	Total
CapEx	\$4.500
OpEx	\$0.000
Removal	\$0.000
Total	\$4.500

Division St. 61F2 Reconductoring (Appendix 9.6.5)

There are asset condition issues with the Division St. 61F2 circuit as identified in Section 4.1.2.



The solution is to reconnector the 1.6 mile stretch along South Pierce Road and Howland Road in East Greenwich, RI with 477 Al SPCR.

Spend (\$M)	Total
CapEx	\$1.600
OpEx	\$0.000
Removal	\$0.000
Total	\$1.600

This project was screened for a non-wire’s alternative solution. It failed to qualify as it is asset condition.

Natick 29F1 Reconductoring (Appendix 9.6.6)

The Natick 29F1 has thermal loading issues along Providence Street in West Warwick, RI as identified in Section 4.2. The solution is to reconnector this 1,000’ with 477 Al SPCR.

Spend (\$M)	Total
CapEx	\$0.190
OpEx	\$0.000
Removal	\$0.000
Total	\$0.190

This project was screened for a non-wire’s alternative solution. It failed to qualify as the wire solution costs less than \$1M, and the need for the project is less than 36 months.

New London 150F6 Reconductoring (Appendix 9.6.7)

The New London 150F6 has thermal loading issues along Providence Street in West Warwick, RI as identified in Section 4.2. The solution is to reconnector this 425’ with 477 Al SPCR.

Spend (\$M)	Total
CapEx	\$0.080
OpEx	\$0.000
Removal	\$0.000
Total	\$0.080

This project was screened for a non-wires alternative solution. It failed to qualify as the wires solution costs less than \$1M, and the need for the project is less than 36 months.

Chase Hill 155F8/Hopkins Hill 63F6 Tie Relocation (Appendix 9.6.8)

There are asset condition issues with the Chase Hill 155F8 circuit as identified in Section 4.1.2.

The solution is to remove this conductor and relocate the tie to Nooseneck Hill Road. This requires the installation of a new 2-way duct bank with 6” ducts for 800’ of single phase 1000 Cu underground conductor that will then rise up to an additional 4,800’ of 477 AL SPCR to the normally open loadbreak switch that serves as the tie to the Hopkins Hill 63F6 feeder.

Spend (\$M)	Total
CapEx	\$1.000
OpEx	\$0.000
Removal	\$0.000
Total	\$1.000

This project was screened for a non-wires alternative solution. It failed to qualify as it is asset condition.

New Kilvert St. 87F1 Backup Feeder Tie (Appendix 9.6.9)

There is currently a lack of adequate backup feeder capacity to the Warwick Mall. The solution is to create a new feeder tie by tapping the existing Kilvert St. 87F1 feeder on Greenwich Ave. in Warwick, RI and installing a new pole top recloser and approximately 700’ of 2-way duct bank with 1000 Cu underground cable to pick up all the existing Warwick Mall 28F1 load.

Area Engineering Reliability Reviews (ERRs)

There is additional cost included for general work performed as part of SubT line asset review. Specifics for each of these three ERRs are as follows:

2230 ERR

Remove unused tap from P9071 in the R.O.W. off Fairview Ave, Coventry to P9005 Hickory Rd, Coventry. Remove ~400’ of 3 - #4 Cu conductor, two poles, 3-100K fuses, and associated equipment. The first two sections of this tap are unfused and add unnecessary exposure to the mainline. Remove this tap, as it is not serving any load. Cost-\$7k

2232 ERR

The 2232 feeder is double circuited with the 150F8 on Panto Road, West Warwick. All poles being replaced are approximately 85 years old and in poor asset condition. The following is being recommended: Replace poles 9166, 9167, 9168, 9169, 9170, 9171, 9172, 9173, 9174, 9175, 9176, and 9178 on Panto Rd with 45’ C2 poles. Reconductor the 2232 feeder from P9165 to P9178 with 3-477 AL (~1900’). Remove parallel 2/0 CU conductor. Replace associated equipment as needed. Cost-\$181k

The 2232 feeder goes through a parking lot off P9063 Industrial Dr, Coventry, making accessibility and tree trimming difficult. The following is being recommended: Relocate this line section onto the street, overbuilding the 64F1 circuit for easier access. Poles are being

replaced due to age, asset condition, and insufficient height. Remove ~1200' of 3-4/0 AL conductor from P 9063 Industrial Dr, through the parking lot to P9057 Flat River Rd. Remove poles 9061 and 9062 from the parking lot. Replace P9057, P208, P206, and P205 Flat River Rd with 45' C2 poles. Replace P 9063, P2, and P1 Industrial Dr with 45' C2 poles. Install ~1200' of 3-477 AL conductor from P9063 Industrial Dr to P9057 Flat River Rd. Replace associated equipment as needed. Cost-\$164k

Spend (\$M)	Total
CapEx	\$0.352
OpEx	\$0.000
Removal	\$0.000
Total	\$0.352

These projects were screened for a non-wires alternative solution. It failed to qualify as the wires solution costs less than \$1M, and the need for the project is less than 36 months.

Voltage Performance and Reactive Compensation

Several low-cost solutions, related mostly to reliability and reactive power compensation, have been developed. Due to the low-cost nature of these solutions, they may be performed outside the scope of this study.

Hopkins Hill 63F3 Rephasing

There are voltage performance issues on the Hopkins Hill 63F3 as identified in Section 4.3. The issue is resolved by transferring the Twin Brook Lane, Fish Hill Rd. and Stuart Dr. taps from C to B phase.

Kent Co. 22F6 Rephasing steps:

There are voltage performance issues on the Kent County 22F6 as identified in Section 4.3. The issues are resolved by transferring Overhill Rd. and Windemere Rd. taps from B to C phase and Bayview Ave. and Marlboro St. taps from B to A phase.

Capacitor Installations:

- Anthony 64F2: Install 1-900 kVAR bank
- Division St. 61F1: Install 1-300 and 1-600 kVAR bank
- Hopkins Hill 63F1: Install 1-600 kVAR bank
- New London Ave. Install 150F4: 1-300 KVAR bank
- New London Ave. Install 150F6: 1-600 kVAR bank
- Warwick Mall 28F2: Install 1- 300 KVAR bank

These projects were screened for a non-wires alternative solution. It failed to qualify as the wires solution costs less than \$1M, and the need for the project is less than 36 months.

**5.2 Drumrock 23 kV System Area Plan #2 – Replace all Equipment with Asset Condition Issues at Anthony #64, Natick #29, and Warwick Mall #28 Substations**

There are significant asset condition issues at Anthony #64, Natick #29, and Warwick Mall #28 Substations as identified in Section 4.1. Two options were developed to address the asset condition issues at these stations. Marked up one-line diagrams detailing the scope of each solution can be found in Appendix 9.6 and cost estimates are shown below.

**5.2.1 Drumrock 23kV Option Comparison**

Option 1 – New Transformer and Four Additional Feeder Positions at New London Ave. to offload Anthony #64, Natick #29, and Warwick Mall #28 Substations (Appendix 9.6.10 and 9.6.11)

The first option to address the asset condition issues is to completely offload Anthony #64, Natick #29, and Warwick Mall #28 substations by adding a second 115/12.47 kV transformer at New London Ave. substation and four (4) new feeder positions and the associated distribution line work required to pick up the load from these three (3) substations. All

equipment could then be removed at Anthony #64, Natick #29, and Warwick Mall #28 substations.

Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Sub Total (\$M)	Total (\$M)
New London Sub (T)	\$ 4.762	\$ -	\$ -	\$ 4.762	\$ 26.758
New London (T)line	\$ 4.101	\$ 0.093	\$ 0.256	\$ 4.450	
New London Sub (D)	\$ 6.321	\$ -	\$ 0.134	\$ 6.455	
New London (D)line	\$ 8.640	\$ -	\$ -	\$ 8.640	
Anthony Sub (D)	\$ -	\$ -	\$ 1.147	\$ 1.147	
Natick Sub (D)	\$ 0.077	\$ -	\$ 0.507	\$ 0.584	
Warwick Mall (D)	\$ -	\$ -	\$ 0.721	\$ 0.721	

Option 2 – Replace all Equipment with Asset Condition Issues at Anthony #64, Natick #29, and Warwick Mall #28 Substations

The second option is to replace all equipment with asset condition issues at Anthony #64, Natick #29, and Warwick Mall #28 Substations. The required replacement work at each station is shown below including cost estimates.

Anthony #64 (Appendix 9.6.12)

- Replace the 23 kV bus structures
- Replace two (2) OCBs
- Replace transformer No. 1 and No. 2
- Replace two (2) 23 kV airbreaks
- Replace 23kV capacitor bank
- Replace lightning arresters
- Remove all retired 4 kV equipment
- Install an animal fence

Natick #29 (Appendix 9.6.13)

- Replace the 29F2 regulators
- Replace three (3) airbreaks - 2266, 2230, and 66-30
- Replace the No. 1 and No. 2 station service transformers
- Replace the brown porcelain station post insulators and vintage dead-end bells

Warwick Mall #28 (Appendix 9.6.14)

- Replace transformer No. 1
- Replace three (3) airbreaks - 2266, 2230, and 30-66
- Replace the 28F2 regulators – all three (3) phases
- Replace the 28F1 regulators – B & C phases
- Replace five (5) sets of HPL airbreak disconnects
- Replace the No. 1 and No. 2 station service transformers

- Replace lightning arresters

Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Sub Total (\$M)	Total (\$M)
Anthony Sub (D)	\$ 3.490	\$ -	\$ 0.315	\$ 3.805	\$ 8.076
Natick Sub (D)	\$ 1.204	\$ -	\$ 0.055	\$ 1.259	
Warwick Mall (D)	\$ 2.853	\$ -	\$ 0.160	\$ 3.013	

Option 3 – Non-Wires Alternative

This issue and solution set was screened out for a non-wires alternative because the issue is asset condition based.

**5.2.2 Drumrock 23kV Recommended Option and Timeline**

Replacing all equipment with asset condition issues is the least cost option and it is, therefore, the recommended option. Cash flows are shown below.

Project Number	Project Title	Spend (\$M)	FY28	FY29	FY30	FY31	FY32	Total
C088006	Anthony #64 Equipment Replacement	CapEx	0.52	0.70	0.87	0.87	0.52	3.49
		OpEx	0.00	0.00	0.00	0.00	0.00	0.00
		Removal	0.00	0.00	0.00	0.00	0.32	0.32
		Total	0.52	0.70	0.87	2.09	3.66	3.81
Project Number	Project Title	Spend (\$M)	FY24	FY25	FY26	FY27	FY28	Total
C088007	Natick #29 Equipment Replacement	CapEx	0.18	0.24	0.30	0.30	0.18	1.20
		OpEx	0.00	0.00	0.00	0.00	0.00	0.00
		Removal	0.01	0.01	0.01	0.01	0.01	0.06
		Total	0.19	0.25	0.31	0.31	0.19	1.26
Project Number	Project Title	Spend (\$M)	FY24	FY25	FY26	FY27	FY28	Total
C088008	Warwick Mall #28 Equipment Replacement	CapEx	0.43	0.57	0.71	0.71	0.43	2.85
		OpEx	0.00	0.00	0.00	0.00	0.00	0.00
		Removal	0.02	0.03	0.04	0.04	0.02	0.16
		Total	0.45	0.60	0.75	0.75	0.45	3.01

**5.3 Kent County 34.5 kV System Area Plan #1 – New Substation on Weaver Hill Rd.**

The Hopkins Hill 63F6 feeder is forecasted to be overloaded to 104% of summer normal loading in 2035. The Coventry 54F1 also shows a high loading of 94% of summer normal in 2035. These thermal loading issues are identified in Section 4.2. Two (2) options were developed to address these issues. Marked up one-line diagrams detailing the scope of each solution can be found in Appendix 9.6 and cost estimates are shown below.

**5.3.1 Kent County 34.5kV Option Comparison**

Option 1 – New Substation on Weaver Hill Rd. (Appendix 9.6.17, 9.6.19, and 9.6.20)

This option considers extending sub transmission to be installed for distributed generation interconnecting customers to a new substation site on Weaver Hill Road.

The scope associated with the DG interconnections is:

- Installation of approximately 17,000 feet of a manhole and duct bank system along Division Street and Nooseneck Hill Road, West Greenwich.
- Installation of approximately 17,000 feet of three conductor 1000 kcmil EPR insulated Cu cable along Division Street and Nooseneck Hill Road, West Greenwich to extend the 3310 line to the interconnecting sites.
- Installation of approximately 20,000 feet of three conductor 1000 kcmil EPR insulated Cu cable along Division Street and Nooseneck Hill Road, West Greenwich to extend the 3309 line to the interconnecting sites.

Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Subtotal (\$M)	Total (\$M)
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3309/3310 to Weaver Hill (SubT-Electric)	\$ 11.492	\$ 0.005	\$ 0.007	\$ 11.504	\$ 19.690
3309/3310 to Weaver Hill (SubT-Civil)	\$ 8.186	\$ -	\$ -	\$ 8.186	

The scope to extend the subtransmission to the new substation site is:

- Extend the 3309 and 3310 lines for 1.7 miles from Nooseneck Hill and Weaver Hill Roads West Greenwich to a Rhode Island Energy owned property off P. 64 Weaver Hill Rd.
- Install a 7.5/9.375 MVA transformer and one modular feeder position to be supplied by the 3309 preferred and 3310 alternate.
- Install distribution line work for a new feeder to be made up of parts of Coventry 54F1 and Hopkins Hill 63F6.

Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Sub Total (\$M)	Total (\$M)
Weaver Hill (SubT)	\$ 5.447	\$ -	\$ -	\$ 5.447	\$ 10.045
Weaver Hill (Sub)	\$ 3.800	\$ -	\$ -	\$ 3.800	
Weaver Hill (Dline)	\$ 0.798	\$ -	\$ -	\$ 0.798	

Total cost including costs that may be shared with interconnecting customers:

Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Subtotal (\$M)	Total (\$M)
Weaver Hill (SubT)	\$ 25.125	\$ 0.005	\$ 0.007	\$ 25.137	\$ 29.735
Weaver Hill (Sub)	\$ 3.800	\$ -	\$ -	\$ 3.800	
Weaver Hill (Dline)	\$ 0.798	\$ -	\$ -	\$ 0.798	

Option 2 – New Substation at the Intersection of New London Tpk. and Bell Schoolhouse Rd. (Pine Hill Sub) (Appendix 9.6.18)

This option considers extending subtransmission to be installed for a distributed generation interconnecting customer to a new substation site on Pine Hill Road.

The scope associated with the DG interconnections is:

- Installation of an approximate 30,000-foot manhole and duct bank along Division Street and Nooseneck Hill Road, West Greenwich.
- Installation of approximately 30,000 feet of three conductor 1000 kcmil EPR insulated Cu cable along Division Street and Nooseneck Hill Road, West Greenwich to extend the 3310 line to the interconnecting sites.

Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Subtotal (\$M)	Total (\$M)
3310 Rt 3 to Near Route 102 (SubT-Electric)	\$ 9.143	\$ 0.005	\$ 0.006	\$ 9.153	\$ 24.153
3310 Rt 3 to Near Route 102 (SubT-Civil)	\$ 15.000	\$ -	\$ -	\$ 15.000	

The scope to extend the subtransmission to the new substation site is:



- Extend the 3310 line for 3.25 miles from Route 3 North of Route 102, Exeter to a Rhode Island Energy owned property at the intersection of New London Turnpike and Bell Schoolhouse Road, Exeter referred to as Pine Hill Substation.
- Install a new 34.5 kV line for 7.5 miles from the new Wickford Junction substation to Pine Hill substation.
- Install a 7.5/9.375 MVA transformer and one modular feeder position to be supplied by the 3310 preferred and Wickford Junction line alternate.
- Install distribution line work for a new feeder to be made up of parts of Coventry 54F1 and Hopkins Hill 63F6.

Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Sub Total (\$M)	Total (\$M)
Pine Hill (SubT)	\$ 12.772	\$ -	\$ -	\$ 12.772	\$ 17.316
Pine Hill (Sub)	\$ 3.760	\$ -	\$ -	\$ 3.760	
Pine Hill (Dline)	\$ 0.784	\$ -	\$ -	\$ 0.784	

Total cost including costs that may be shared with interconnecting customers:

Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Subtotal (\$M)	Total (\$M)
Pine Hill (SubT)	\$ 36.915	\$ 0.005	\$ 0.006	\$ 36.925	\$ 41.469
Pine Hill (Sub)	\$ 3.760	\$ -	\$ -	\$ 3.760	
Pine Hill (Dline)	\$ 0.784	\$ -	\$ -	\$ 0.784	

Option 3 – Non-Wires Alternative

This issue and solution set was screened out for a non-wires alternative because the amount of load would be required is greater than 20% of the total area load.

Recommended Plan

The new substation on Weaver Hill, West Greenwich is the least cost option, and it is, therefore, the recommended option.

**5.3.2 Study Cash Flows and Timeline**

Cash flows are shown below for the all the study recommendations.

**5.3.2.1 Costs That May Be Shared with DG Interconnecting Customers**

	Dline Spending Profile (\$M)					
	FY24	FY25	FY26	FY27	FY28	Total
CapEx	\$2.952	\$3.936	\$4.920	\$4.920	\$2.952	\$19.678
OpEx	\$0.001	\$0.001	\$0.001	\$0.001	\$0.001	\$0.005
Removal	\$0.001	\$0.001	\$0.002	\$0.002	\$0.001	\$0.007
Total	\$2.954	\$3.938	\$4.923	\$4.923	\$2.954	\$19.690

**5.3.2.2 Study Recommendation Cash Flows**

Type	Spend Type	FY24	FY25	FY26	FY27	FY28	Total
D-Line	CapEx	1.201	0.789	0.986	0.986	0.591	4.553
	OpEx	0.000	0.000	0.000	0.000	0.000	0.000
	Removal	0.000	0.000	0.000	0.000	0.000	0.000
<b>D-Line Total</b>		<b>1.201</b>	<b>0.789</b>	<b>0.986</b>	<b>0.986</b>	<b>0.591</b>	<b>4.553</b>
D-Sub	CapEx	4.045	5.393	6.742	6.742	4.045	26.966
	OpEx	0.000	0.000	0.000	0.000	0.000	0.000
	Removal	0.123	0.164	0.205	0.205	0.443	1.139
<b>D-Sub Total</b>		<b>4.168</b>	<b>5.557</b>	<b>6.946</b>	<b>6.946</b>	<b>4.488</b>	<b>28.105</b>
<b>Study Total</b>		<b>5.369</b>	<b>6.346</b>	<b>7.932</b>	<b>7.932</b>	<b>5.079</b>	<b>32.658</b>

**5.3.2.3 Total Cash Flows**

Dline Spending Profile (\$M)						
	FY24	FY25	FY26	FY27	FY28	Total
CapEx	\$4.153	\$4.724	\$5.905	\$5.905	\$3.543	\$24.231
OpEx	\$0.001	\$0.001	\$0.001	\$0.001	\$0.001	\$0.005
Removal	\$0.001	\$0.001	\$0.002	\$0.002	\$0.001	\$0.007
<b>Total</b>	<b>\$4.155</b>	<b>\$4.727</b>	<b>\$5.908</b>	<b>\$5.908</b>	<b>\$3.545</b>	<b>\$24.243</b>

DSub Spending Profile (\$M)						
	FY24	FY25	FY26	FY27	FY28	Total
CapEx	\$4.045	\$5.393	\$6.742	\$6.742	\$4.045	\$26.966
OpEx	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000
Removal	\$0.123	\$0.164	\$0.205	\$0.205	\$0.443	\$1.139
<b>Total</b>	<b>\$4.168</b>	<b>\$5.557</b>	<b>\$6.946</b>	<b>\$6.946</b>	<b>\$4.488</b>	<b>\$28.105</b>

**5.3.3 Permitting, Licensing, Real Estate, and Environmental Considerations**

The new Weaver Hill MITs installation will be placed on an existing greenfield site. Permitting and licensing will be needed for this.

**6. CONCLUSIONS AND RECOMMENDATIONS**

The comprehensive system analysis revealed that the most significant issues in the area are related to asset condition. There are several common items that include resolving these issues at Coventry #54, Hope #15, and Division St. # 61 substations as well as the re-conductor of five (5) feeders to address overloaded lines, asset condition issues and outage issues. Projects were also proposed to address asset condition issues on the 23kV system at Anthony #64, Warwick Mall #28, and Natick #29 substations. Finally, on the 34.5 kV a new modular feeder is proposed off Weaver Hill Rd. in West Greenwich supplied by 3309

preferred/3310 alternate with distribution line work for a new feeder to be made up of parts of Coventry 54F1 and Hopkins Hill 63F6 to alleviate overloading concerns.

## **7. APPENDIX**

7.1 - Area Map

7.2 – One-Line Diagrams

7.3 – Study Dashboard

7.4 - Arc Flash and Fault Duty Analysis

7.5 – Reactive Compensation

9.6 – Plan Development

9.7 – Non-Wires Alternative Criteria

7.1 AREA MAP



## **7.2 ONE-LINE DIAGRAMS**

FIGURE 9.2.1 – 115 KV SUPPLY SYSTEM ONE-LINE DIAGRAM

FIGURE 9.2.2 – 34.5 kV SUPPLY SYSTEM ONE-LINE DIAGRAM

FIGURE 9.2.3 – 23 kV SUPPLY SYSTEM ONE-LINE DIAGRAM

FIGURE 9.2.4 – 23 kV SUPPLY SYSTEM ONE-LINE DIAGRAM

FIGURE 9.2.5 – ANTHONY #64 ONE-LINE DIAGRAM

FIGURE 9.2.6 – COVENTRY #54 ONE LINE DIAGRAM

FIGURE 9.2.7 – DIVISION ST #61 ONE LINE DIAGRAM

FIGURE 9.2.8 – HOPE #15 SUBSTATION ONE-LINE DIAGRAM

FIGURE 9.2.9 – HOPKINS HILL #63 SUBSTATION ONE-LINE DIAGRAM

FIGURE 9.2.10 – KENT COUNTY #22 SUBSTATION ONE-LINE DIAGRAM

FIGURE 9.2.11 – KENT COUNTY #22 SUBSTATION ONE-LINE DIAGRAM

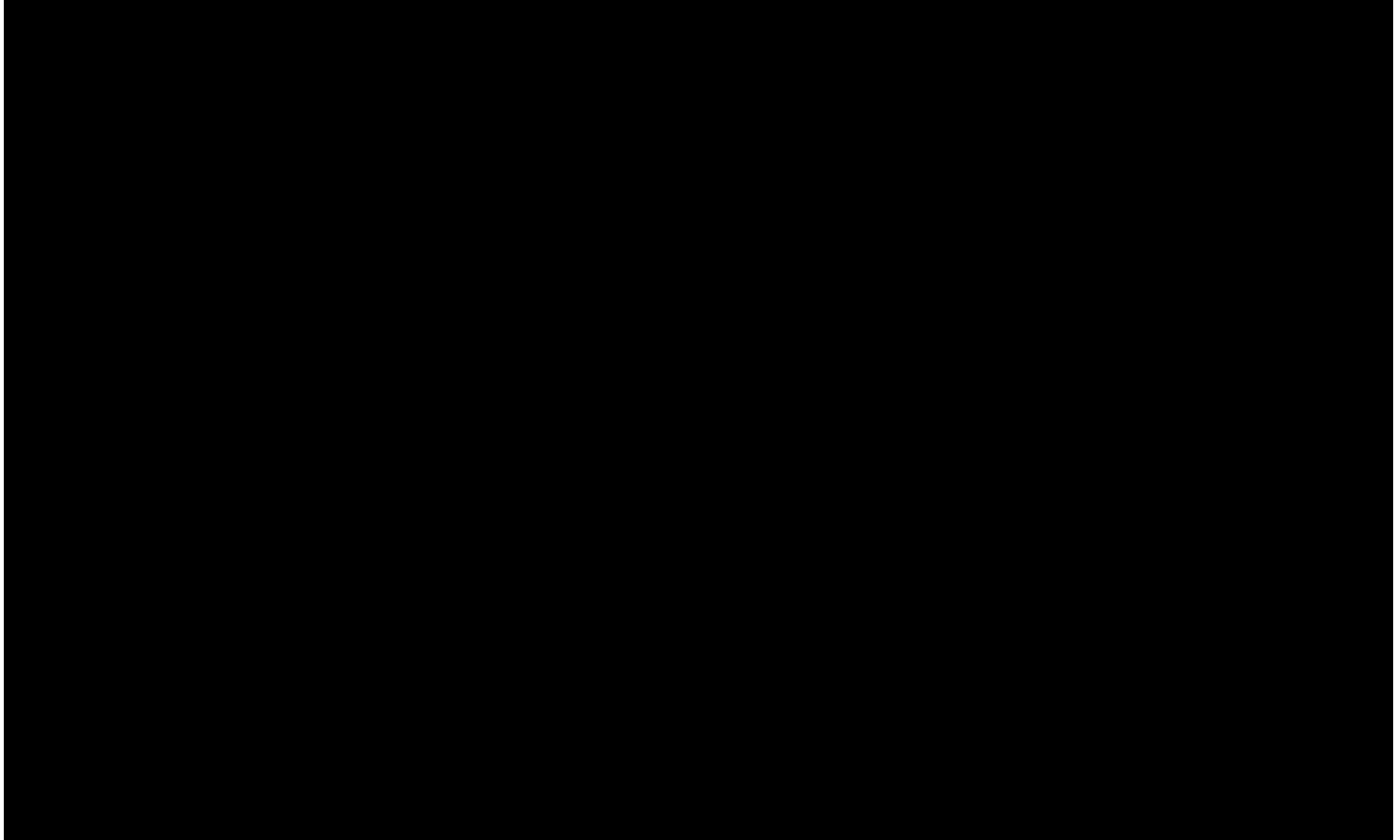
FIGURE 9.2.12 – NATICK #29 SUBSTATION ONE-LINE DIAGRAM

FIGURE 9.2.13 – NEW LONDON #150 SUBSTATION ONE-LINE DIAGRAM

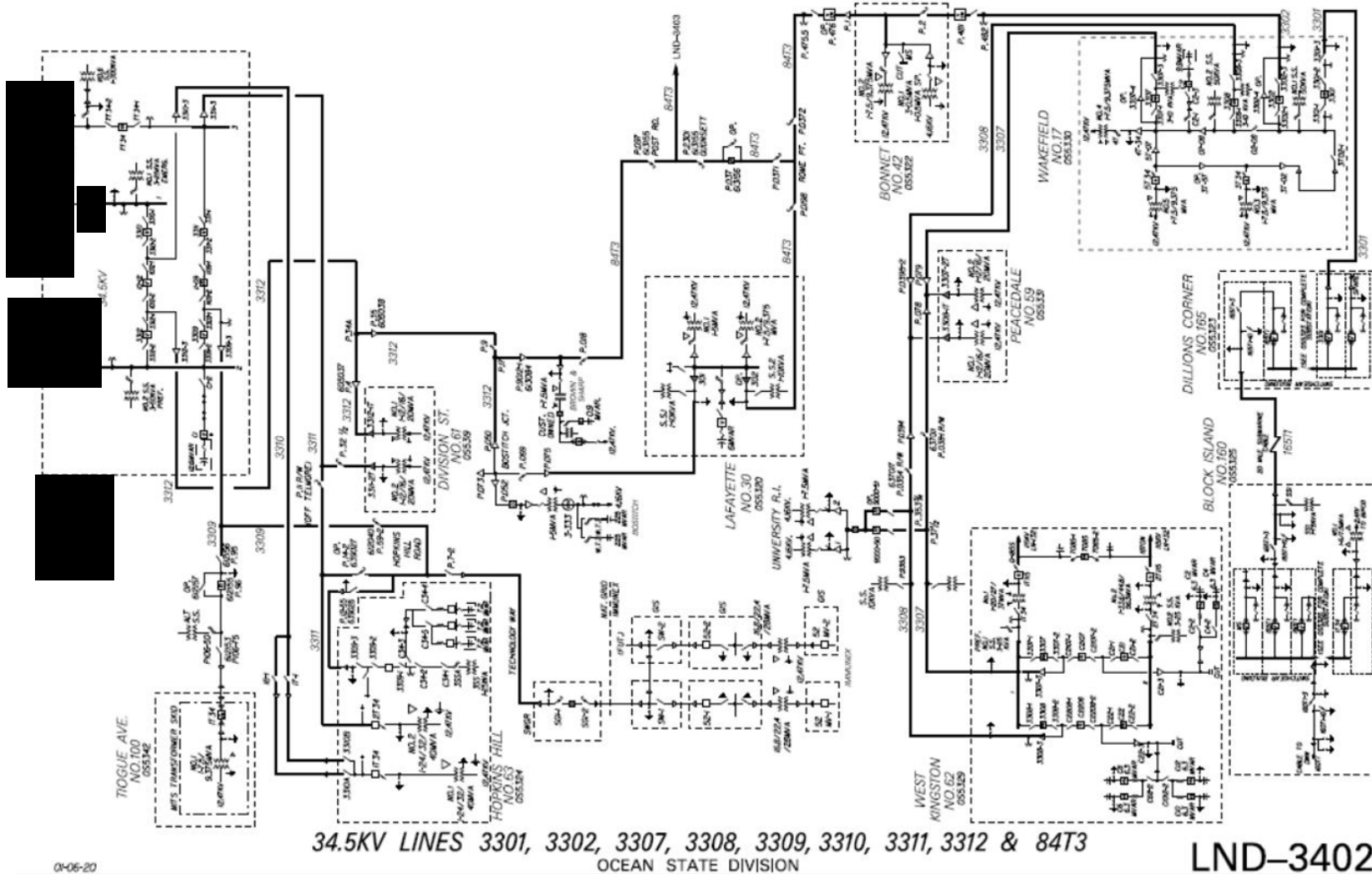
FIGURE 9.2.14 – TIOGUE AVE #100 SUBSTATION ONE-LINE DIAGRAM

FIGURE 9.2.15 – WARWICK MALL #28 SUBSTATION ONE-LINE DIAGRAM

**7.2.2 115 KV SUPPLY SYSTEM ONE-LINE DIAGRAM**



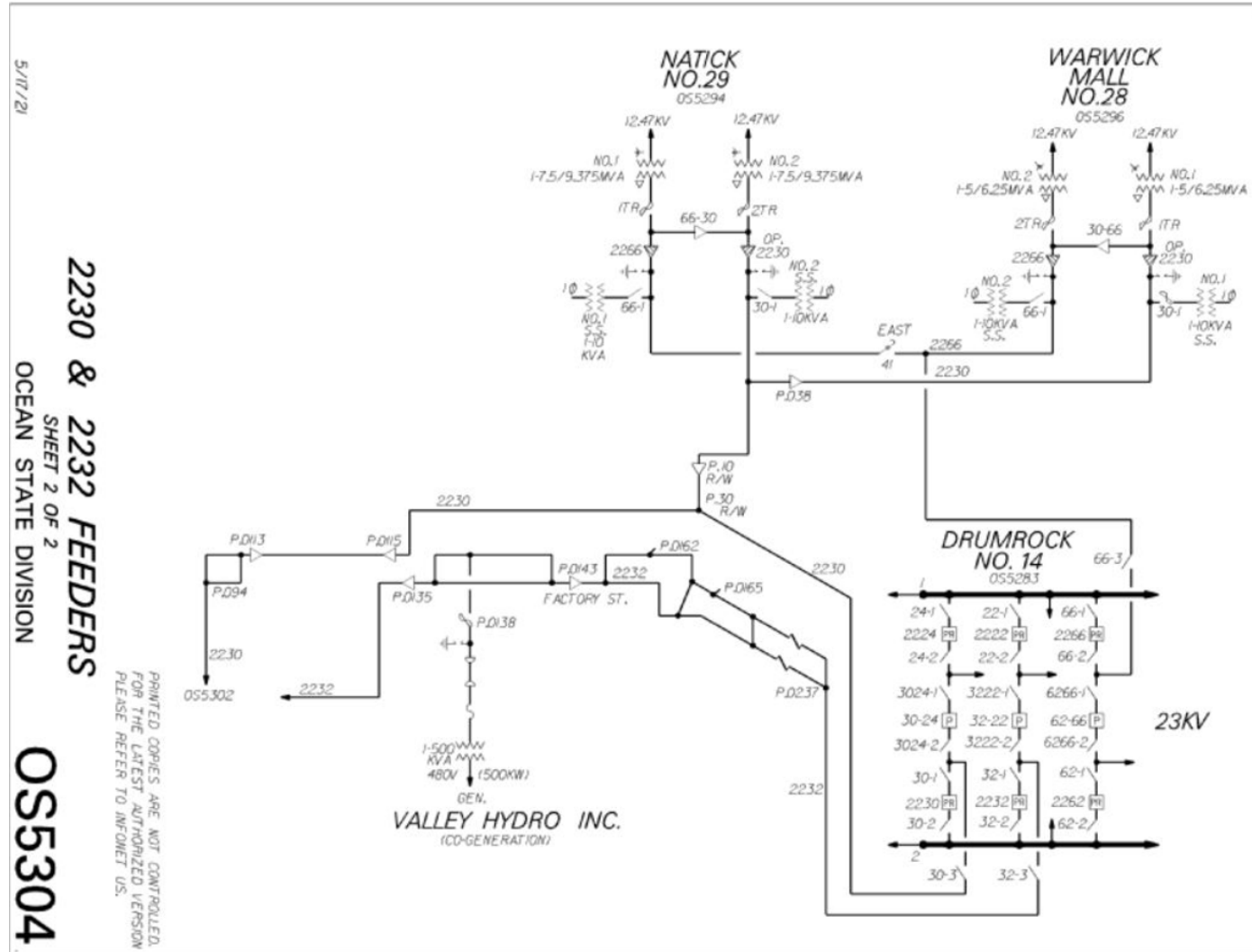
7.2.3 **34.5KV SUPPLY SYSTEM ONE-LINE DIAGRAM**



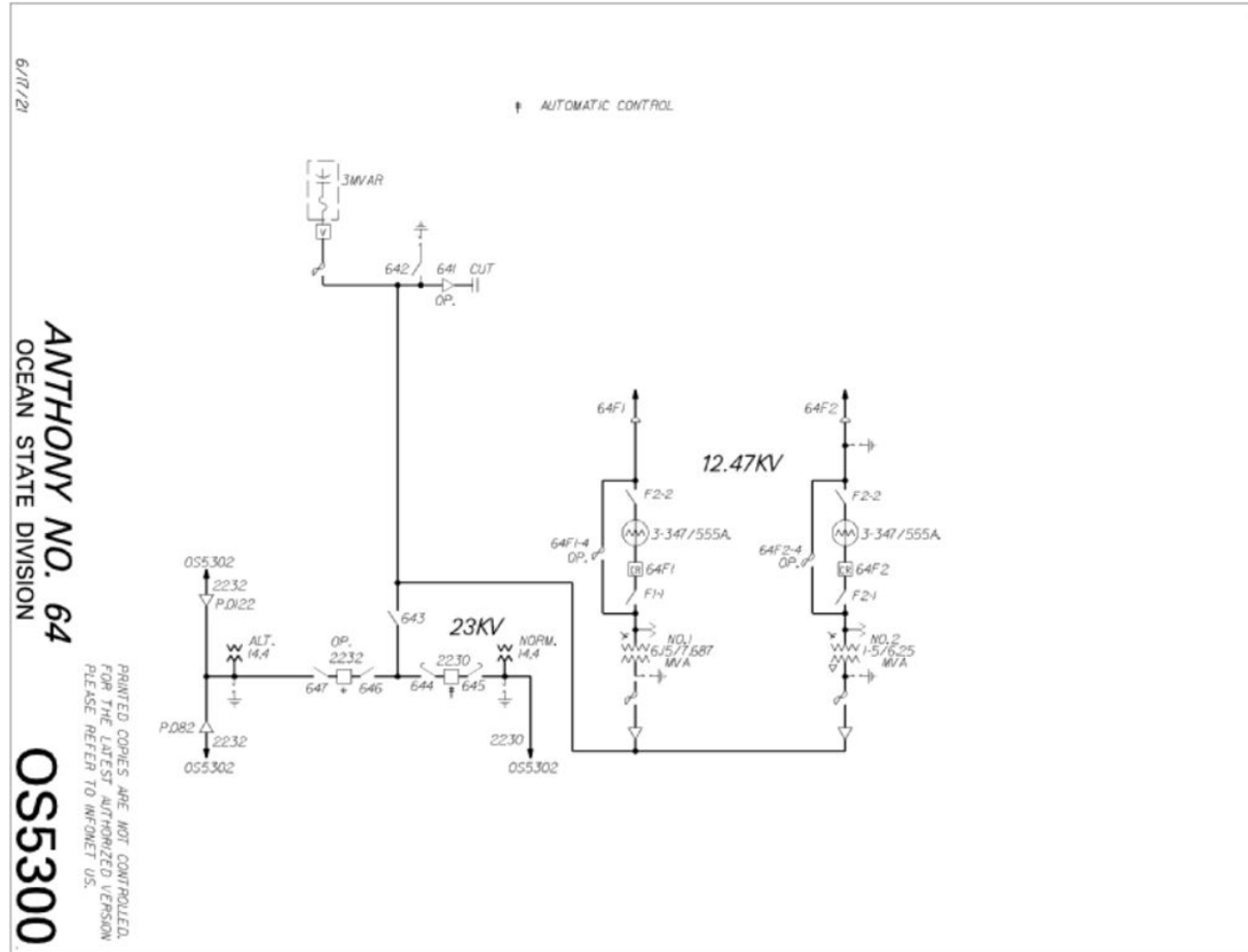




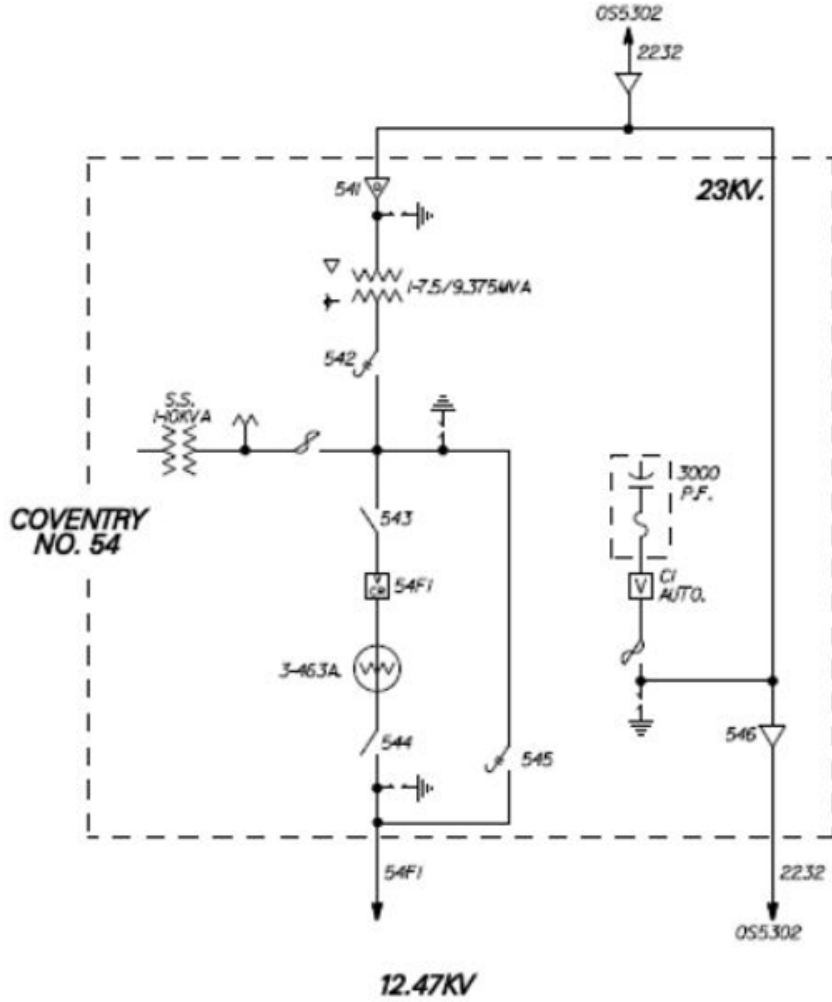
7.2.5 23KV SUPPLY SYSTEM ONE-LINE DIAGRAM



7.2.6 ANTHONY #64 ONE-LINE DIAGRAM



7.2.7 COVENTRY #54 ONE LINE DIAGRAM

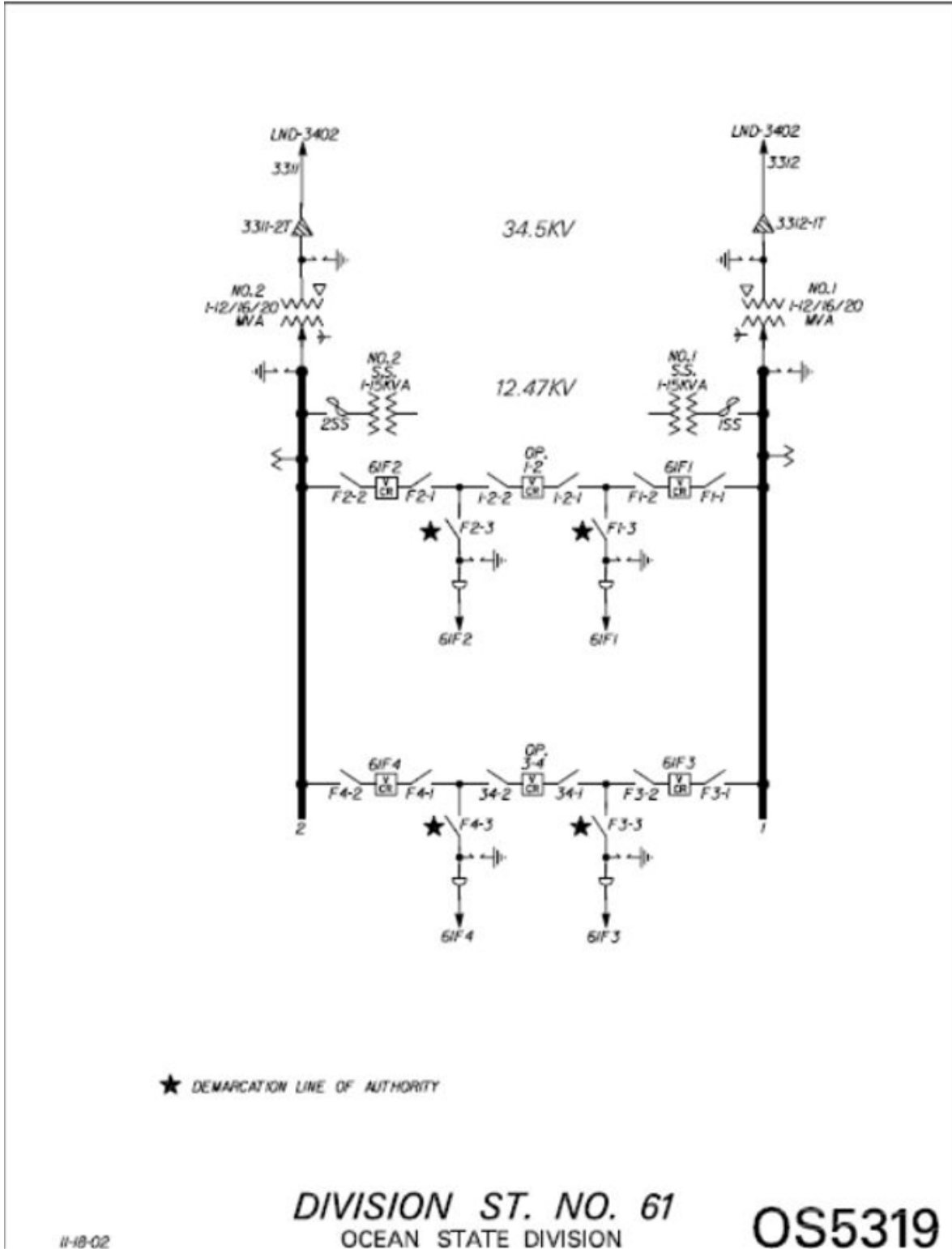


**COVENTRY NO. 54**  
OCEAN STATE DIVISION

**OS5308.**

#-01-08

7.2.8 DIVISION ST #61 ONE LINE DIAGRAM

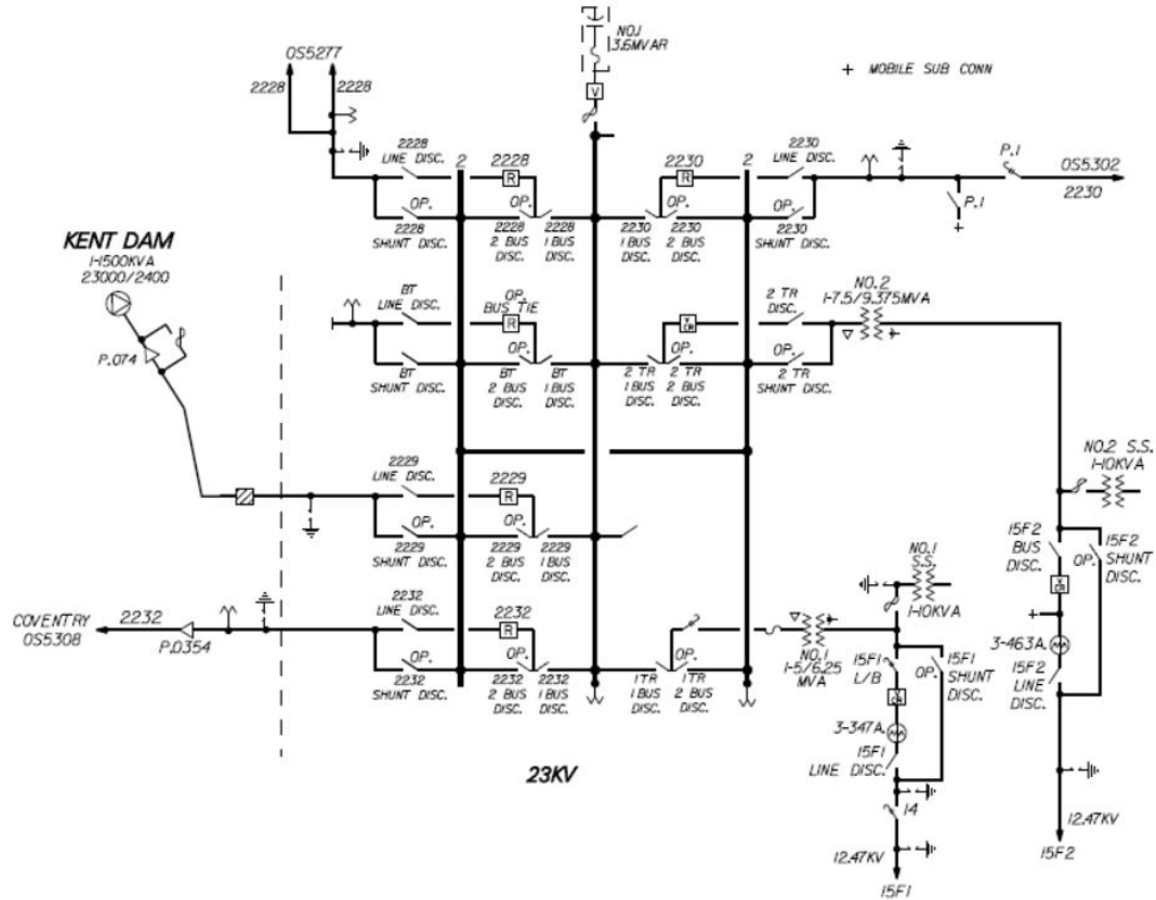


7.2.9 HOPE #15 SUBSTATION ONE-LINE DIAGRAM

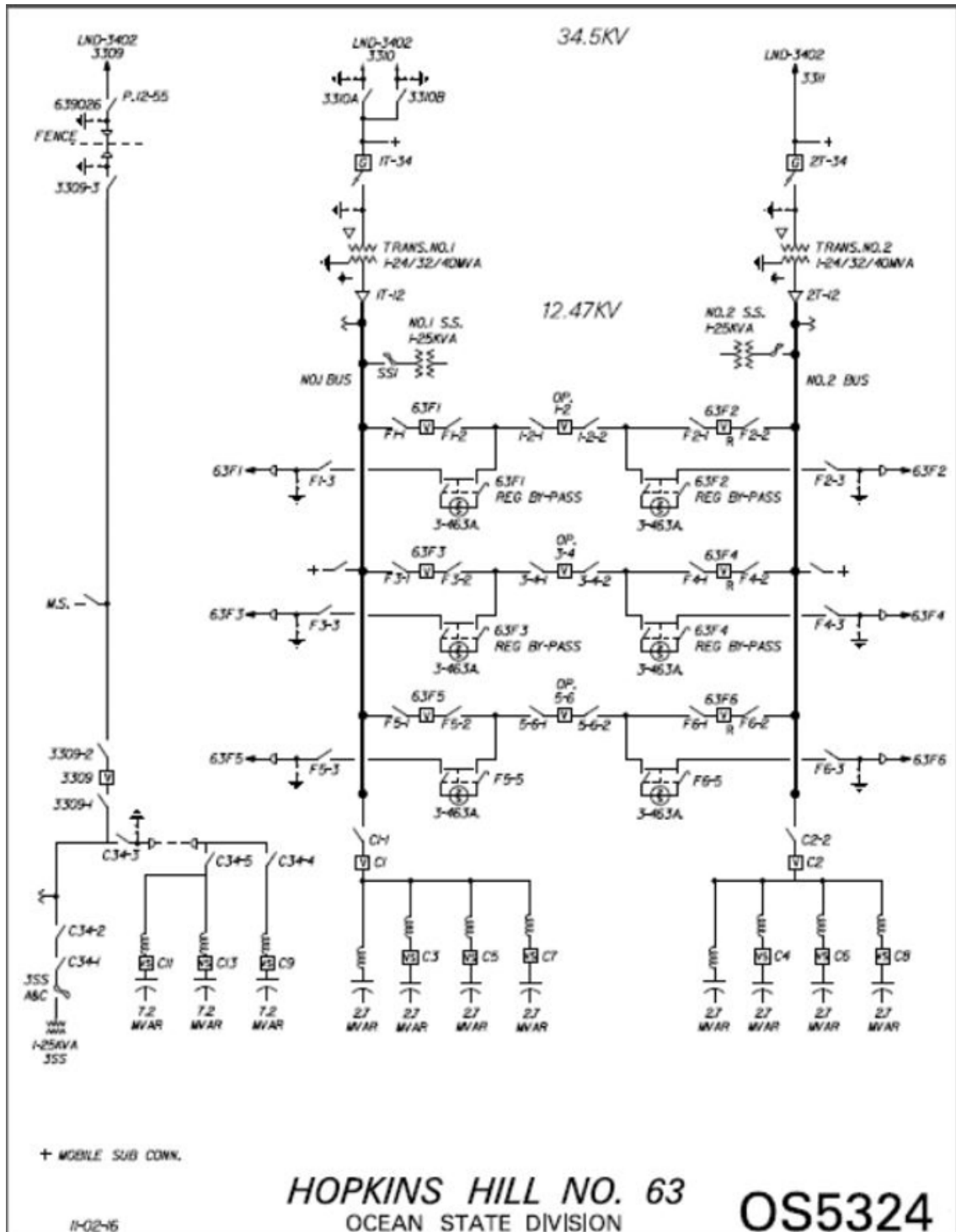
09-29-06

HOPE NO. 15  
OCEAN STATE DIVISION

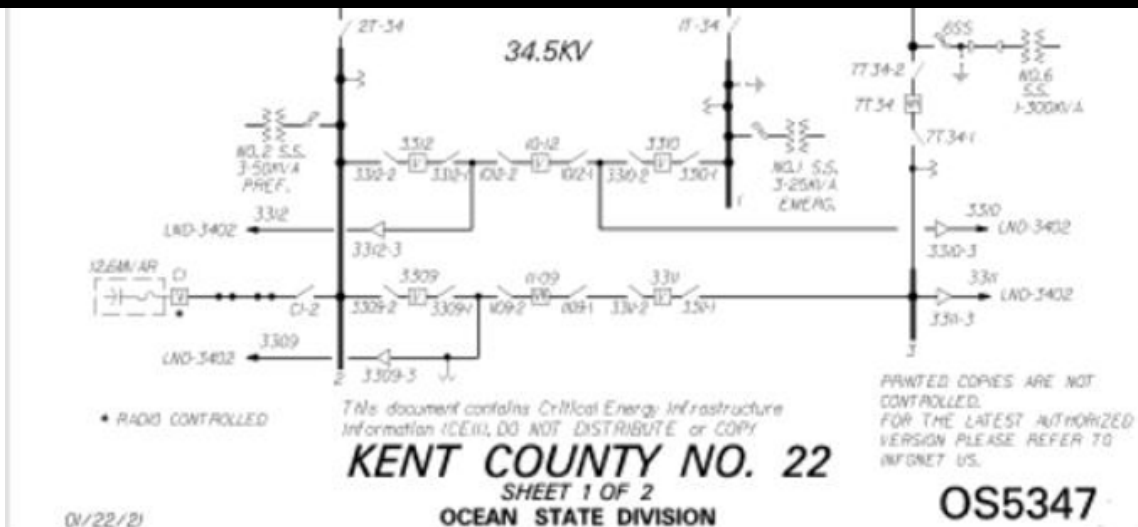
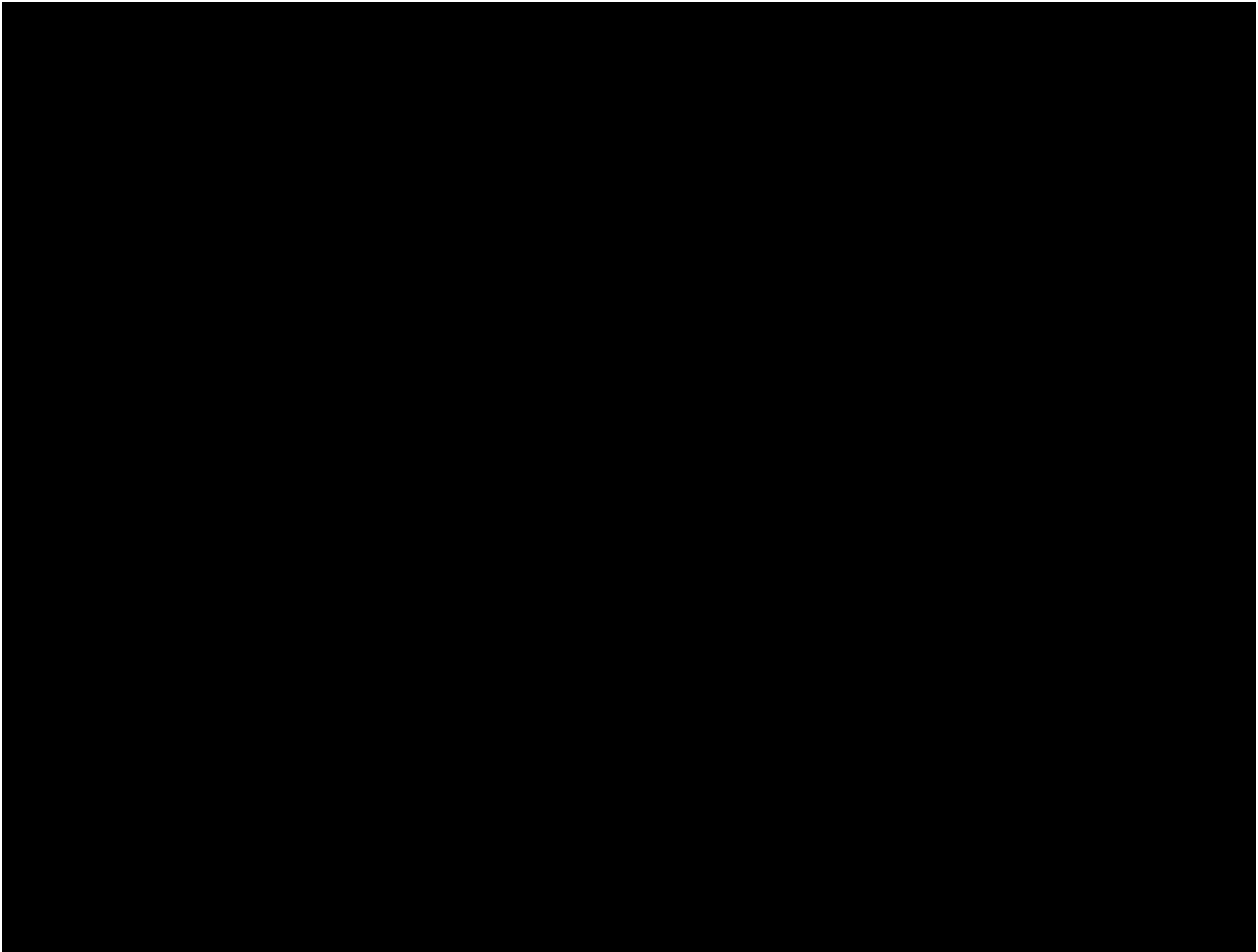
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7.2.10 HOPKINS HILL #63 SUBSTATION ONE-LINE DIAGRAM

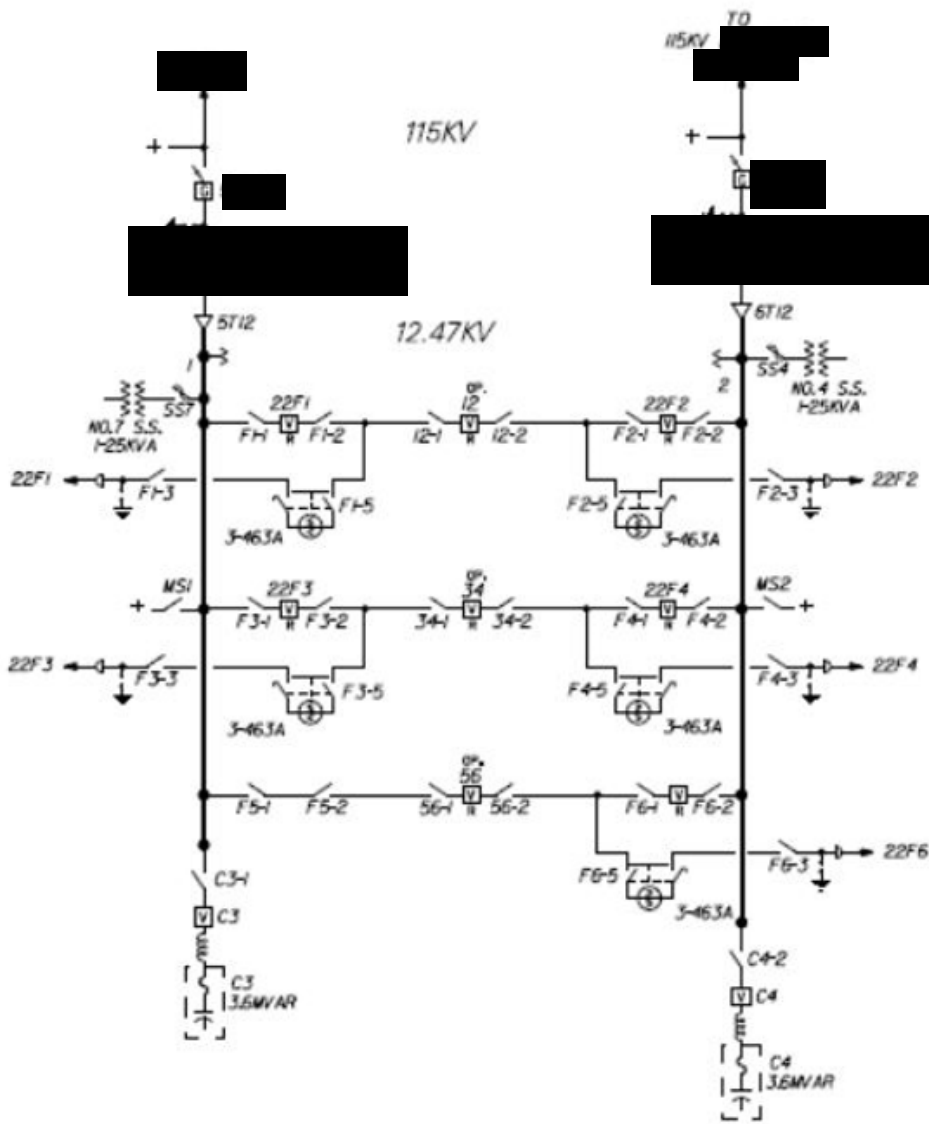


7.2.11 KENT COUNTY #22 SUBSTATION ONE-LINE DIAGRAM





7.2.12 KENT COUNTY #22 SUBSTATION ONE-LINE DIAGRAM



+ MOBILE SUB TAP

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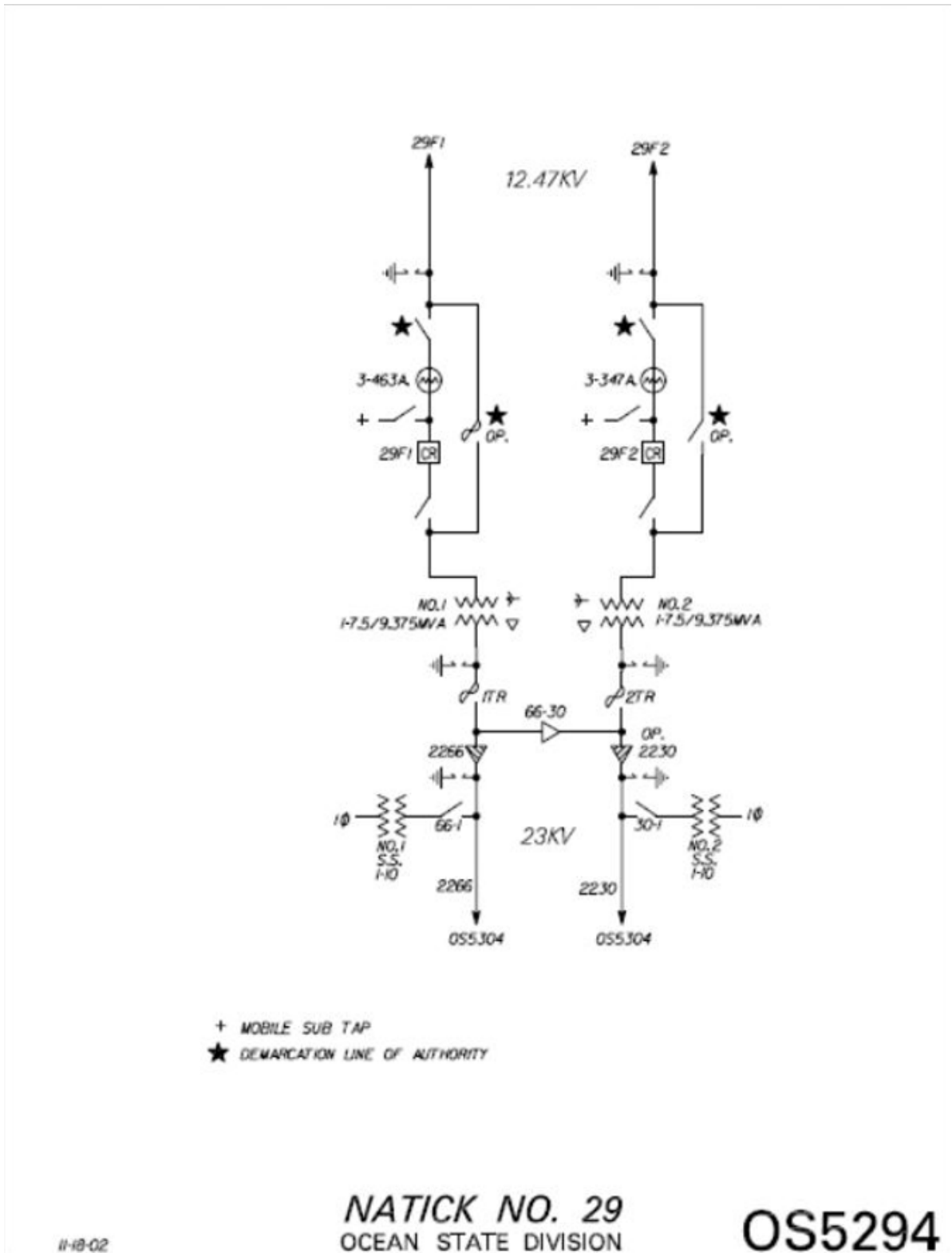
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SHEET 2 OF 2

07-26-17

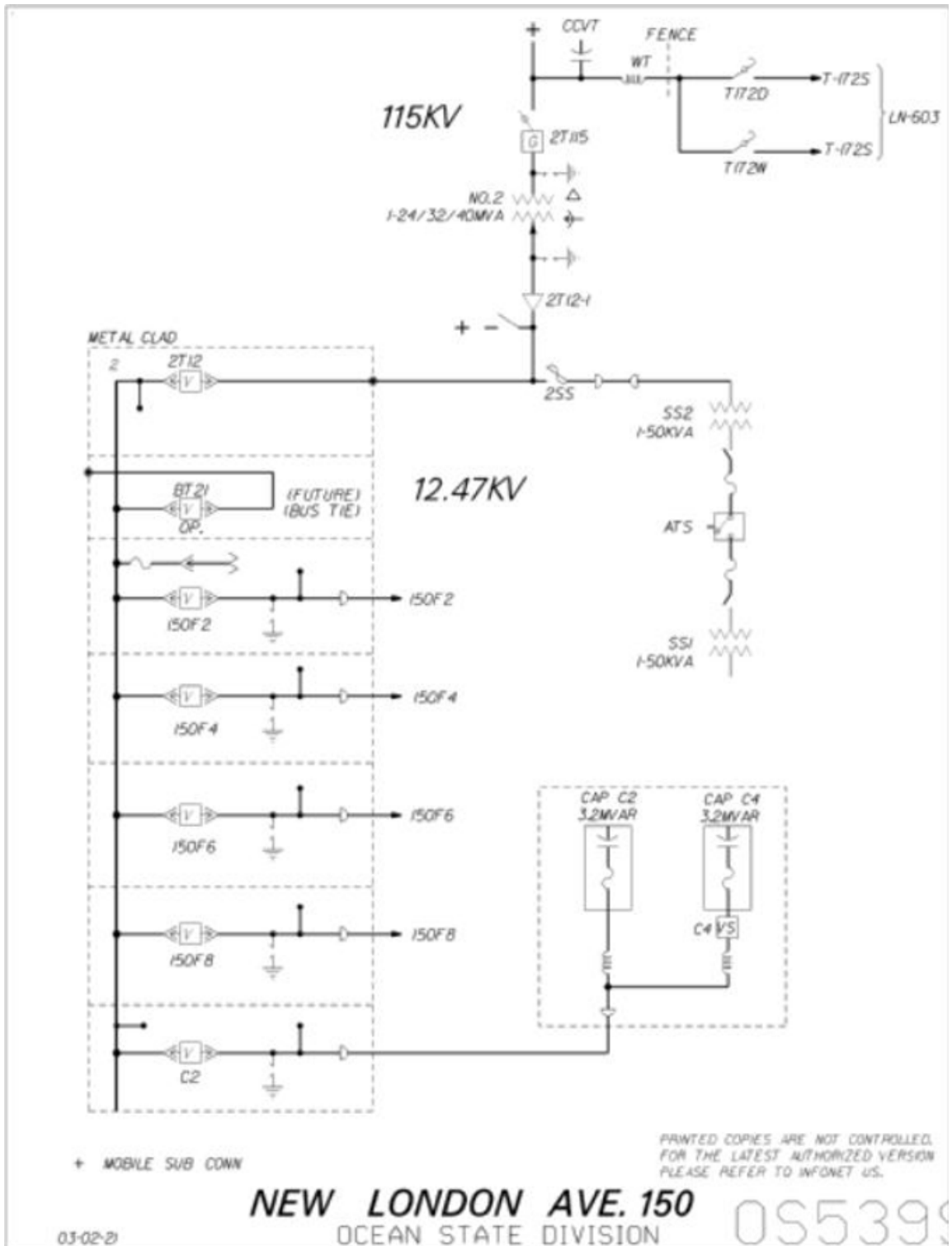
OCEAN STATE DIVISION

**OS5348**

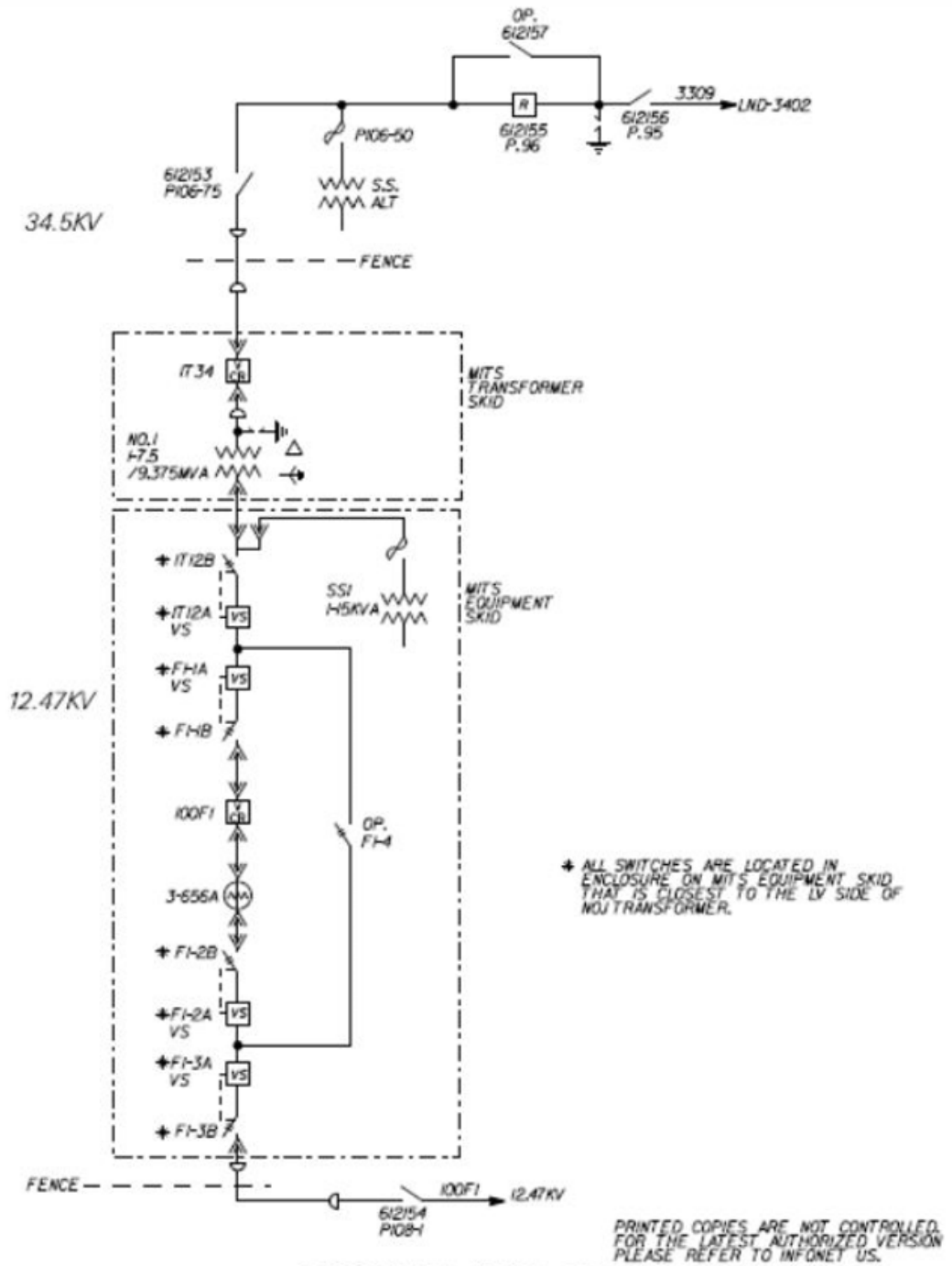
7.2.13 NATICK #29 SUBSTATION ONE-LINE DIAGRAM



7.2.14 NEW LONDON #150 SUBSTATION ONE-LINE DIAGRAM

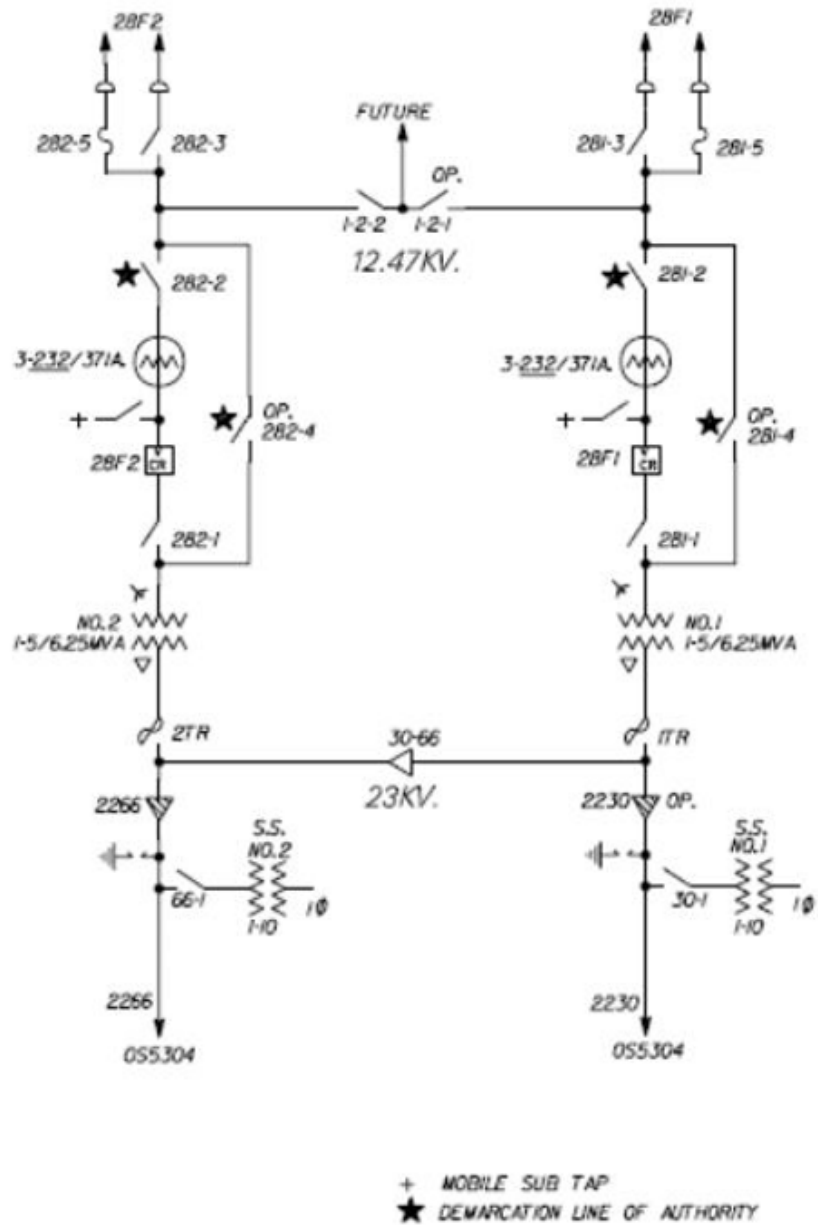


7.2.15 TIOGUE AVE #100 SUBSTATION ONE-LINE DIAGRAM



TIOGUE AVE 100  
OCEAN STATE DIVISION  
OS5342

7.2.16 WARWICK MALL #28 SUBSTATION ONE-LINE DIAGRAM



WARWICK MALL NO. 28  
OCEAN STATE DIVISION

OS5296

11-18-02

### 7.3 Arc Flash and Fault Duty Analysis

Substation	ID	OH Feeder UG Feeder	Breaker IC	Vreg Duty	Arc Flash cal/cm <sup>2</sup>
ANTHONY 64	T1	64F1	sufficient	sufficient	<8
ANTHONY 64	T2	64F2	sufficient	sufficient	<8
COVENTRY 54	T1	54F1	sufficient	sufficient	<8
DIVISION ST 61	T1	61F1	sufficient	sufficient	<8
DIVISION ST 61		61F3	sufficient	sufficient	<8
DIVISION ST 61	T2	61F2	sufficient	sufficient	<8
DIVISION ST 61		61F4	sufficient	sufficient	<8
HOPE 15	T1	15F1	sufficient	sufficient	<8
HOPE 15	T2	15F2	sufficient	sufficient	<8
HOPKINS HILL 63	T1	63F1	sufficient	sufficient	<8
HOPKINS HILL 63		63F3	sufficient	sufficient	<8
HOPKINS HILL 63		63F5	sufficient	sufficient	<8
HOPKINS HILL 63	T2	63F2	sufficient	sufficient	<8
HOPKINS HILL 63		63F4	sufficient	sufficient	<8
HOPKINS HILL 63		63F6	sufficient	sufficient	<8
KENT COUNTY 22	T5	22F1	sufficient	sufficient	<8
KENT COUNTY 22		22F3	sufficient	sufficient	<8
KENT COUNTY 22	T6	22F2	sufficient	sufficient	<8
KENT COUNTY 22		22F4	sufficient	sufficient	<8
KENT COUNTY 22		22F6	sufficient	sufficient	<8
NATICK 29	T1	29F1	sufficient	sufficient	<8
NATICK 29	T2	29F2	sufficient	sufficient	<8
NEW LONDON 150	T2	150F2	sufficient	sufficient	<8
NEW LONDON 150		150F4	sufficient	sufficient	<8
NEW LONDON 150		150F6	sufficient	sufficient	<8
NEW LONDON 150		150F8	sufficient	sufficient	<8
TIOGUE AVE 100	T1	100F1	sufficient	sufficient	<8
WARWICK MALL 28	T1	28F1	sufficient	sufficient	<8
WARWICK MALL 28	T2	28F2	sufficient	sufficient	<8

ANSI C or larger size paper is needed for an optimal view of the dashboard.

### 7.4 Reactive Compensation

			Substation Reactive Power	Line Reactive Power	
Substation	ID	OH Feeder UG Feeder	'35 MVAR	'35 PF	'35 kVAR
ANTHONY 64	T1	64F1	0.0	-93.0	-1379
ANTHONY 64	T2	64F2	0.0	86.0	1641
COVENTRY 54	T1	54F1	3	95	2291
DIVISION ST 61	T1	61F1	4.0	90.0	3031
DIVISION ST 61		61F3		99.0	364
DIVISION ST 61	T2	61F2	4.0	-99.0	-309
DIVISION ST 61		61F4		99.0	1167
DRUMROCK 14		2230		99.0	2100
DRUMROCK 14		2232		100.0	0
DRUMROCK 14		2266		94.0	5100
HOPE 15	T1	15F1	1.0	-74.0	-2606
HOPE 15	T2	15F2	2.0	100.0	185
HOPKINS HILL 63	T1	63F1	-7.0	90.0	1964
HOPKINS HILL 63		63F3		-100.0	-604
HOPKINS HILL 63		63F5		-99.0	-995
HOPKINS HILL 63	T2	63F2	-6.0	-100.0	-292
HOPKINS HILL 63		63F4		95	1093
HOPKINS HILL 63		63F6		90.0	5000
KENT COUNTY 22	T1	3309	-2.0	99.0	4500
KENT COUNTY 22	T2	3310	-2.0	94.0	-4500
KENT COUNTY 22	T7	3311	-2.0	99.0	3500
KENT COUNTY 22		3312		100.0	1100
KENT COUNTY 22	T5	22F1	-8.0	-100.0	-119
KENT COUNTY 22		22F3		100.0	242
KENT COUNTY 22	T6	22F2	-4.0	96.0	2481
KENT COUNTY 22		22F4		97.0	1321
KENT COUNTY 22		22F6		98.0	1477
NATICK 29	T1	29F1	2.0	99.0	562
NATICK 29	T2	29F2	1.0	99.0	462
NEW LONDON 150	T2	150F2	2.0	95	2257
NEW LONDON 150		150F4		94.0	2228
NEW LONDON 150		150F6		93.0	3256
NEW LONDON 150		150F8		-98.0	-1057
TIOGUE AVE 100	T1	100F1	1	99.0	1476
WARWICK MALL 28	T1	28F1	1.0	95	974
WARWICK MALL 28	T2	28F2	1.0	91.0	965

## 9.6 Plan Development

FIGURE 9.6.1 – REBUILD COVENTRY #54

FIGURE 9.6.2 – HOPE #15 REPLACE RELEVANT EQUIPMENT

FIGURE 9.6.3 – DIVISION ST. #61 REPLACE TRANSFORMERS AND OTHER RELEVANT EQUIPMENT

FIGURE 9.6.4 – COVENTRY 54F1 RECONDUCTORING

FIGURE 9.6.5 – DIVISION ST. 61F2 RECONDUCTORING

FIGURE 9.6.6 – NATICK 29F1 RECONDUCTORING

FIGURE 9.6.7 - NEW LONDON 150F6 RECONDUCTORING

FIGURE 9.6.8 - CHASE HILL 155F8/HOPKINS HILL 63F6 TIE RELOCATION

FIGURE 9.6.9 - NEW KILVERT ST. 87F1 BACKUP FEEDER TIE

FIGURE 9.6.10 - NEW LONDON AVE. PROPOSED LOCATION

FIGURE 9.6.11 - NEW LONDON AVE. PROPOSED FEEDERS

FIGURE 9.6.12 - ANTHONY #64 ASSET CONDITION REPLACEMENTS

FIGURE 9.6.13 - NATICK #29 ASSET CONDITION REPLACEMENTS

FIGURE 9.6.14 - WARWICK MALL #28 ASSET CONDITION REPLACEMENTS

FIGURE 9.6.15 - 3309, 3310, AND 3311 EXTENSIONS

FIGURE 9.6.16 - COVENTRY 54F1 AND HOPKINS HILL 63F6

FIGURE 9.6.17 - WEAVER HILL SUB PROPOSED LOCATION AND PICKUPS

FIGURE 9.6.18 - PINE HILL PROPOSED LOCATION AND PICKUPS

FIGURE 9.6.19 - WEAVER HILL DETAILED SCOPE

FIGURE 9.6.20 - WEAVER HILL SUBSTATION ONE LINE



FIGURE 9.6.1 – REBUILD COVENTRY #54

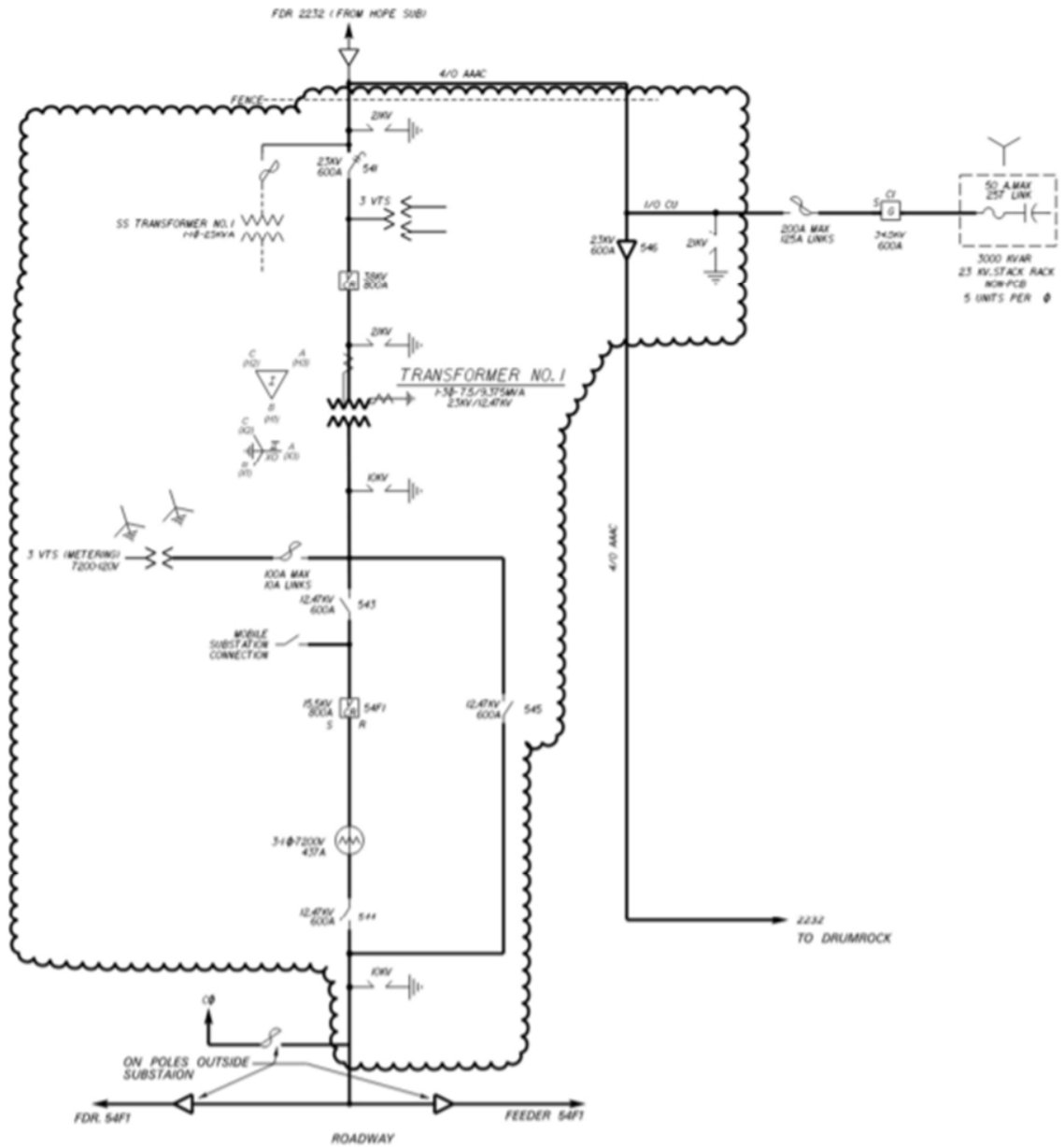
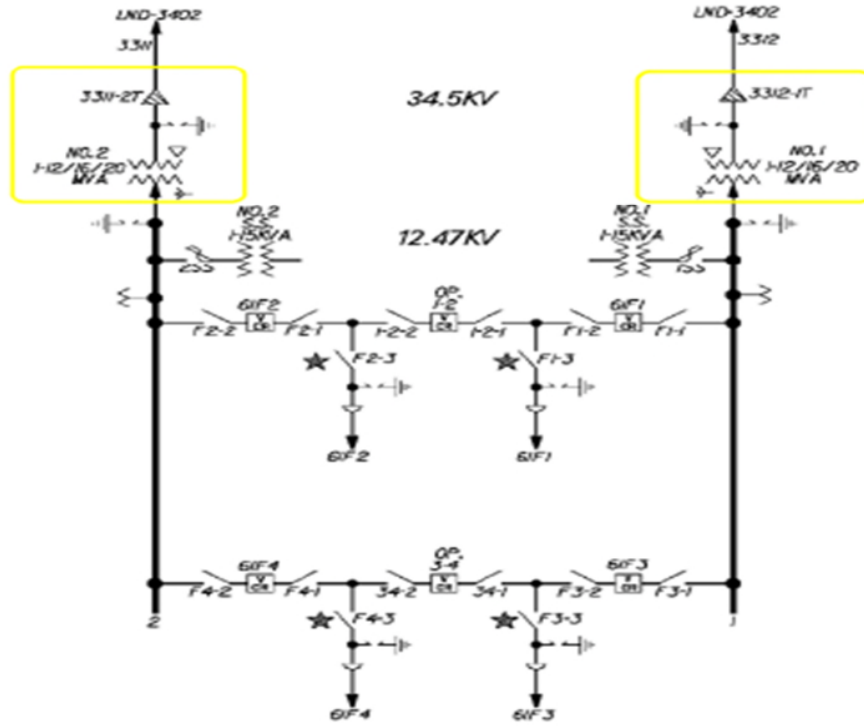




FIGURE 9.6.3 – DIVISION ST. #61 REPLACE TRANSFORMERS AND OTHER RELEVANT EQUIPMENT



★ DEMARCATION LINE OF AUTHORITY

**DIVISION ST. NO. 61**  
OCEAN STATE DIVISION

**OS5319**

N-18-G2

FIGURE 9.6.4 – COVENTRY 54F1 RECONDUCTING

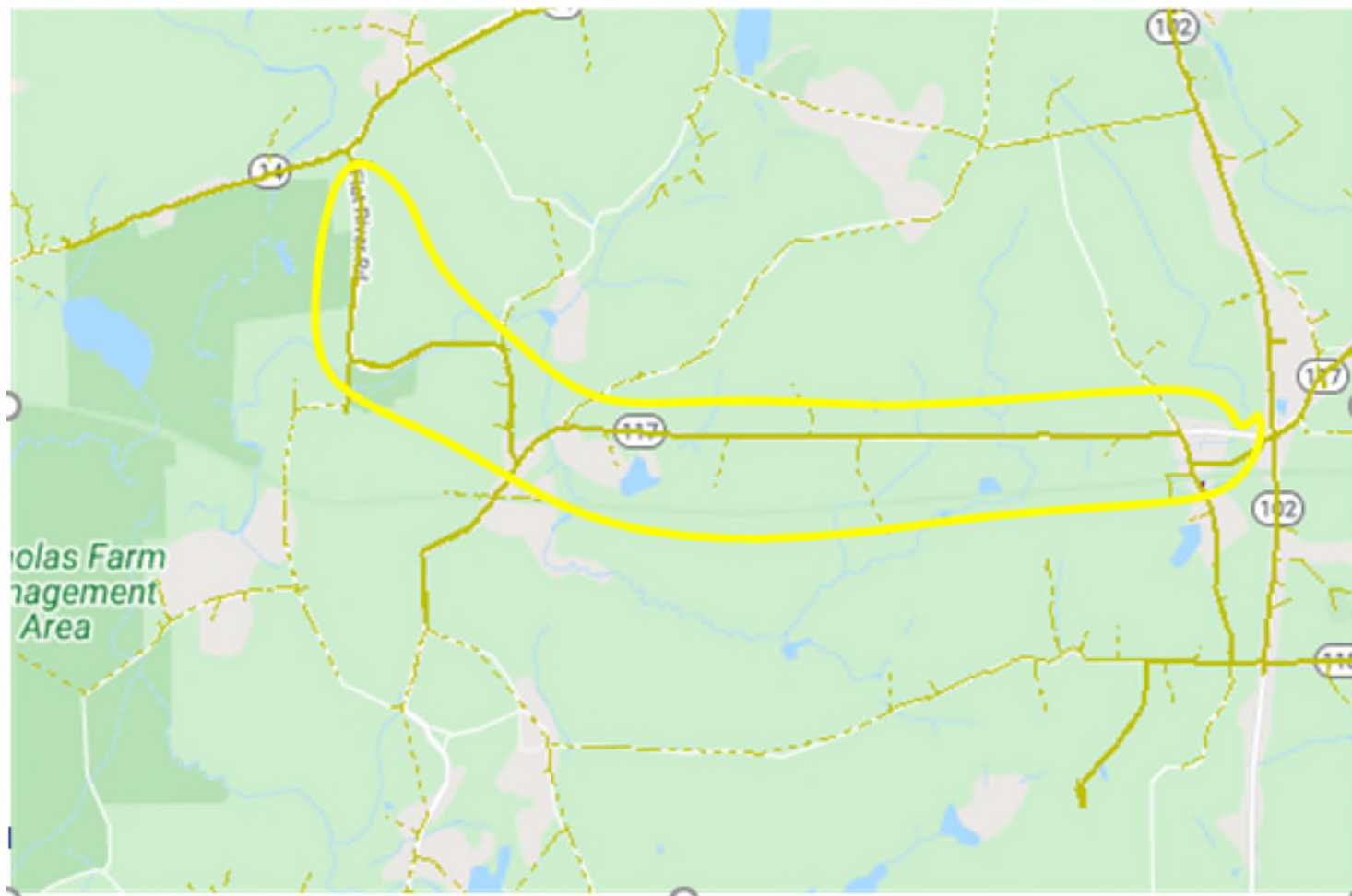


FIGURE 9.6.5 – DIVISION ST. 61F2 RECONDUCTORING

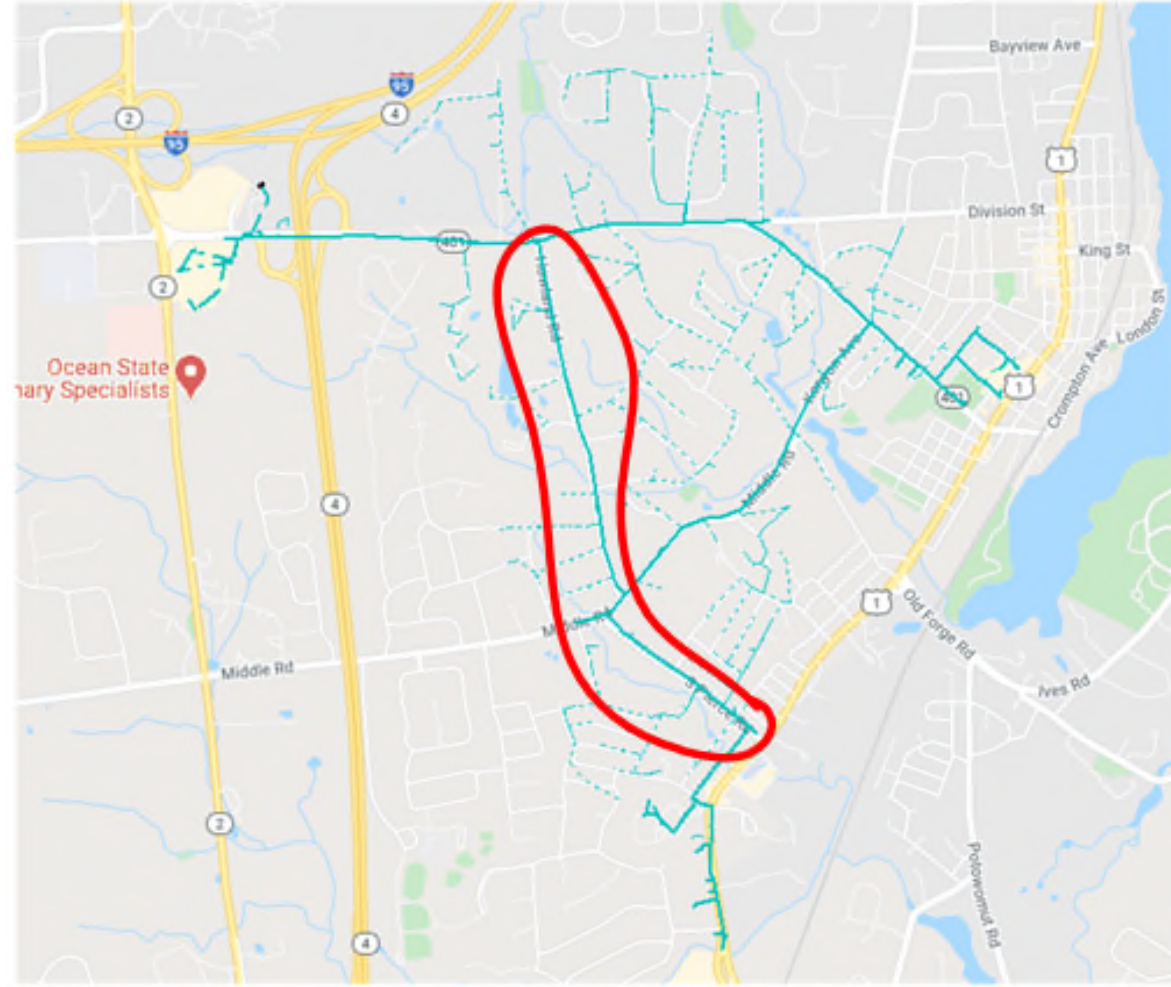


FIGURE 9.6.6 – NATICK 29F1 RECONDUCTORING

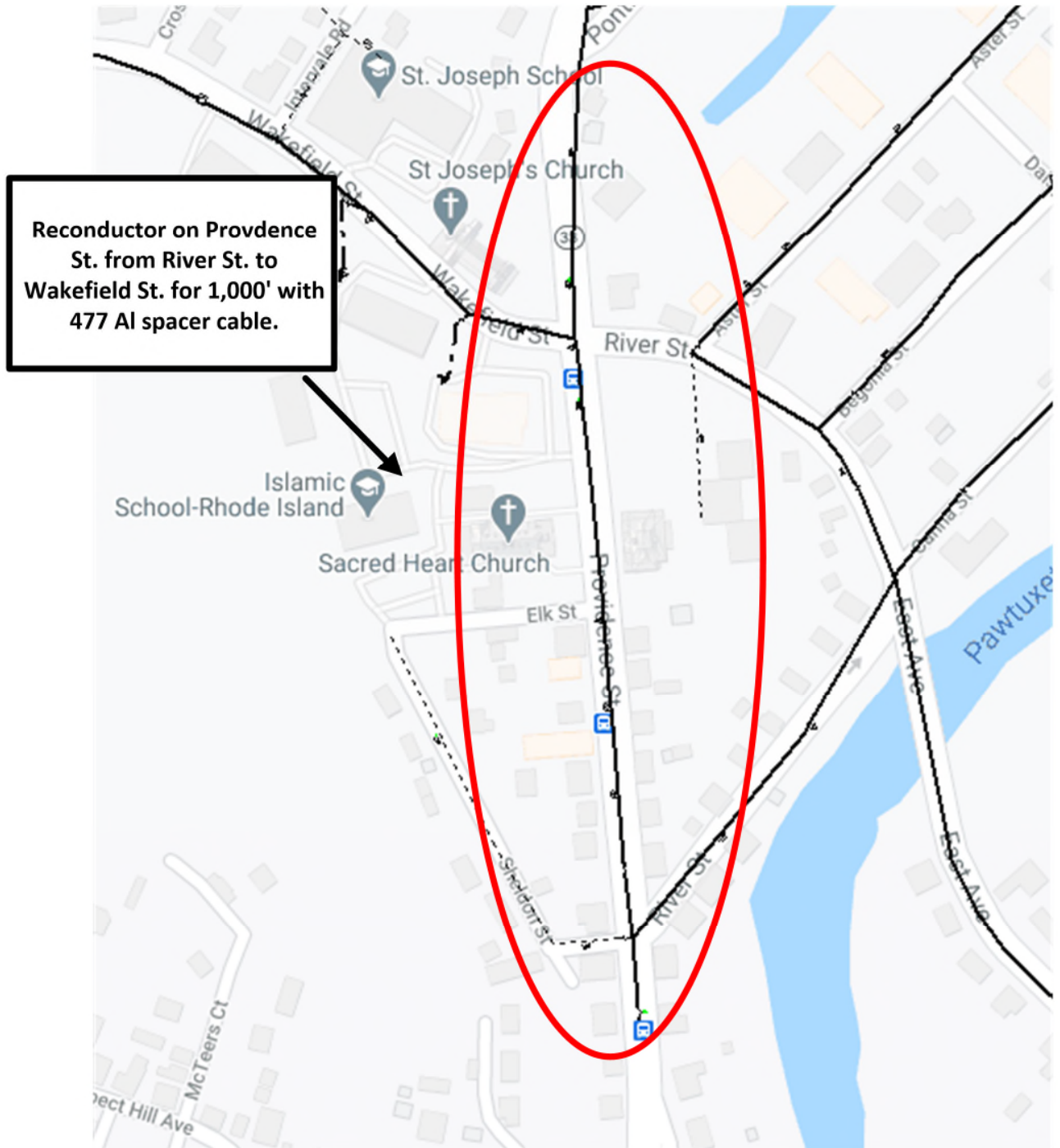


FIGURE 9.6.7 - NEW LONDON 150F6 RECONDUCTING

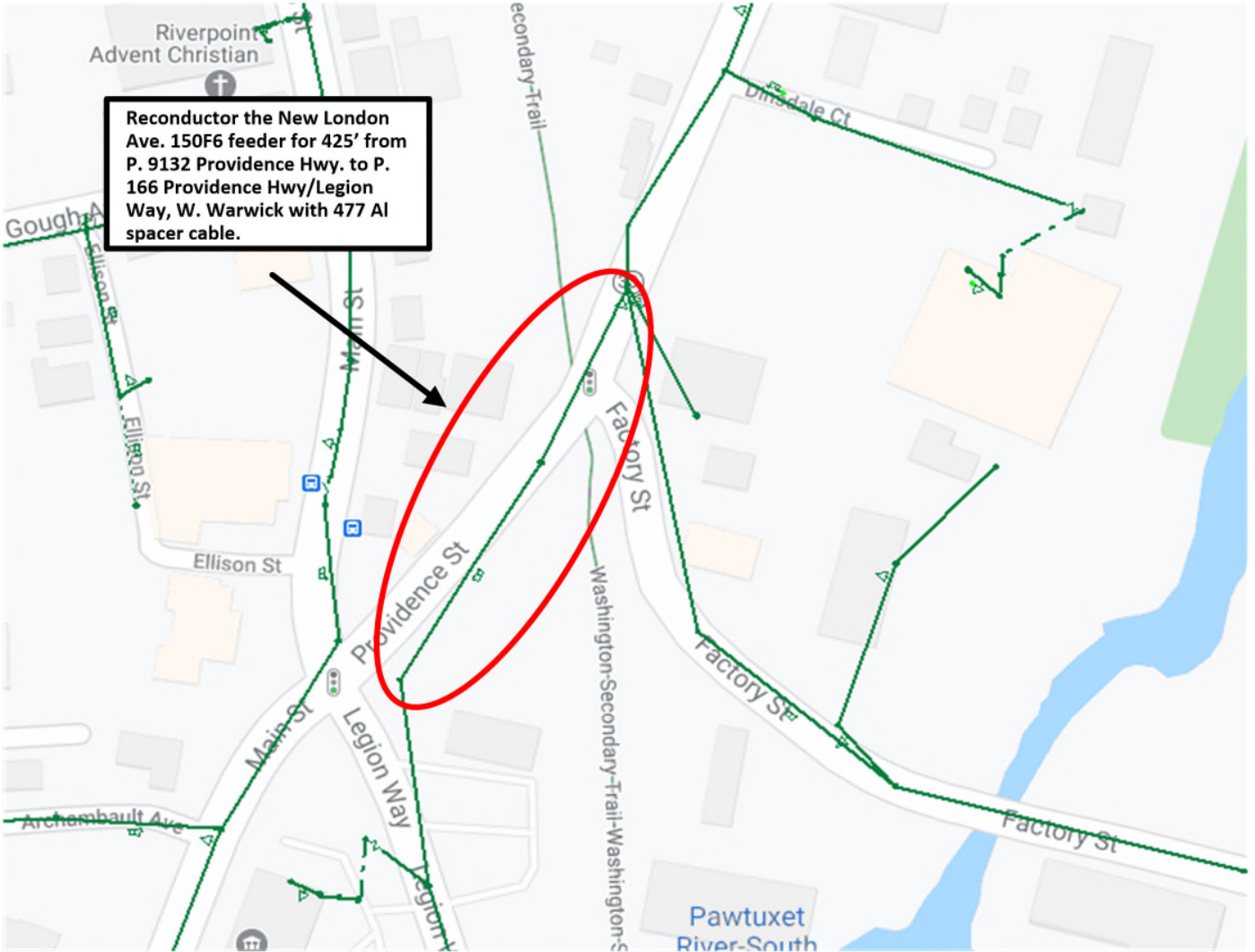


FIGURE 9.6.8 - CHASE HILL 155F8/HOPKINS HILL 63F6 TIE RELOCATION

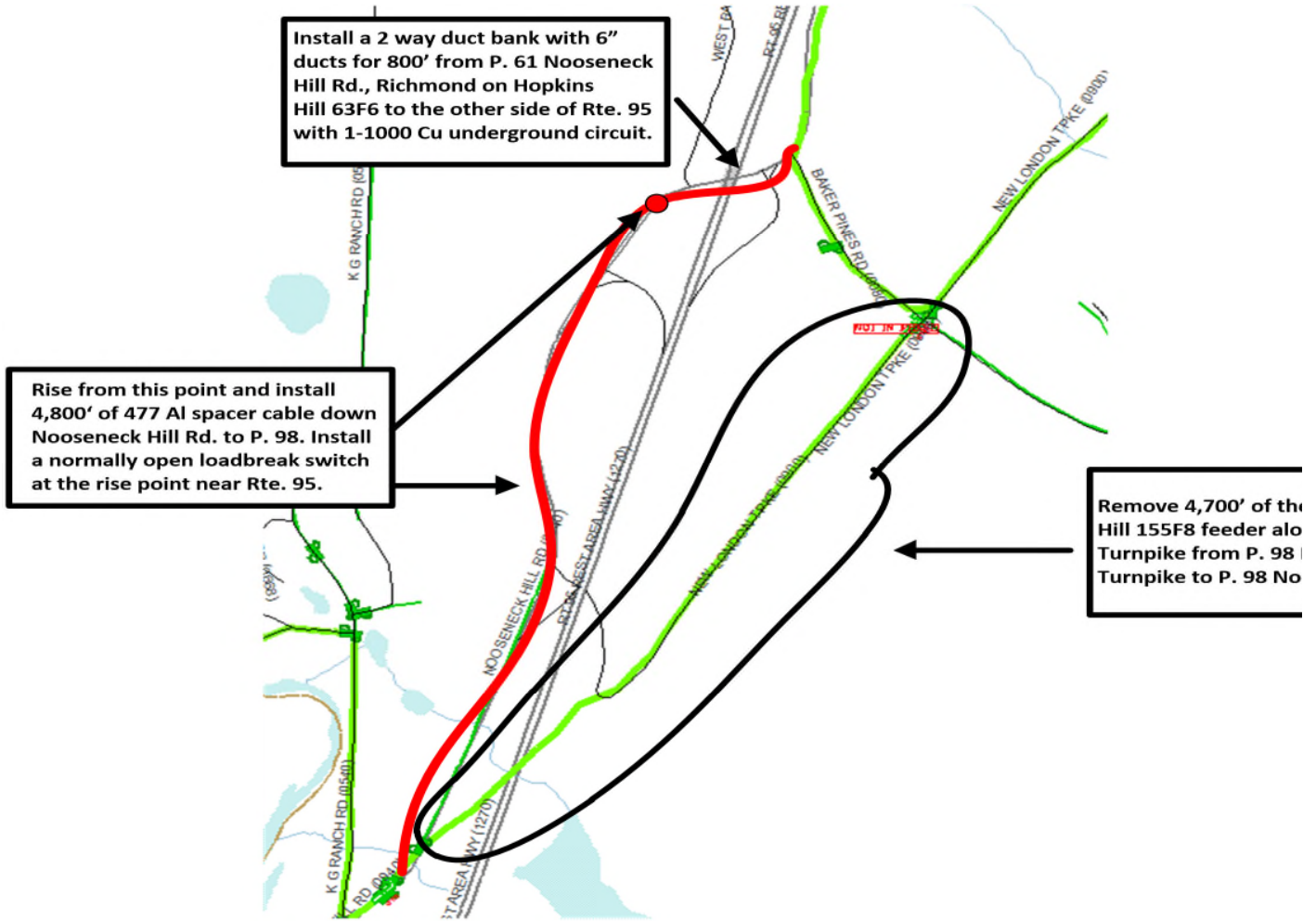




FIGURE 9.6.9 - NEW KILVERT ST. 87F1 BACKUP FEEDER TIE

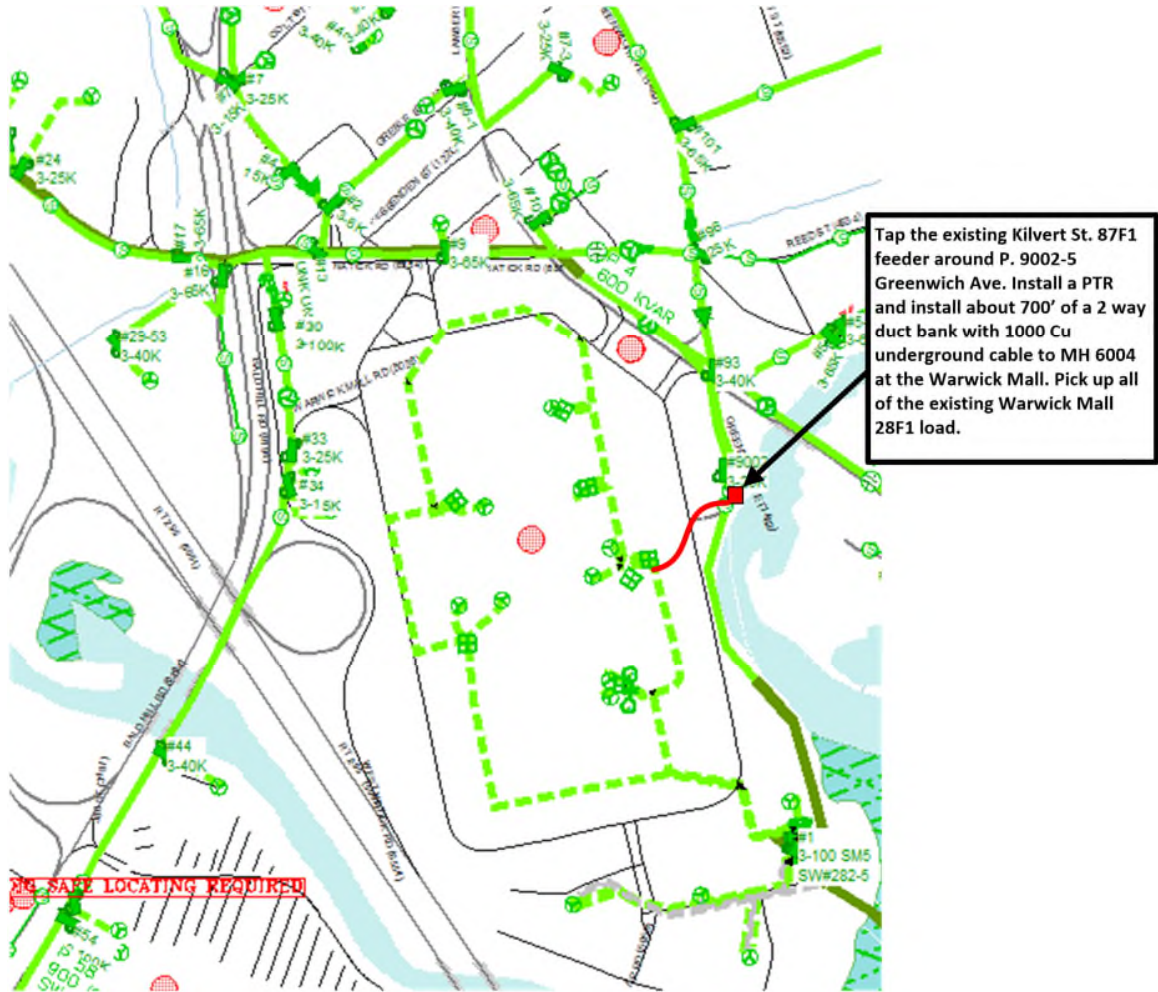


FIGURE 9.6.10 - NEW LONDON AVE. PROPOSED LOCATION

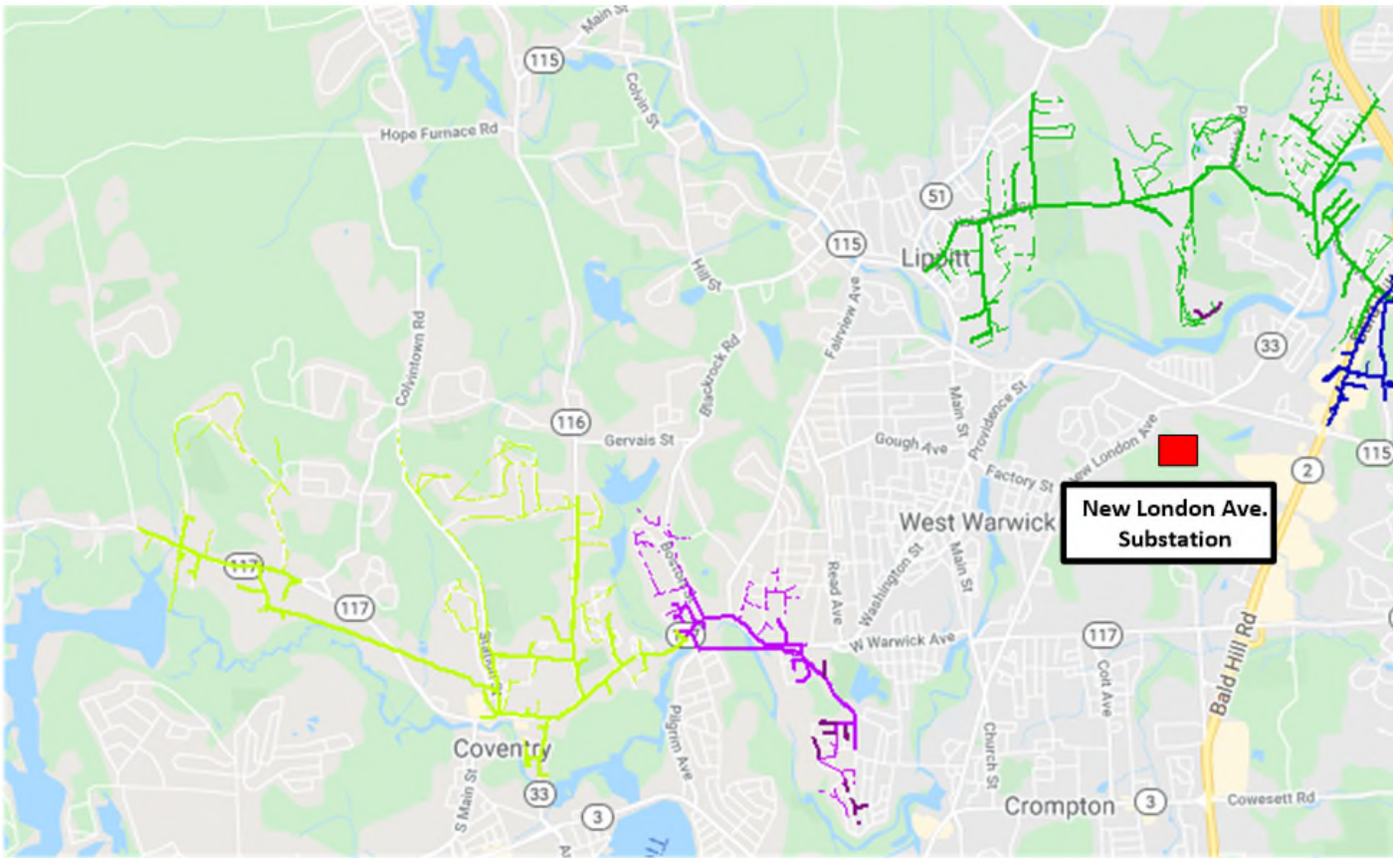
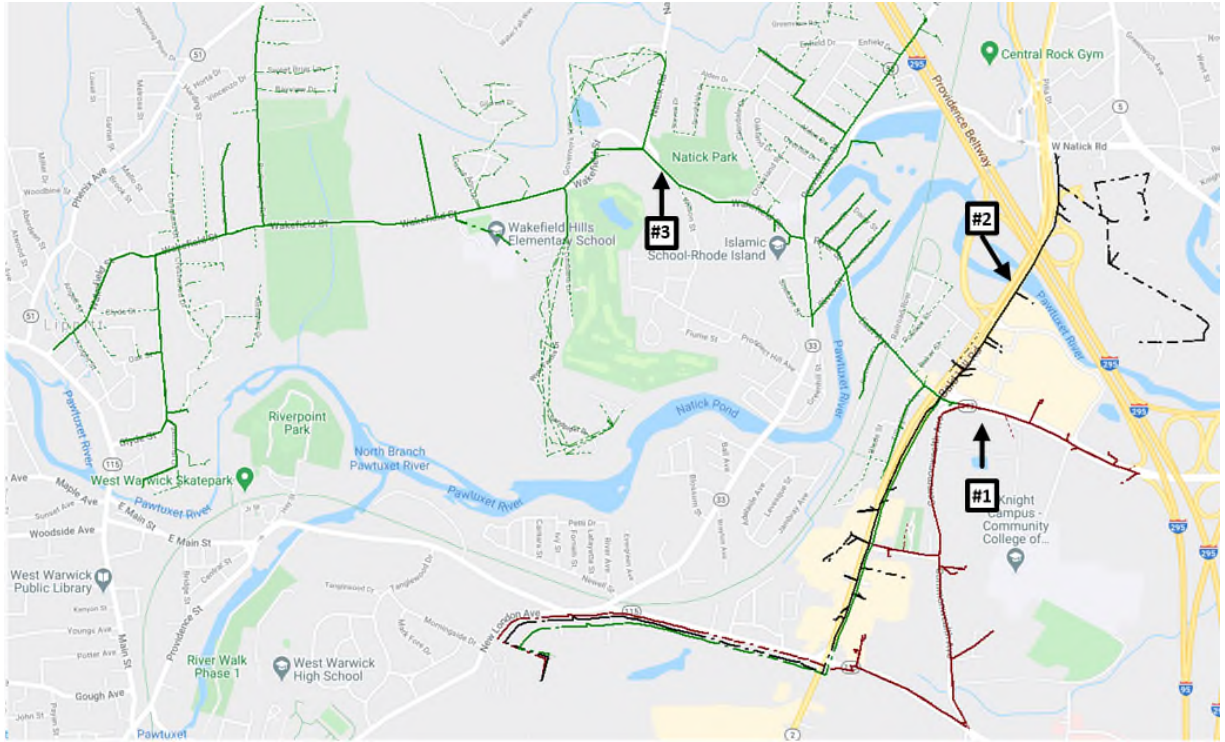


FIGURE 9.6.11 - NEW LONDON AVE. PROPOSED FEEDERS



**New London #4**

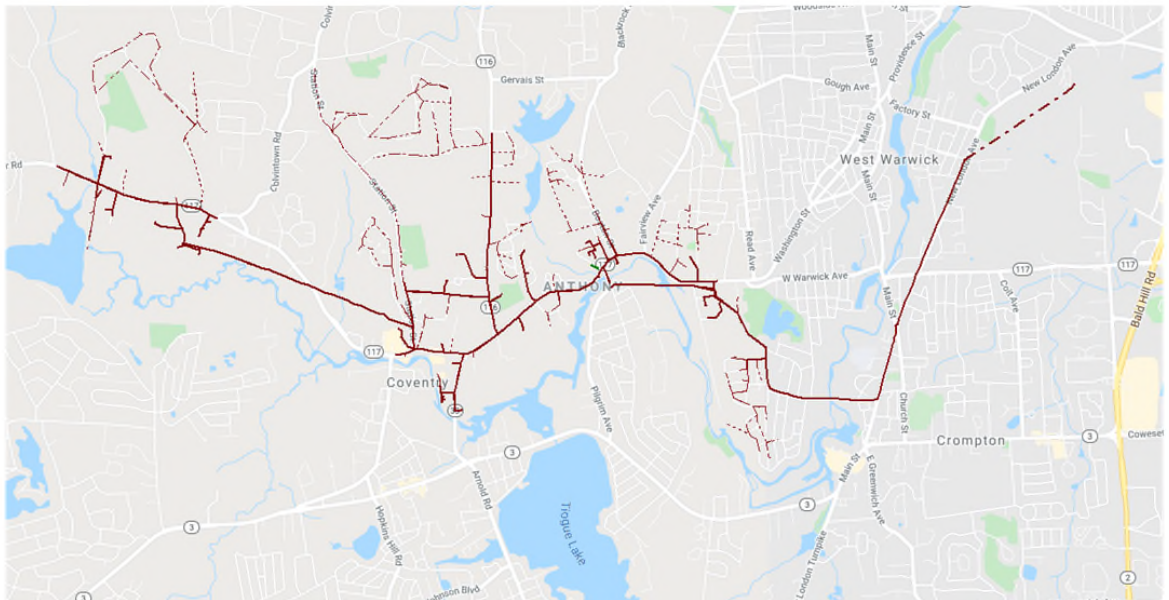


FIGURE 9.6.12 - ANTHONY #64 ASSET CONDITION REPLACEMENTS

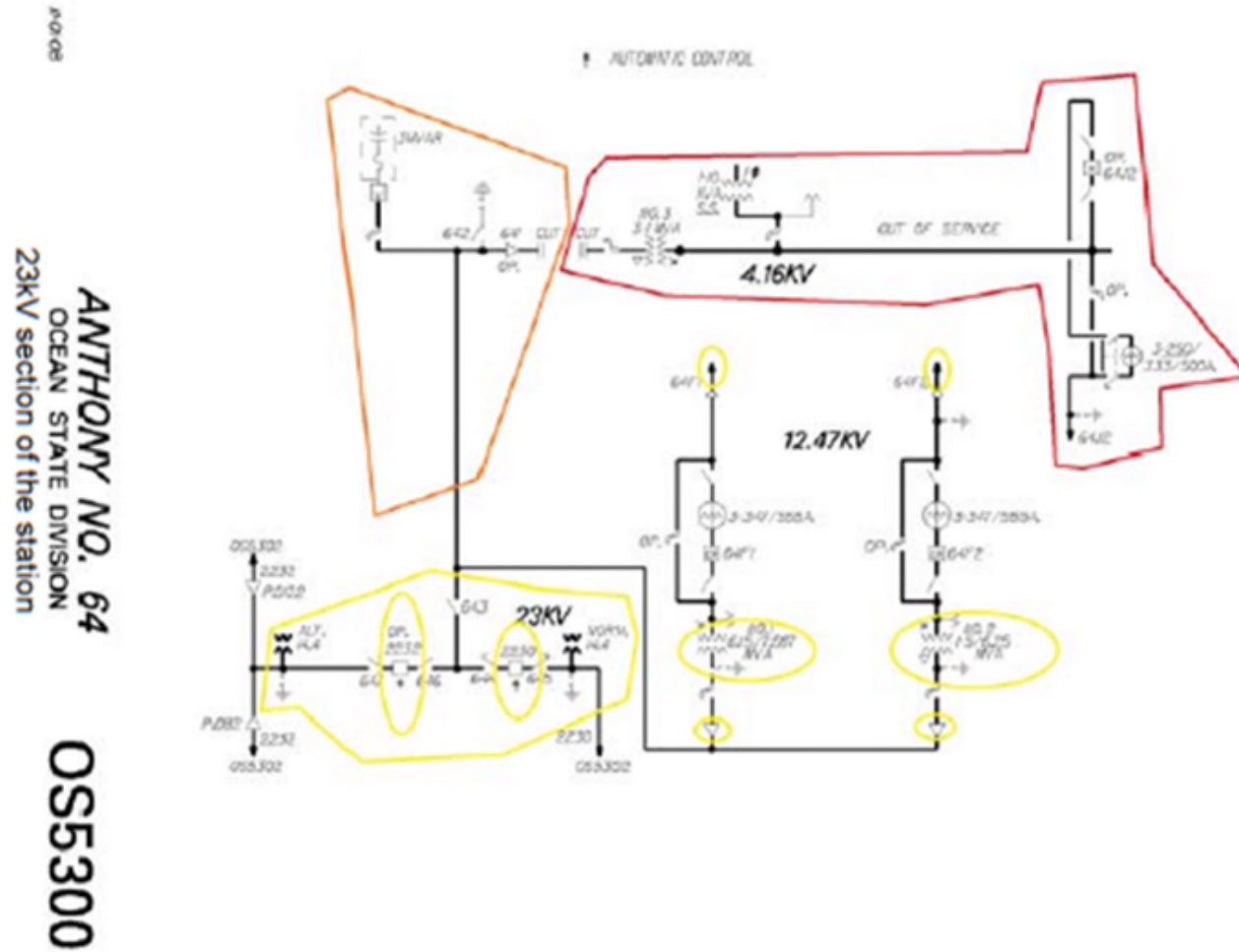


FIGURE 9.6.13 - NATICK #29 ASSET CONDITION REPLACEMENTS

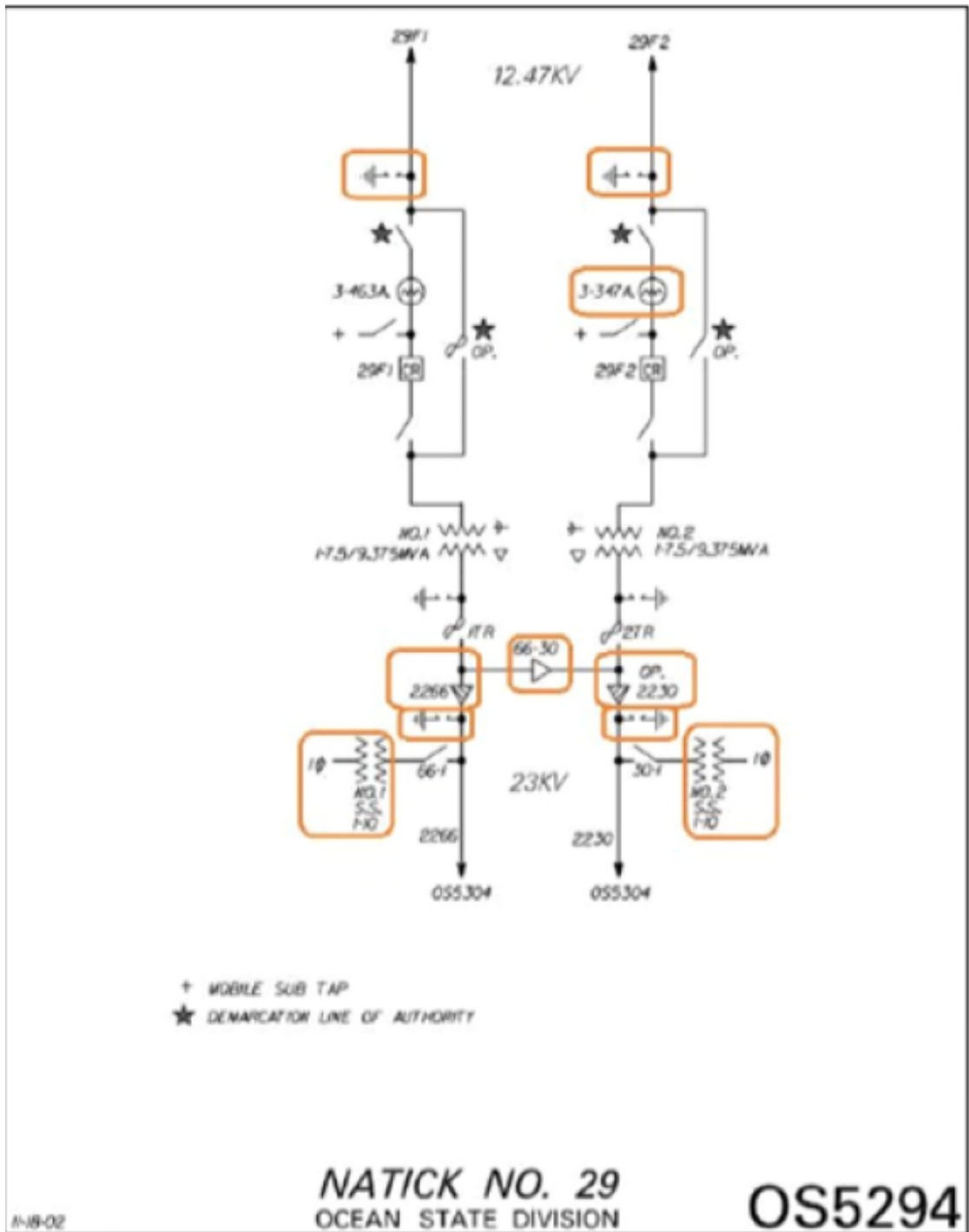


FIGURE 9.6.14 - WARWICK MALL #28 ASSET CONDITION REPLACEMENTS

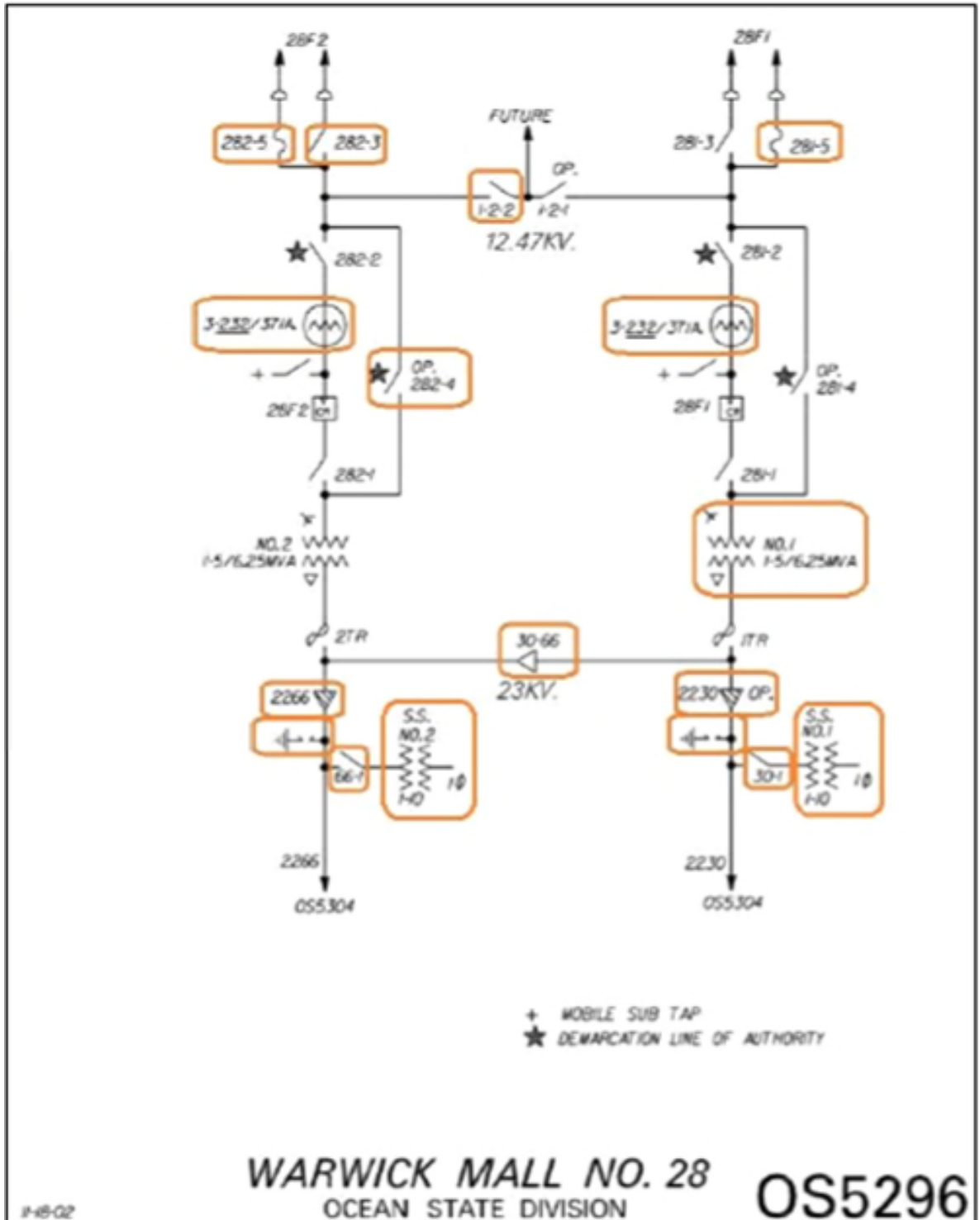


FIGURE 9.6.15 - 3309, 3310, AND 3311 EXTENSIONS



FIGURE 9.6.16 - COVENTRY 54F1 AND HOPKINS HILL 63F6

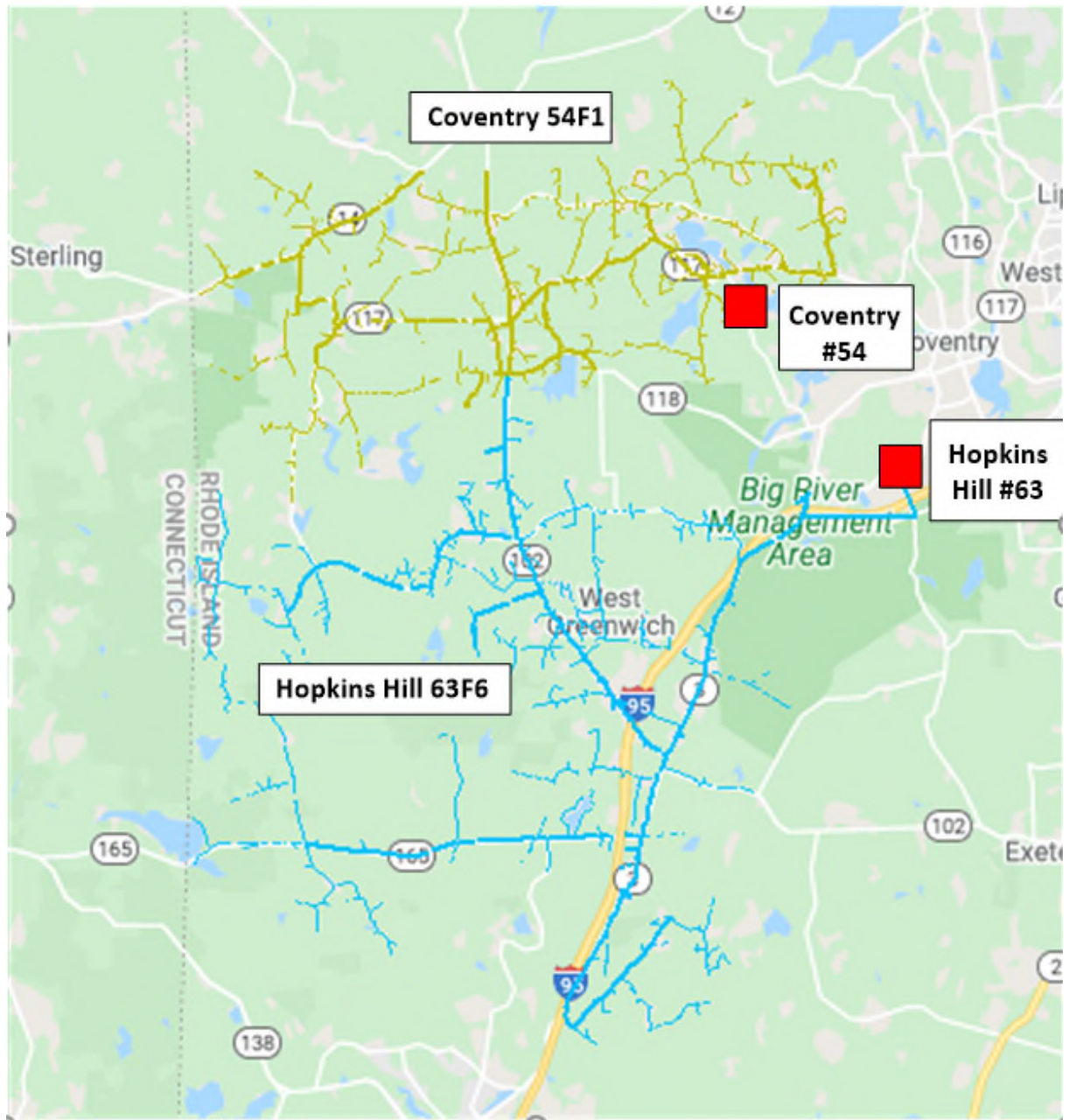




FIGURE 9.6.17 - WEAVER HILL SUB PROPOSED LOCATION AND PICKUPS

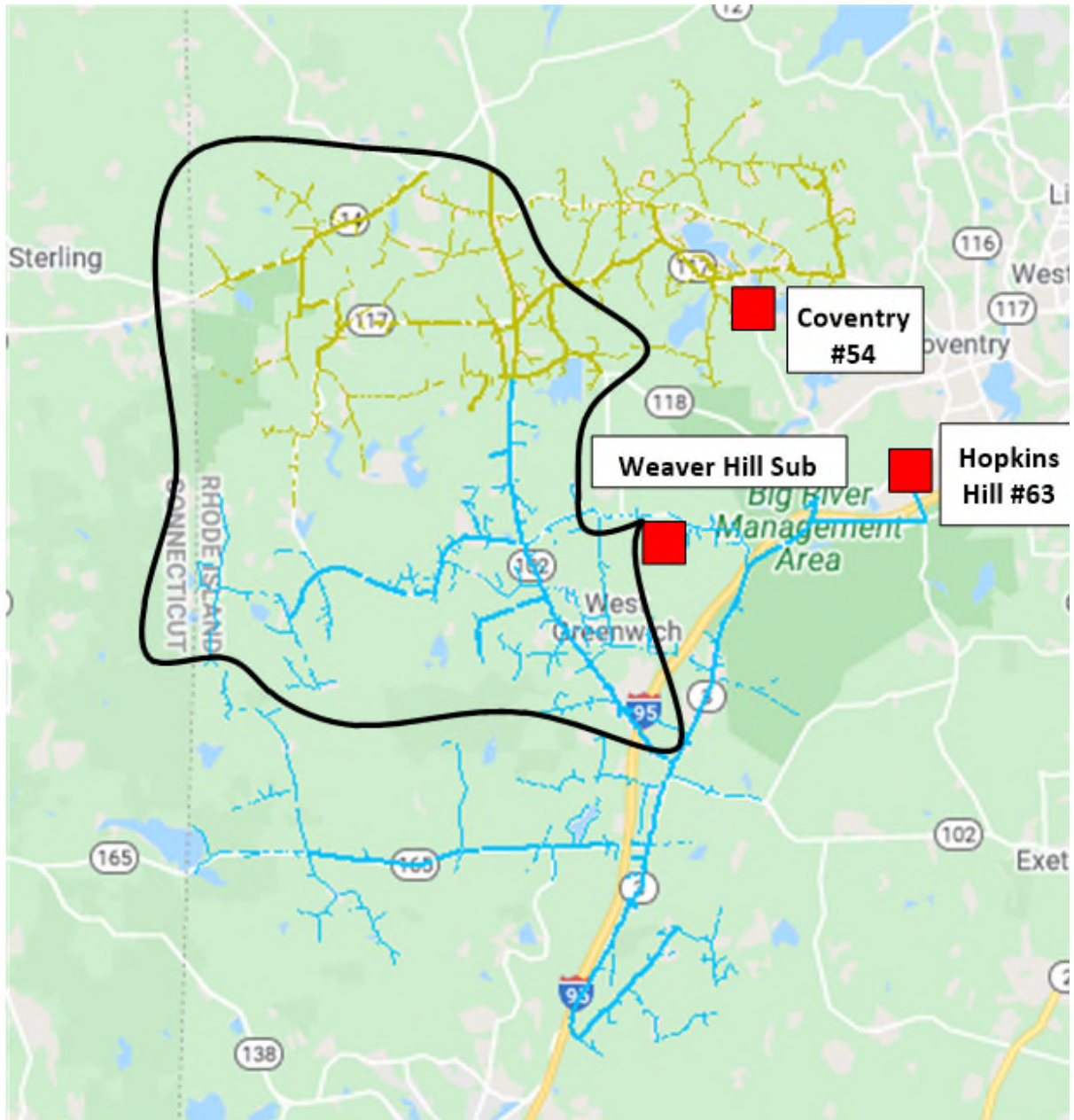
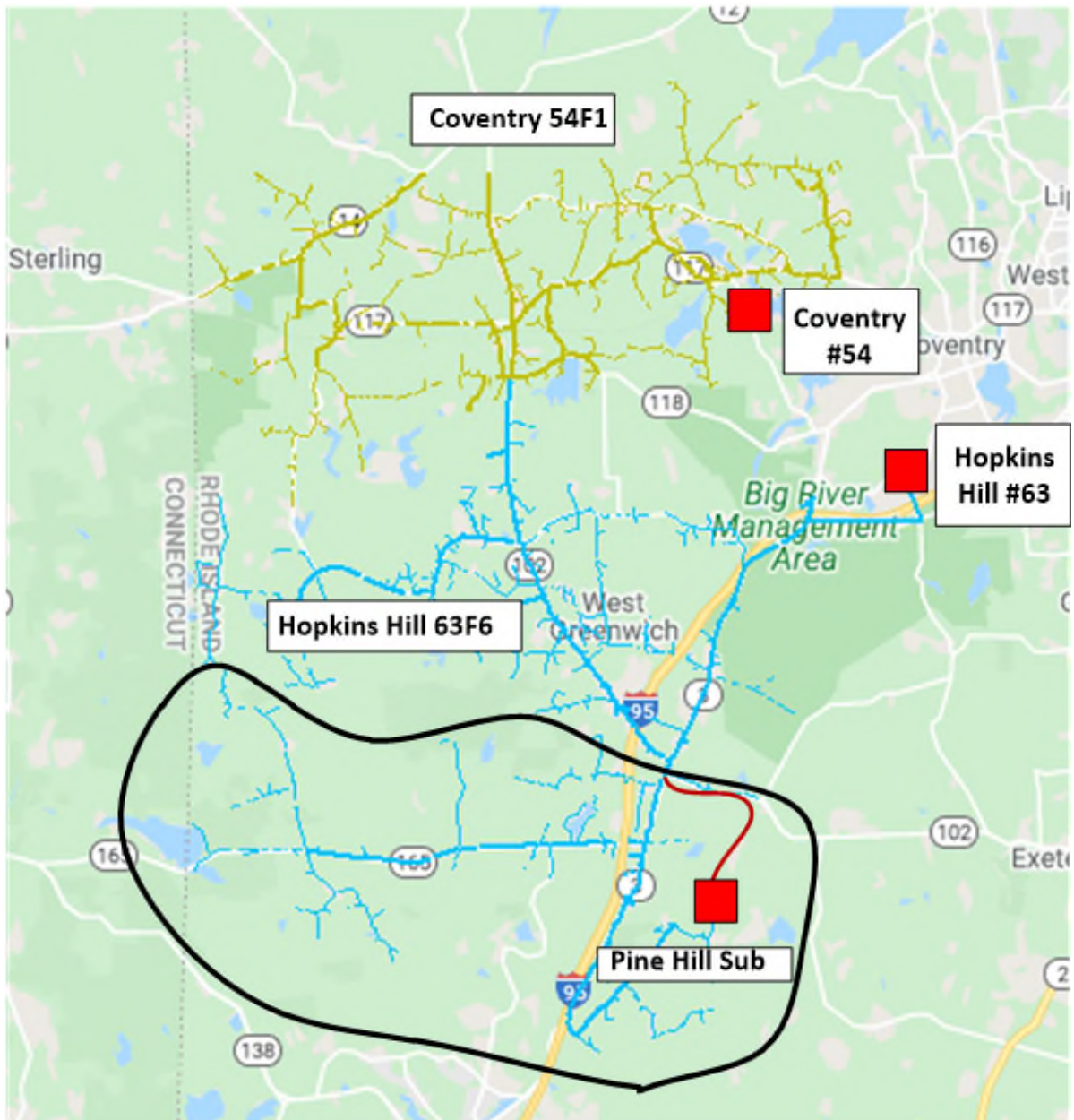


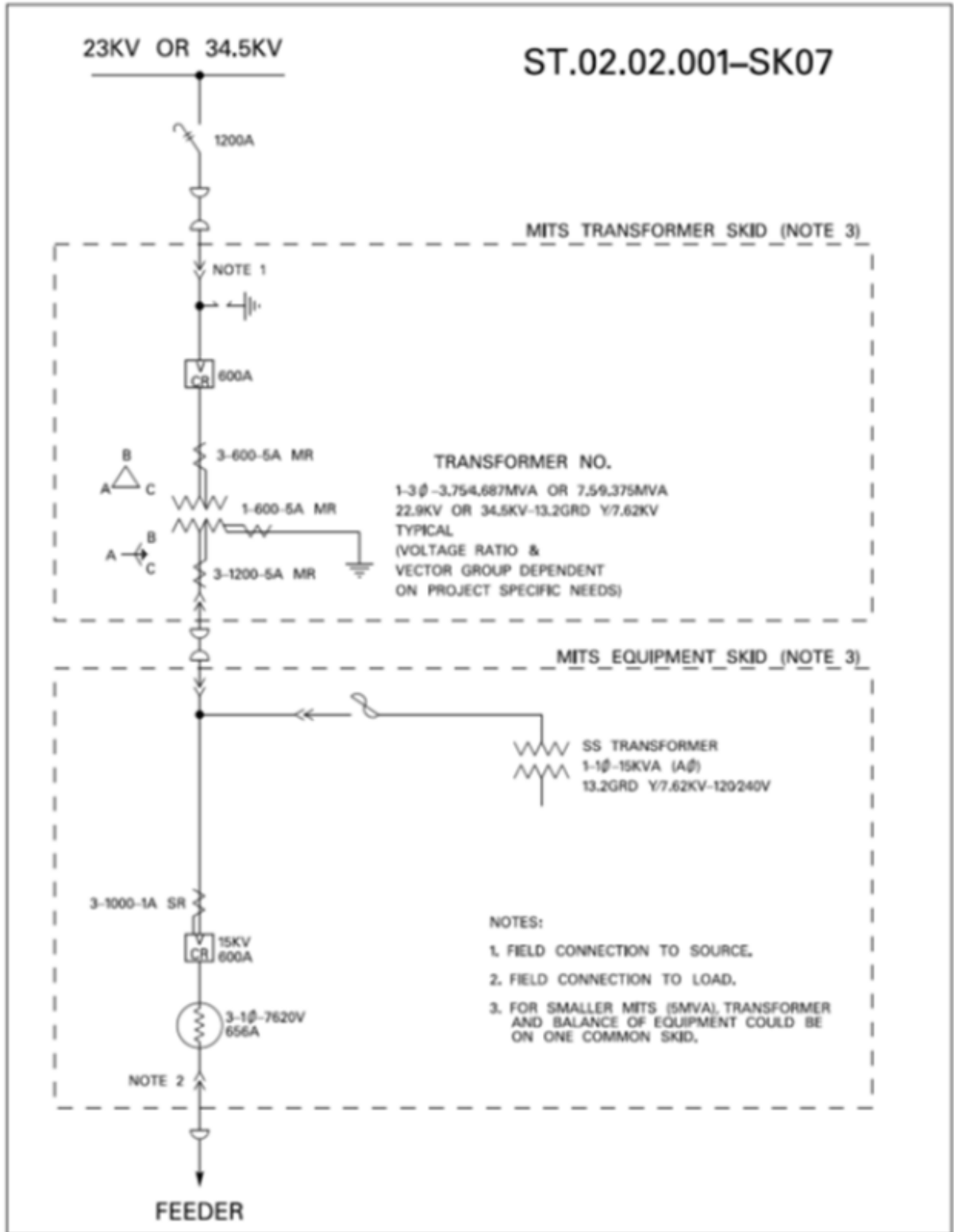
FIGURE 9.6.18 - PINE HILL PROPOSED LOCATION AND PICKUPS



## FIGURE 9.6.19 - WEAVER HILL DETAILED SCOPE

Install a new MITS at a 36.6-acre greenfield site near P. #64 Weaver Hill Rd., West Greenwich, RI. The site must be prepped to accept the substation. Major equipment to include one (1) 34.5/13.2 kV, 7.5/9.375 MVA transformer, one (1) 34.5 kV, 600-amp recloser, one (1) 13 kV, 600-amp recloser and three (3) 7620 V, 656-amp voltage regulators.

FIGURE 9.6.20 - WEAVER HILL SUBSTATION ONE LINE



## 9.7 Non-Wires Alternative Criteria

Where an issue has been identified, a Non-Wires Alternative may also be considered as an option to defer a transmission, sub-transmission, or distribution wires solution for a period of time. Considering Non-Wires Alternatives to every wires solution is not practical given the low cost of a large volume of potential wires solutions, the magnitude of load relief required in certain situations, the time to acquire Non-Wires Alternatives (and verify their availability) or instances where the issue is poor operating condition of the asset. As a result, Non-wires Alternatives are screened against the following four guidelines:

- A. The Wires solution, based on Engineering judgment, will likely be more than \$1M;
- B. If load reduction is necessary, then it will be less than 20 percent of the total load in the area of the defined need.
- C. Start of construction is at least 36 months in the future; and
- D. The need is not based on Asset Condition.



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# Project Cost Audit

## Nooseneck Utility Connection

Conducted by:

Reshma Bhagat  
Randy Richards

ENTRUST Solutions Group

Revision A, Submitted 12/16/2022

**Headquarters:**  
28100 Torch Parkway, Suite 400, Warrenville, IL 60555  
(630) 353-4000 | [info@entrustsol.com](mailto:info@entrustsol.com)



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▪ Appendix A – Independent Project Cost Estimate	
▪ Appendix B – RFI Log and Requests for RIE	
▪ Appendix C – RFI Log and Requests for Green Development	
▪ Appendix D – Green Development Responses	



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## EXECUTIVE SUMMARY OF FINDINGS

### Cost Validation

Per the Rhode Island Public Utility Commission (PUC)'s request, the costs for the UG duct bank were validated to support potential cost sharing with third parties.

FINDING: Some minor errors and clarifications were required but all costs incurred by Green Development have been validated, except for \$79,220 for equipment not related to this project and should be deducted from the total.

### Costs incurred vs reasonable estimate of project

Green Development	Engineering & Design	Labor & Equipment	Subcontractors	General Conditions & Material (\$/lnft)		Total
	\$ 371,458.31	\$ 4,751,088.48	\$ 3,566,341.86	\$ 3,409,094.71		\$ 12,097,983.36

Study Grade Estimate	Engineering	Labor	Contingency	Materials	Permitting, Stores Handling, Sales Tax, Transportation, AFUDC	Total
(-)25%+50%	\$ 554,000.00	\$ 4,848,000.00	\$ 2,307,000.00	\$ 4,380,000.00	\$ 1,072,000.00	\$ 13,161,000.00
				Estimate Range	\$ 9,870,750.00	\$ 19,741,500.00

FINDING: Green Development's costs incurred are within the range of reasonable expected costs for a project of this scope. See Detailed Review and Appendix A for what is included/excluded in cost estimate.

### Bid/Procurement Process

Green Development's procurement, competitive and single source bid processes are outlined in their responses to cost validation questions included in Appendix D.

FINDING: Green Development's methodology and approach are in line with industry standards.

### Impact of 24 hour schedule

In Green Development's responses to cost validation questions included in Appendix D, they discuss their work methods and planned working hours. Our estimate assumed 40-hour day shift work to review impact of differing work methods.

FINDING: Efficiencies in schedule were gained by reducing the significant impact caused by plating and un-plating and these efficiencies more than covered any cost differences related to





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24 hour work, e.g. police detail, etc. The overall cost incurred by Green Development is well within the acceptable estimate range of a project utilizing a “traditional” work schedule.

### **AUDIT PROCEDURE FOLLOWED**

The Assigned Audit Team completed the following:

- Reviewed the objective and scope of the project, the project schedule, the status, and associated cost information as provided by the company. Where necessary interviews were completed with key project team members.
  - Schedule:
    - Reviewed the baseline schedule and subsequent changes which included the process of analyzing activity sequences, constructability, activity durations and buffers, resource requirements, design and coding of activities and project organization, schedule constraints, project milestones, area access restrictions and compliance with contractual requirements.
  - Material costs:
    - Performed material take-offs to determine a comprehensive list of expected material quantities needed to complete the construction of the project by length, weight, and volume.
    - Reviewed material purchase orders and compare against material take-off quantities for accuracy.
    - Compared material unit costs against expected costs to determine total expected budget for project.
  - Equipment costs:
    - Reviewed project construction activities and equipment required for project construction.
    - Performed project cost estimation techniques to determine the valuation of operating machinery and equipment.
    - Compared equipment costs against expected costs based off projected equipment needed for construction activities.
  - Labor costs:
    - Reviewed project construction activities and construction manpower planning required for project.
    - Evaluated project construction schedule, shifts, recruitment, and future hiring (if needed) with associated labor costs.
  - Subcontractor / project support services costs:
    - Evaluated bid process for subcontractor services, including but not limited to the following:
      - Electrical
      - Piping
      - Concrete
      - Paving
      - Police Details
      - Traffic Management
    - Assessed the project delivery phase and analyze the performance of these services through the subcontractor/contractor evaluation.



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- Validation of Change Order Processes for performance, costs, budgets, scope of work, timeframe, scheduling, and work sequencing with all the parties involved.
- Requested that construction provide a business case to demonstrate the prudence of their means and methods and review the means and methods of the business case.
- Reviewed the developer's procurement policy for prudence to eliminate any irregularities, if any.
- Reviewed compliance with procurement policy to measure the effectiveness of purchasing policies.
- A combination of control testing and substantive testing was utilized in the review and evaluation of the accuracy of the project's records and financials.
- This draft report will be submitted based on the extensive findings for review and comments.
- Feedback will be incorporated from the draft report to submit the final report for audit.



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## DETAILED REVIEW

### SCOPE OF WORK

The work will consist of following major areas:

1. Excavation of roadway and repaving once work is completed.
2. Installation of 46 manholes, 5 of which are 3 way, 41 of which are 2 way manholes.
3. Installation of 11 riser locations as identified in the design drawings for the project.
4. Installation of 700 ft +/- concrete encased 2x1 – 6 in. duct bank, 26,700 ft. +/- concrete encased 2x2- 6 in. duct bank, 800 ft +/- ft concrete encased 3x3 – 6 in. duct bank.
5. Installation of 11 pole risers with galvanized steel conduit.
6. Installation of a paving on all disturbed roadways along the ductbank route.
7. Roadway safety system during construction.
8. Installation and removal of roadway steel plates to protect areas of construction along the route.

## CONCEPTUAL COST ESTIMATE AND SCHEDULE

### Conceptual Grade Estimate

A conceptual grade estimate has been developed with only the conceptual understanding of the project as described in this report. The estimate has been prepared using historical cost data, data from similar projects and other identified assumptions. The accuracy of this study grade estimate is expected to be -25% to +50%.



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## Project Component Summary

<b>Project Name</b>	<b>Nooseneck Duct Bank</b>				
Funding Project		Work Order	N0000265356	Estimate Type	Conceptual
Company	RIE	Bus. Segment	Distribution	Estimator	Randy Richards
State	RI			Engineer	Andres Molina
Alternative	1	Rev. #	1	Last Updated	11/21/2022
Description	Installation of a 27,000 ft. long duct bank				
	CAPEX	OPEX	COR	TOTAL	
Labor	\$ 4,848,000	\$ -	\$ -	\$ 4,848,000	
Materials	\$ 4,380,000	\$ -		\$ 4,380,000	
Engineering	\$ 554,000	\$ -	\$ -	\$ 554,000	
Contingency	\$ 2,307,000	\$ -	\$ -	\$ 2,307,000	
<b>Distribution Substation Subtotal Direct Cost</b>				<b>\$ 12,089,000</b>	
Permitting, Stores Handling, Sales Tax, Transportation, Contingency, AFUDC	\$ 1,072,000			\$ 1,072,000	
<b>Total</b>	<b>\$ 1,072,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 13,161,000</b>	

## Project Schedule

Activity	Duration (in weeks)	Additional Comments
Construction	92-96 <sup>1</sup>	
Closeout	4	
<b>Total Project Duration</b>	<b>96-100</b>	<b>Approx. 2 years</b>

NOTE: 1. Two winter moratoriums are considered in this duration.



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## ASSUMPTIONS AND EXCEPTIONS

- All labor is estimated as contracted straight time with overheads included of \$125.00 per hour. An average equipment rate cost of \$50.00 per hour is applied to estimated labor hours.
- Permitting costs are estimated at 2% of overall cost.
- Engineering is estimated at 6% of overall cost.
- Stores Handling presented as estimated at 0% as the materials are supplied by the Contractor.
- Capital Overheads is presented as 0% as 100% of the direct and indirect labor was provided by the Contractor.
- A contingency of 25% is included.
- AFUDC is estimated at 7.23% of overall cost.
- PPL/RIE materials price sheet is not available. Estimated cost of materials used to produce this estimate are representative of those found in the New England operating areas.
- This estimate excludes the costs of the culvert identified in Green Development RFI-11 as it was not part of the original scope of the project.

## REVISION HISTORY OF PROJECT DOCUMENT

<u>Version</u>	<u>Date</u>	<u>Description of Revision</u>
A	12/16/2022	Submittal of draft audit report for Rhode Island Energy Review

**The Narragansett Electric Company  
d/b/a Rhode Island Energy  
Petition for Acceleration Due to DG Project - Nooseneck Project  
Illustrative Depreciated Value at FY 2027**

	(a)	(b)	(c)
(1) Final Cost			13,569,565
(2) FY 2025 Book Depreciation	3.16%	214,399	
FY 2026 Book Depreciation	3.16%	428,798	
(3) Cumulative Book Depreciation			<u>643,197</u>
(4) Depreciated Value @ FY 2027			12,926,368

Notes:

- (1) Estimated final cost of project benefitting distribution customers
- (2)(a) Annual Book depreciation rate in FY 2024 ISR Plan  
Annual depreciation rate x Line (1)(c), FY 2025 is half year in year placed in service, FY 2026 forward use full rate
- (2)(b) placed in service, FY 2026 forward use full rate
- (3) Sum of FY 2025 through FY 2026 Depreciation
- (4) Line 1(c) less Line 3