

January 25, 2024

VIA ELECTRONIC MAIL

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

RE: Docket No. 23-37-EL – The Narragansett Electric Company d/b/a
Rhode Island Energy's Petition for Acceleration of a System Modification
Due to Distributed Generation Project
Tiverton Project
Responses to Division Data Requests – Set 3

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (the "Company"), enclosed, please find the Company's responses to the Division of Public Utilities and Carriers' ("Division's") Third Set of Data Requests concerning the Tiverton Project in the above-referenced docket.

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

Sincerely,

Andrew S. Marcaccio

Come & m

Enclosures

cc: Docket 23-37-EL Service List

The Narragansett Electric Company d/b/a Rhode Island Energy RIPUC Docket No. 23-37-EL

In Re: Rhode Island Energy's Petition for Acceleration Due To Distributed Generation Project – Tiverton Projects Responses to the Division's Third Set of Data Requests Issued on December 20, 2023

Division 3-1

Request:

Provide a list of each substation which does not have a N-1 contingency solution together with the total MVA at risk.

Response:

Please see the following Table for a list of substations which do not have a N-1 contingency solution, together with total MVA at risk.

Station	Transformer(s)	2023 MVA at Risk
Washington	T261 & T262	2.6 - T261 5.2 - T262
New London	T2	7.3
West Cranston	T2	0.8
Wampanoag	T1 & T2	3.4 - T1 6.1 - T2
Staples	T124	10.5
Valley	T22 & T23	4.5 - T22 2.7 - T23
Dexter	T364	8.2
Tower Hill	T1	9.1
Chase Hill	T2	18.4
Newport	T1	8.3
Tiverton	T2	1.9
Shun Pike	T1	15.7
Johnston	Т3	7.1
Elmwood	T2	16.6

Please note the above information may not be relevant to the Tiverton Petition because it includes areas of the system not included in the electric scope of the Petition and these other areas have differing characteristics and circumstances.

Division 3-2

Request:

Provide a list of each feeder on the RIE system which does not have a N-1 or other contingency solution for a feeder outage. Provide the following information, ranking the list by the feeder having the most load first and the feeder with the least load last: Feeder Identification

- a. Substation Name
- b. Total load
- c. Load at risk
- d. Number of hours of load at risk
- e. MWHrs of load at risk
- f. Number of customers served, by class
- g. Solution to resolve the contingency and when projects are planned for implementation
- h. Reference to the Area Study and/or ISR Plan budget that includes the project

Response:

Please see the following Table for a list of feeders which does not have a N-1 contingency solution.

Division 3-2, page 2

Substation	Feeder	Total Load (MVA)	Feeder Load at Risk in MVA	MWHR Outage with 4 Hour Repair	Total MWHR Outage for 1hr switch and 4hr repair	Total Customers	Notes
NASONVILLE 127	127W43	12.2	3.1	12.6	21.7	3	Associated with service to Pascoag Municipal with established procedures.
LINCOLN AVENUE 72	72F2	8.3	2.6	10.2	16.5	2642	Will be re-evaluated after Admiral St and Auburn 12kV stations
LINCOLN AVENUE 72	72F5	10.2	2.6	10.4	18	3336	Will be re-evaluated after Admiral St and Auburn 12kV stations
LINCOLN AVENUE 72	72F6	10.8	2.6	10.3	18.4	2395	Will be re-evaluated after Admiral St and Auburn 12kV stations
WARWICK 52	52F3	9.7	6.4	25.6	32.9	2692	Included in the Central RI East Study kicking off in 2024.
CHOPMIST 34	34F1	10.9	3	12	20.1	3368	Included in North Central RI Study kicking off in 2024.
CHOPMIST 34	34F3	4.9	3.3	13.3	17	858	Included in North Central RI Study kicking off in 2024.
JOHNSTON 18	18F5	11.3	5.6	22.3	30.7	4487	Will be re-evaluated after Admiral St and Auburn 12kV stations
JOHNSTON 18	18F7	11.4	2.8	11.1	19.6	4192	Will be re-evaluated after Admiral St and Auburn 12kV stations
JOHNSTON 18	18F8	6.6	4	15.8	20.7	1774	Will be re-evaluated after Admiral St and Auburn 12kV stations
JOHNSTON 18	18F10	9.1	4.2	16.9	23.7	2494	Will be re-evaluated after Admiral St and Auburn 12kV stations
JOHNSTON 18	18F11	10.8	2.8	11.3	19.3	1300	Will be re-evaluated after Admiral St and Auburn 12kV stations

Division 3-2, page 3

Substation	Feeder	Total Load (MVA)	Feeder Load at Risk in MVA	MWHR Outage with 4 Hour Repair	Total MWHR Outage for 1hr switch and 4hr repair	Total Customers	Notes
JOHNSTON 18	18F13	9	3.3	13.2	20	2199	Will be re-evaluated after Admiral St and Auburn 12kV stations
MANTON 69	69F3	10.4	6.6	26.3	34.1	4863	Included in North Central RI Study kicking off in 2024.
PUTNAM PIKE 38	38F2	8.6	2.6	10.5	17	521	Included in North Central RI Study kicking off in 2024.
PUTNAM PIKE 38	38F3	8.6	4.2	16.6	23.1	1369	Included in North Central RI Study kicking off in 2024.
WEST CRANSTON 21	21F1	10.7	5.9	23.5	31.5	2631	Included in North Central RI Study kicking off in 2024.
WEST CRANSTON 21	21F2	9.8	6.6	26.3	33.6	1243	Included in North Central RI Study kicking off in 2024.
WEST CRANSTON 21	21F4	9.8	6.2	24.7	32	2073	Included in North Central RI Study kicking off in 2024.
LIPPITT HILL 79	79F2	11.3	3.7	14.7	23.2	2497	Will be re-evaluated after Admiral St and Auburn 12kV stations.
POINT STREET 76	76F1	9.2	8	32	38.9	2081	Will be re-evaluated after Admiral St and Auburn 12kV stations
POINT STREET 76	76F2	11.7	5.7	23	31.8	3979	Will be re-evaluated after Admiral St and Auburn 12kV stations
POINT STREET 76	76F4	12	6.1	24.3	33.3	5059	Will be re-evaluated after Admiral St and Auburn 12kV stations
POINT STREET 76	76F5	9.5	4.3	17.2	24.4	3754	Will be re-evaluated after Admiral St and Auburn 12kV stations
POINT STREET 76	76F6	11.3	3.3	13	21.5	3058	Will be re-evaluated after Admiral St and Auburn 12kV stations

Division 3-2, page 4

Substation	Feeder	Total Load (MVA)	Feeder Load at Risk in MVA	MWHR Outage with 4 Hour Repair	Total MWHR Outage for 1hr switch and 4hr repair	Total Customers	Notes
POINT STREET 76	76F7	9.9	3	11.9	19.3	2654	Will be re-evaluated after Admiral St and Auburn 12kV stations
POINT STREET 76	76F8	7.2	3.3	13.4	18.8	607	Will be re-evaluated after Admiral St and Auburn 12kV stations
CHASE HILL 155	155F6	10.5	5.3	21.2	29	1743	Load has increased since the study substantially, Weaver Hill should provide some relief.

Please note the above information may not be relevant to the Tiverton Petition because it includes areas of the system not included in the electric scope of the Petition and these other areas have differing characteristics and circumstances.

Division 3-3

Request:

Provide a copy of each System Impact Study shown in the Revision History (Petition, page 97), specifically Versions 1.0, 2.0 (Final), 3.0, 4.0, 5.0, 6.0, and 8.0.

Response:

Please see Attachment DIV 3-3 with the requested versions of the System Impact Study.

Attachment DIV 3-3

The Company provided a .zip file of Attachment DIV 3-3.

Division 3-4

Request:

Regarding System Impact Study Version 5.0 (Petition, page 97), what was the new application added to the project indicated on page 97?

Response:

The Customer split an existing application of 5,894 KVA (one project) into two applications, 2,526 KVA and 3,368 KVA totaling 5,894 KVA.

Division 3-5

Request:

Regarding System Impact Study Version 6.0 (Petition, page 97), what was the customer change to the size of the project? Why did the customer change the size? Did the change require a restudy? Did the change result in revisions to required system modifications or system improvements?

Response:

Regarding the Version 6.0 change, the customer went from three sites totaling 11,788 kW in Version 5.0 to two sites totaling 11,791 kW in Version 6.0.

The Company consulted with Green Development to confirm the customer's reasons for changing the system size. One of the three sites was not feasible. For the remaining two, Green made the decision to reduce one of the projects to 3,368 kW and increase the other project to 8,423 kW for a final system size of 11,791 kW. This was due to Green's decision to enter the projects in different state programs.

A restudy was performed, but system modifications remained the same.

Division 3-6

Request:

When did the DG customer first propose performing civil work? What prompted the decision? When did the Company formally confirm the DG customer's decision to perform civil work? Provide supporting information. Did the decision require a System Impact revision, and if so, which version?

Response:

The customer self-build was proposed during the Distribution System Impact Study (DSIS) phase. In the Spring of 2020, Green was already in the design phase to self-construct the civil work for the Nooseneck/Weaver Hill projects. As the DSIS for Tiverton was developed with an UG solution for interconnection, Green requested to self-construct the civil work for those projects as well. Although the Company cannot definitively speak for the reason behind the developer's decisions, the decision may be prompted by Green possessing the internal resources to complete the project with the understanding that both the cost and schedule would benefit by self-performance. The Company agreed to this during the DSIS phase. A revision of the impact study was not required.

Division 3-7

Request:

Did RIE suggest, or did Green Development propose that the DG customer procure cable? When was this first proposed and when was the decision confirmed? What prompted the decision?

Response:

Green Development proposed procuring the cable after RIE informed the customer of the lead time. Green proposed this during the engineering & design phase of the project in July 2022. The decision was confirmed in August 2022 when the Company provided the terms and conditions to the customer. The Company worked internally with representatives from procurement, material standards, engineering, and the project team to review the customer's request. The Company decided that as long as the customer was able to meet the terms and conditions set forth, then collaboration and working together to achieve a faster and more cost effective interconnection was the right decision.

Division 3-8

Request:

The Company states that "Criteria to perform self-build includes having an estimate that is either at or below the Company's estimated cost to perform the work." (PUC 1-7 response)

- a. Did the Company offer, or did the DG customer request or otherwise receive any cost estimates from the Company for civil work assuming the Company performed the work? If so, provide the estimate, date provided to the DG customer, and associated correspondence. If a cost estimate was not provided to the DG customer, how did the DG customer determine that self-performed civil work would be at or below what it would cost the Company to perform, thereby reducing the DG customer's interconnection costs?
- b. Did the Company request or otherwise receive a cost estimate from the DG customer for the cost of cable assuming the DG customer would procure the cable? If so, provide the detailed estimate, date provided to the Company, and associated correspondence. If a cost estimate was not provided, how did the Company determine that customer procured cable would be at or below what it would cost the Company to provide?

Response:

- a. There was no estimate offered to the customer for the civil work. In this instance, based on previous projects and existing experience with this customer, there was a mutual agreement that they could perform the work for less and thus were permitted to perform the self-build.
- b. The customer provided a quote of the cable they received from a vendor that could meet a better timeline. The vendor, however, was not an approved vendor. The Terms and Conditions provided to the customer stated the requirements, one of which was to comply with all Company requirements for standards and approved vendor qualifications.
 - Regarding the cost, the Terms and Conditions also stated that "Increased costs incurred by Green Development in the purchasing of the cable as well as any associated costs incurred to comply with the terms and conditions mentioned above, but not limited to, will be the sole responsibility of Green Development and will not be included in any future cost sharing with either PPL/RIE or its customers." Additionally, the Company received quotes for cable procurement.

Division 3-9

Request:

Is any portion of the DG customer's cost to perform civil work eligible for an investment tax credit or other contributions that would lower the cost? If so, does RIE's reimbursement account for offsets that may have been achieved?

Response:

The Company consulted with Green Development and confirmed that no portion of the customer's cost to perform civil work was eligible for an investment tax credit.

Division 3-10

Request:

Is any portion of the DG customer's cost to procure cable eligible for an investment tax credit or other contributions that would lower the cost? If so, does RIE's reimbursement account for offsets that may have been achieved?

Response:

The Company consulted with Green Development and confirmed that no portion of the customer's cost to procure cable was eligible for an investment tax credit.

Division 3-11

Request:

Regarding response to PUC 1-2, RIE indicates that the difference between overhead and underground system on Route 177 and Brayton Road is \$3.284 million. Is the difference related only to that section of line? Explain the basis for both the overhead and underground estimates. In executable format, provide all workpapers and analysis to derive the difference.

Response:

Yes, this difference is only related to the section of line on Route 177 and Brayton Road.

The underground costs are based off the information provided by the DG developer. This was used to break down the cost per road, Fish Road (underground with either option), Route 177 and Brayton Road. Estimates are based off distances and various overheads.

The overhead option is based off of the Company's typical 477 AL spacer circuit installation cost, adjacent to an existing overhead line.

Please see the attached Excel file for calculations.

Attachment DIV 3-11

The Company provided the Excel version of Attachment DIV 3-11.

The Narragansett Electric Company d/b/a Rhode Island Energy RIPUC Docket No. 23-37-EL Attachment DIV 3-11 Page 1 of 1

Cost Basis

ITEM NO.	DESCRIPTION OF WORK	Unit of Measure	RIE Quantities	Subcontractor	TOTAL
1	ENGINEERING / PERMITTING	Lot		\$500,000	\$500,000
2	WIRE PROCUREMENT	Lot			\$2,223,702
3	2 WAY MANHOLE	Ea	29	-	\$1,603,352
4	3 WAY MANHOLE	Ea	5	-	\$339,362
5	9 WAY DUCTBANK	ln-ft	1,100		\$464,572
6	6 WAY DUCTBANK	ln-ft	1100	-	\$418,155
7	4 WAY DUCTBANK	ln-ft	16,800	-	\$5,921,518
8	2 WAY DUCTBANK/RISERS	ln-ft	250	-	\$211,310
9	GENERAL REQUIREMENTS			-	\$1,586,141
10	MATERIAL HANDLING (13%)				\$467,991
11	CAPITAL OVERHEAD (22%)				\$981,669
12	A&G (5%)			-	\$663,406
					\$0
	PAGE TOTALS				\$15,381,177

Company Estimated Costs for OH Spacer Cable	Capex	Opex	Removal	Total
1 mile 477 spacer 2nd circuit (per mile)	\$1,112,243	\$123,094	\$112,150	\$1,347,487

Allocation	n By Street	(Length/Quantity)	Cost Al	Estimated OH Costs on			Costs on Rt		
Fish Rd	177	Brayton Rd	Fish Rd	177	Brayton Rd	0	H 177	OH	H Brayton Rd
		Eng & Permitting	\$208,333.33	\$133,928.57	\$157,738.10	\$	-	\$	-
		Wire Procurement	\$926,542.50	\$595,634.46	\$701,525.04	\$	-	\$	-
15	6	8	\$829,320	\$331,728	\$442,304		-	\$	-
3	1	1	\$203,617	\$67,872	\$67,872	\$	-	\$	-
1100			\$464,572 \$	-	\$ -				
1100			\$418,155 \$	-	\$ -				
7000	4500	5300	\$2,467,299.17	\$1,586,120.89	\$1,868,097.94	\$1,	148,426		\$1,352,59
200	25	25	\$169,048.00	\$21,131.00	\$21,131.00	\$	-	\$	-
		Subcontractor	\$660,892.08	\$424,859.20	\$500,389.72	\$	-	\$	-
		Material Handle	\$194,996.32	\$125,354.78	\$147,640.07	\$	-	\$	-
		Cap OH	\$409,028.58	\$262,946.95	\$309,693.07	\$	-	\$	-
		A&G	\$276,419.00	\$177.697.93	\$209.288.67	\$	_	\$	-

RIE Portion of Costs
Associated With GD Installing
Additional Ducts

Addition	ai Ducts
\$793,060.45	\$934,048.97
\$212,429.60	\$250,194.86
\$0	\$0
\$52,681.42	\$62,047.01
\$29,326.79	\$34,540.44

\$7,228,223.18 \$3,727,274.18 \$4,425,680.00 **Tot**

Tot \$15,381,177.36 \$3,283,607.11

savings

\$1,087,498.25 \$1,280,831.27

\$12,097,570.25

Division 3-12

Request:

When did the Tiverton Area Study commence?

Response:

The Tiverton Area Study commenced in July of 2020.

Division 3-13

Request:

Please provide the Tiverton Area Study dated September 2021 (completed before Revision – September 2022). Explain the differences in the study and why a revision was necessary.

Response:

There were no changes or revisions to study recommendations between Revisions 0 and 1. Revision 1, was only editing and formatting to finalize the study report. This was done to preserve the initial handoff date to the Division of the study recommendations and models which was fourth quarter of 2021.

Additionally, the Distributed Generation developer was finalizing their design, which also coincided with the finalization of the System Impact Study pertaining to their interconnection, which had a direct impact to the Area Study cost estimates and final cost tables.

The Narragansett Electric Company
d/b/a Rhode Island Energy
RIPUC Docket No. 23-37-EL

In Re: Rhode Island Energy's Petition for Acceleration Due To Distributed Generation Project – Tiverton Projects Responses to the Division's Third Set of Data Requests Issued on December 20, 2023

Division 3-14

Request:

The Company's Tiverton Area Study presentation to the Division (dated May 7, 2021, page 44) included the following cost estimates for Tiverton area solutions:

Cost Comparison

Options	Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Subtotal (\$M)	Total (\$M)
	D-Line	\$8.36	\$0.08	\$0.28	\$8.72	
Option 1	Sub (D)	\$3.67	\$0.00	\$0.15	\$3.82	64440
Option 1	Sub (T)	\$1.53	\$0.00	\$0.13	\$1.66	\$14.19
	T-Line	\$0.00	\$0.00	\$0.00	\$0.00	
	D-Line	\$8.36	\$0.08	\$0.28	\$8.72	644.00
Option 2	Sub (D)	\$3.86	\$0.00	\$0.15	\$4.00	
Option 2	Sub (T)	\$2.06	\$0.00	\$0.07	\$2.14	\$14.86
	T-Line	\$0.00	\$0.00	\$0.00	\$0.00	
	D-Line	\$8.36	\$0.08	\$0.28	\$8.72	
Option 3	Sub (D)	\$8.83	\$0.05	\$0.49	\$9.37	620.00
Option 3	Sub (T)	\$0.55	\$0.00	\$0.05	\$0.61	\$20.90
	T-Line	\$2.06	\$0.02	\$0.12	\$2.20	

- Assumes Green Development project does not move forward and National Grid is responsible for all costs
- a. In executable format, provide a detailed breakdown of project components, quantities and unit costs used to develop the estimates for Option 1.
- b. What is the cost estimate accuracy?
- c. Confirm that Option 1 includes the costs for RIE to perform the D-Line work described below:

Proposed to serve Green Development DG project:

- Add one 12.47kV circuit position on the No.2 bus (33F6)
 - Install one (1) 12.47kV breaker, three (3) single-phase regulators, and a new getaway manhole and duct system inside of the Tiverton substation
- Install ~21,000 feet of 1000kcmil cable from the substation to the Point of Interconnection

Division 3-14, page 2

Proposed additional work for picking up load:

- Extend the 33F6 from the DG site to the intersection of Lake Road and East Road
 - Installation of a riser and recloser
 - Upgrade ~17,200 feet of single-phase to three-phase 477AL
- Reconductor ~5,700 feet of existing 4/0 AL 3-phase conductor along East Road to 477AL to allow for feeder ties.
- d. Does Option 1 reflect the projects and associated costs that would be RIE's responsibility for Tiverton Area solutions whether or not the Green Development project moved forward? Explain any differences.
- e. Confirm that the Option 1 cost estimate includes RIE performing D-line civil work and providing underground cable.
- f. Are the solutions in Option 1 consistent with the solutions currently being implemented or planned? If not, please explain any differences.

Response:

- a. Please see the attached Excel file as Attachment DIV 3-14 for a detailed cost breakdown of cost components.
- b. These estimates can be considered -50%/+50%. Estimates, however, the Company acknowledges that recent actual costs for similar type work have exceeded this range.
- c. The estimate does not include:
 - Install ~21,000 feet of 1000kcmil cable from the substation to the Point of Interconnection The estimate only includes 9,300' of cable and duct.

The estimate does include:

- Add one 12.47kV circuit position on the No.2 bus (33F6)
 - o Install one (1) 12.47kV breaker, three (3) single-phase regulators, and a new getaway manhole and duct system inside of the Tiverton substation.

Division 3-14, page 3

- Extend the 33F6 from the DG site to the intersection of Lake Road and East Road Installation of a riser and recloser
 - Upgrade ~17,200 feet of single-phase to three-phase 477AL.
 - Reconductor ~5,700 feet of existing 4/0 AL 3-phase conductor along East Road to 477AL to allow for feeder ties.
- d. Option 1 reflects the costs if Green Development did not move forward. Because Green did move forward, there are 21,000' of cable and duct system required, instead of 9,300' of cable and duct.
- e. Yes, that is correct.
- f. No, because Green did move forward, there are 21,000' of cable and duct system required, instead of 9,300' of cable and duct.

Attachment DIV 3-14

The Company provided the Excel version of Attachment DIV 3-14.

The Narragansett Electric Company d/b/a Rhode Island Energy RIPUC Docket No. 23-37-EL Attachment DIV 3-14 Page 1 of 1

Cost Basis - D-Sub

NECO - Substation Work (D-Sub)	Ca	pital	0&M	Re	moval	Tot	al
Install One Breaker Position at Tiverton Sub	\$	1,053,804.00	\$ -	\$	-		
Substation Asset Condition Upgrades (12.47kV							
breakers, voltage regulators, and EMS upgrades)	\$	2,619,000.00	\$ -	\$	146,000.00		
	\$	3,672,804.00	\$ -	\$	146,000.00	\$	3,818,804.00

Cost Basis - T-Sub

NECO - Substation Work (D-Sub)	Capital	O&M	Removal	Total
Install One Breaker Position at Tiverton Sub	\$ -	\$ -	\$ -	
Substation Asset Condition Upgrades (12.47kV				
breakers, voltage regulators, and EMS upgrades)	\$ 1,526,000.00	\$ -	\$ 131,000.00	
	\$ 1,526,000.00	\$ -	\$ 131,000.00	\$ 1,657,000.00

Cost Comparison

Options	Component	Capital (\$M)	O&M (\$M)	Removal (\$M)	Subtotal (\$M)	Total (\$M)
	D-Line	\$8.36	\$0.08	\$0.28	\$8.72	
Option 1	Sub (D)	\$3.67	\$0.00	\$0.15	\$3.82	\$14.19
Орион 1	Sub (T)	\$1.53	\$0.00	\$0.13	\$1.66	\$14.19
	T-Line	\$0.00	\$0.00	\$0.00	\$0.00	
	D-Line	\$8.36	\$0.08	\$0.28	\$8.72	\$14.86
Option 2	Sub (D)	\$3.86	\$0.00	\$0.15	\$4.00	
Option 2	Sub (T)	\$2.06	\$0.00	\$0.07	\$2.14	ş 14.00
	T-Line	\$0.00	\$0.00	\$0.00	\$0.00	
	D-Line	\$8.36	\$0.08	\$0.28	\$8.72	
Option 3	Sub (D)	\$8.83	\$0.05	\$0.49	\$9.37	600.00
Option 3	Sub (T)	\$0.55	\$0.00	\$0.05	\$0.61	\$20.90
	T-Line	\$2.06	\$0.02	\$0.12	\$2.20	

Assumes Green Development project does not move forward and National Grid is responsible for all costs

The Narragansett Electric Company d/b/a Rhode Island Energy RIPUC Docket No. 23-37-EL In Re: Rhode Island Energy's Petition for Acceleration Due

To Distributed Generation Project – Tiverton Projects Responses to the Division's Third Set of Data Requests Issued on December 20, 2023

Division 3-15

Request:

Regarding the Tiverton Area Study (Revision 1 – September 2022), Section 6.4.3 provides Total Cash Flows for proposed solutions which are further summarized as follows:

Tiverton

Cost Summary per Area Study - Revision 1-September 2022 (ref. 6.4.3 Total Cash Flows)

D-Line	\$5.284	\$0.063	\$0.211	\$5.558
Sub-D	\$3.641	\$0.002	\$0.146	\$3.789
Sub-T	\$0.000	\$0.000	\$0.000	\$0.000
T-Line	\$1.526	\$0.000	\$0.131	\$1.657

TOTAL

\$11.004 Excluding DG civil work

- a. In executable format, provide a detailed breakdown of project components, quantities and unit costs used to develop the Recommended Option for the September 2022 Tiverton Area Study. The estimate should reconcile to the totals shown above.
- b. What is the cost estimate accuracy of the September 2022 Area Study?
- c. Confirm that the cash flows exclude RIE performing D-line civil work but include providing underground cable.
- d. Other than civil work, explain the differences between the solutions and cash flows provided in the September 2022 Area Study and Option 1 in the May 7, 2021 presentation.
- e. Confirm that the projects funded by the cash flows are currently being implemented or planned. If not, please explain the differences.

Response:

- a. Please see the attached Excel file, referenced as Attachment DIV 3-15, for a detailed cost breakdown of cost components.
- b. These estimates can be considered -50%/+50%. Estimates, however, the Company acknowledges that recent actual costs for similar type work have exceeded this range.

Division 3-15, page 2

- c. These cash flows are for all proposed work, included the cable, but do not include the civil work for the ductbank.
- d. The difference between the solutions and cash flows provided in the September 2022 Area Study and Option 1 in the May 7, 2021 presentation are, the September 2022 Area Study includes installation of ~21,000 feet of 1000kcmil cable from the substation to the Point of Interconnection, and the May 7, 2021 presentation includes 9,300' of cable and duct. The approximate 2 mile extension of the underground system also results in an approximate 2 mile reduction in the overhead scope included in the May 7, 2021 presentation.
- e. Yes, this is confirmed. The projects currently being funded by the cash flows in the ISR plan, are the ones being implemented as outlined in the Area Study Documentation.

Attachment DIV 3-15

The Company provided the Excel version of Attachment DIV 3-15.

D-Line

Unit of

Cost Basis	Quantity	Measure	Unit Cost	Cap	oex	Opex	Removal	Total
Cable 15kV - New Install	21	1000 ft	\$ 139,609.76	\$	2,931,804.89	\$0	\$0	\$ 2,931,804.89
Engineering Support	1	EA	\$ 165,000.00		\$165,000.00	\$0	\$0	\$165,000.00
Spacer Cable 15kV - New Install	3.3	MI	\$ 433,409.09	\$	1,430,250.00	\$0	\$0	\$1,430,250.00
Open Wire Bare 15kV - Reconductor	1.1	MI	\$ 682,500.00	\$	476,750.00	\$63,000	\$211,000	\$750,750.00
Equipment - Cap-Reg	1	EA	\$ 100,000.00	\$	100,000.00	\$0	\$0	\$100,000.00
Equipment - Cap-Reg	10	EA	\$ 18,000.00	\$	180,000.00	\$0	\$0	\$180,000.00
	-		-		\$5,283,804.89	\$63,000.00	\$211,000.00	\$ 5,557,804.89

D-Sub

Item				Capex	Opex	Remov	Total
Green Dev Sub - Install one new breaker position, disconnect switches and asspciated regulators at Tiverton		EA					
Substation	1		\$1,024,000	\$1,022,000.00	\$2,000.00	\$0.00	\$1,024,000.00
Replace asset condition equipment, airbreak switches, circuit breakers and line regulators (D-Sub)	1	EA	\$2,765,000	\$2,619,000.00	\$0.00	\$146,000.00	\$2,765,000.00
				\$3,641,000.00	\$2,000.00	\$146,000.00	\$3,789,000.00

T-Sub

Replace asset condition equipment, airbreak switches, circuit breakers and line regulators (T-Sub)	1	EA	\$1,657,000	\$1,526,000.00	\$0.00	\$131,000.00	\$1,657,000.00
				\$1,526,000.00	\$0.00	\$131,000.00	\$1,657,000.00

The Narragansett Electric Company d/b/a Rhode Island Energy RIPUC Docket No. 23-37-EL Attachment DIV 3-15 Page 2 of 2

Tiverton

Cost Summary per Area Study - Revision 1-September 2022 (ref. 6.4.3 Total Cash Flows)

D-Line	\$5.284	\$0.063	\$0.211	\$5.558
Sub-D	\$3.641	\$0.002	\$0.146	\$3.789
Sub-T	\$0.000	\$0.000	\$0.000	\$0.000
T-Line	\$1.526	\$0.000	\$0.131	\$1.657

TOTAL

\$11.004 Excluding DG civil work

Division 3-16¹

Request:

The Company's summary of Tiverton System Improvements and Modifications in response to PUC 1-2 along with Tiverton projects included in the preliminary FY 2025 ISR Plan filing indicate the following breakdown of costs:

Tiverton Cost Summary per Petition (see PUC 1-2)

excludes \$0.32 for Equipment at Interconnecting Customer's Property

Substation-New feeder position	\$1.022	
Line-Civil and Cable Procure	\$15.381	
Line - Electrical - Install conductor	\$1.540	
Subtotal	\$17.943	
OH-UG Differential	(\$3.284)	
Sub-total Petition	\$14.659	Net System Modifications subject to petition

Tiverton FY 2025 ISR Plan Spend

TOTAL	\$19.608	
Sub-total FY 25 ISR Plan	\$4.949	System Improvements not subject to petition
Line - Syst Cap & Perform (FY24+5 years)	\$2.517	
Sub - Asset Condition Work (5 years)	\$2.432	

- a. Does this breakdown reflect current estimated costs to implement all solutions identified in the Tiverton Area Study? Explain any differences.
- b. What does the FY 25 Asset Condition work include? What is the cost estimate accuracy?
- c. What does the FY 25 System Capacity and Performance work include? What is the cost estimate accuracy? Does this work include the \$1.907 million for Line extension & reconductoring listed in PUC 1-2?
- d. Are there any Sub-T or T-line work in the costs? Explain and if not, where are those costs captured?

_

¹ Response begins on page 2.

Division 3-16, page 2

Response:

- a. Yes.
- b. The Asset Condition work is expected to span five years and includes switch, breaker and regulator replacements, plus other work described in Section 6.2 Option 1 of the Area Study. The FY 25 work will be engineering and design. These estimates can be considered -50%/+50% estimates, however the Company acknowledges that recent actual costs for similar type work have exceeded this range.
- c. The System Capacity and Performance work is also expected to span five years and includes extending the 33F6 overhead, from the DG developer point of interconnection, reconductoring sections of existing overhead wire, and adding new capacitor banks and line regulator, as described in Section 6.1 of the Area Study. The FY 25 work will be engineering, design and initial construction activities. Yes, this work includes the scope of the \$1.907 million line extension.
- d. There are substation transmission costs as part of the asset condition scope of work, however these costs are not included in the FY25 ISR or in the Petition cost estimate tables. There are no sub-transmission or transmission line costs associated with this scope of work.

Division 3-17

Request:

The May 7, 2021 Area Study presentation estimates D-Line work at \$8.72 million. The September 22, 2022 Area Study estimates D-Line work at \$5.558 million for a difference of \$3.162 million. What portion of the \$3.162 million cost estimate reduction is due to the DG customer electing to perform civil work?

Response:

Conceptually, all of the difference is due to the DG customer electing to perform civil work because the September 22, 2022 Area Study estimates D-Line work at \$5.558 million does not include civil work. However, the May 7, 2021 Area Study presentation estimates should not be compared to the September 22, 2022 Area Study estimates in the manner due to the change in scope of work as described in DIV 3-14 and 3-15. The response to DIV 3-11 outlines how the work without the DG developer compares to the work with the DG developer.

Division 3-18

Request:

Should the DG customer reimbursement for civil work be based on the DG customer cost estimate of \$12.757 million (Petition page 14), the actual cost for civil work, or the Company's estimated cost for civil work?

Response:

Reimbursement for the civil work should be based on the actual cost for the civil work once audited and verified upon completion of construction.

Division 3-19

Request:

The project to serve the DG customer includes 21,000 circuit feet of 1000 kcmil CU 3-1/C EPR insulated 15 kV cable. If the DG customer project did not advance, and RIE constructed the new 33F6 feeder to serve customers, how much 1000 kcmil cable would be required?

Response:

As described in the response to Division 3-14 and Division 3-15, 9,300' of cable would be installed.

Division 3-20

Request:

The Company removed cable cost of \$1,468,456 from the cost estimate in the last version of the Interconnection Study (Petition, page 97). Was this for all 21,000 feet of 1000 kcmil cable?

Response:

Yes, the removed cable cost reflect all 21,000 feet of 1000 kcmil cable.

Division 3-21

Request:

How much cable was specified in the September 2022 Tiverton Area Study and at what cost?

Response:

The September 2022 Tiverton Area Study specified 21,000' of cable, and the cost was \$3.1 million.

Division 3-22

Request:

The Company states that Green Development's estimate for civil work was \$12.76 million and including the cost of the cable was \$15.38 million. (Petition, pp 14-15)

Confirm that the cost difference of \$2.62 million is for cable. Why did the Company agree that the DG customer would procure cable when the DG customer's estimate is \$2.62 million, or nearly 80% higher when compared to the Company's cost estimate of \$1.47 million as indicated in the System Impact Study? (Petition, page 97)?

Response:

Confirmed, according to the cost estimate provided by the customer, \$2.62 million is estimated for cable procurement and material handling. The Company agreed to allow the customer to procure the cable because it complied with the terms and conditions and the cost sharing is not based on estimates, but actuals incurred once they have been audited and verified as reasonable costs for the project.

Division 3-23

Request:

What is the cost estimate accuracy in Interconnection Studies?

Response:

The cost estimate accuracy for Interconnection Studies is +/-25% as identified in the DG interconnection tariff RIPUC No. 2258, definition for Impact Study for Renewable DG ("ISRDG").

Division 3-24

Request:

Are Green Development's civil and cable cost estimates based on final engineering, design and bid results, or some other method? What is the expected accuracy? Provide supporting documentation received by RIE to validate the estimates along with RIE's analysis relied upon to determine that the estimates were reasonable.

Response:

The Company consulted with Green Development to confirm that the civil and cable costs provided were based on final engineering and design and subcontractor bid results. RIE did not conduct an analysis to determine reasonableness since actual construction costs will be audited for reasonableness. Attached, as Attachment DIV 3-24, is the estimate provided to the Company.

The Narragansett Electric Company d/b/a Rhode Island Energy RIPUC Docket No. 23-37-EL Attachment DIV 3-24 Page 1 of 1

Project Name: Tiverton Ductbank

Project Number: 22-02-005

ITEM NO.	DESCRIPTION OF WORK	Unit of Measure	Quantity	Labor	Equipment	Rental Equipment	\$ Subcontractor	Materials		SCHEDULED VALUE	
1	ENGINEERING / PERMITTING	Lot	1				\$ 500,000			\$	500,000
2	WIRE PROCUREMENT	Lot	1					\$	2,223,702	\$	2,223,702
3	2 WAY MANHOLE	Ea	27	\$ 323,349	\$ 311,780	\$ 76,788	\$ 398,331	\$	493,104	\$	1,603,352
4	3 WAY MANHOLE	Ea	4	\$ 62,785	\$ 57,101	\$ 18,960	\$ 110,024	\$	90,492	\$	339,363
5	9 WAY DUCTBANK	ln-ft	1,018	\$ 83,884	\$ 83,848	\$ 39,165	\$ 202,826	\$	54,849	\$	464,573
6	6 WAY DUCTBANK	ln-ft	985	\$ 81,165	\$ 83,655	\$ 37,896	\$ 166,969	\$	48,470	\$	418,155
7	4 WAY DUCTBANK	ln-ft	14,952	\$ 1,232,059	\$ 1,257,902	\$ 575,244	\$ 2,182,041	\$	674,272	\$	5,921,518
8	2 WAY DUCTBANK/RISERS	ln-ft	731	\$ 55,269	\$ 62,832	\$ 18,448	\$ 59,718	\$	15,043	\$	211,310
9	GENERAL REQUIREMENTS						\$ 1,586,141			\$	1,586,141
10	MATERIAL HANDLING (13%)							\$	467,991	\$	467,991
11	CAPITAL OVERHEAD (22%)			\$ 404,472	\$ 408,566	\$ 168,630				\$	981,669
12	A&G (5%)			\$ 91,926	\$ 92,856	\$ 38,325	\$ 260,302	\$	179,997	\$	663,406
						_				\$	-
	PAGE TOTALS									\$	15,381,179

Division 3-25

Request:

Should the DG customer reimbursement for cable be based on the DG customer cost estimate, actual costs, or the Company's estimated cost?

Response:

Reimbursement for the cable should be based on the actual cost of the cable once audited and verified upon completion of construction for the component that is deemed system improvement.

Division 3-26

Request:

In response to PUC 1-8, RIE states that "DG projects are subject to the standard final accounting practice regarding the 10% cap. If the cost increases are identified during the project, and the DG customer is notified of such increase, then the costs will be collected from the DG customer." Does this mean that any and all cost increases identified during the project are collected from the DG customer if RIE notifies the customer or only costs up to a 10% increase cap? If only up to a 10% cap, how does the Company recover costs that exceed the cap?

Response:

Only costs up to a 10% increase can be collected by the customer if the customer is notified of such an increase. Costs that exceed the cap are evaluated and if the charges are reasonable costs incurred to perform the work above the estimate, they are recovered through the ISR.

Division 3-27

Request:

The Company states that the extension of the proposed 33F6 circuit to address loading concerns is in the FY2023 Proposal, Docket No. 5209, filed on December 20, 2021. (Petition, page 16). Cite the exact reference in the FY 2023 ISR plan including when the Company proposed that the project be completed.

Response:

The Company refers to the need for the extension of the 33F6 circuit in FY2023 Proposal, Docket No. 5209 on Bates Page 37. The Company did not have any spending proposed in the FY 2023 Plan for this work nor a completion date. The initial plan from the Area Study was for the work to begin in FY 2024 and be completed in FY 2029.

Division 3-28

Request:

Was the 33F6 circuit included in the FY 2023 ISR Plan budget? If so, please reference the project line item and proposed spend by year. Identify the date that the project would be complete as shown in the budget. Reconcile the proposed spend with the project components provided in response to PUC 1-2 (e.g. identify the substation work to add a new feeder position and the new 33F6 line work, including the extension). If the 33F6 project was not in the FY 2023 ISR Plan budget, provide a reference for the first time the substation new feeder position and 33F6 circuit were proposed in an ISR Plan budget, the completion date as shown in the budget, and reconcile as described above.

Response:

No, the 33F6 circuit was not included in the FY 2023 ISR Plan budget. The initial plan from the Area Study was for the work to begin in FY 2024 and be completed in FY 2029.

The Company first included a proposed budget for this work in the FY 2024 Plan. As shown in the table on PUC 1-2, the \$1.907 million for "System Improvement not subject to Petition" was included within the System Capacity & Performance budget for FY 2024. The Company showed a five-year outlook for spend through FY 2028; however, the Company anticipated this work would not be complete until FY 2029.

Division 3-29

Request:

If a capital project is mentioned in the Company's ISR Plan filing but not included in the Company's proposed ISR Plan budget that accompanies the Plan, does the Company consider the project "identified in the Company's work plan as a necessary capital investment"?

Response:

If a capital project is mentioned in the Company's ISR Plan filing but not included in the proposed plan budget, the Company does consider the project "identified in the Company's work plan as a necessary capital investment". The Company includes information in its ISR Plan such as area study summaries and a five-year plan to provide visibility to investments that have been identified and needed in future years.

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

Joanne M. Scanlon

January 25, 2024

Date

Docket No. 23-37-EL Rhode Island Energy – Petition for Acceleration Due to DG Project – Tiverton Projects - Service List updated 12/14/2023

Parties' Name/Address	E-mail	Phone		
The Narragansett Electric Company	AMarcaccio@pplweb.com;	401-784-7263		
d/b/a Rhode Island Energy Andrew Marcaccio, Esq.	COBrien@pplweb.com;			
Celia B. O'Brien, Esq.	JScanlon@pplweb.com;			
280 Melrose Street	SBriggs@pplweb.com;			
Providence, RI 02907	KRCastro@RIEnergy.com;			
	ERussell@RIEnergy.com;			
Division of Public Utilities	Leo.Wold@dpuc.ri.gov;			
Leo Wold, Esq.	Margaret.L.Hogan@dpuc.ri.gov;			
	Christy.Hetherington@dpuc.ri.gov;			
	John.bell@dpuc.ri.gov;			
	Al.contente@dpuc.ri.gov;			
	Paul.Roberti@dpuc.ri.gov;			
	Ellen.golde@dpuc.ri.gov;			
Gregory L. Booth, PLLC 14460 Falls of Neuse Rd. Suite 149-110 Raleigh, N. C. 27614	gboothpe@gmail.com;	919-441-6440		
Linda Kushner L. Kushner Consulting, LLC 514 Daniels St. #254 Raleigh, NC 27605	Lkushner33@gmail.com;	919-810-1616		
William Watson	wfwatson924@gmail.com;			

Green Development LLC Seth H. Handy, Esq. HANDY LAW, LLC 42 Weybosset Street Providence, RI 02903	seth@handylawllc.com;	401-626-4839
Kevin Hirsch Green Development, LLC 2000 Chapel View Blvd, Suite 500 Cranston, RI 02920	kh@green-ri.com; ms@green-ri.com; hm@green-ri.com; mu@green-ri.com;	
Revity Energy LLC Nicholas L. Nybo, Esq. Revity Energy LLC & Affiliates 117 Metro Center Blvd., Suite 1007 Warwick, RI 02886	nick@revityenergy.com;	508-269-6433
File an original & 5 copies w/: Luly E. Massaro, Commission Clerk Public Utilities Commission 89 Jefferson Blvd. Warwick, RI 02888	Luly.Massaro@puc.ri.gov; Cynthia.WilsonFrias@puc.ri.gov; Alan.Nault@puc.ri.gov; Todd.Bianco@puc.ri.gov; Kristen.L.Masse@puc.ri.gov;	401-780-2107