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February 28, 2025

VIA ELECTRONIC MAIL AND HAND DELIVERY

Stephanie De La Rosa, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

**RE: Docket No. 24-54-EL – The Narragansett Electric Company d/b/a Rhode Island Energy
Proposed FY 2026 Electric Infrastructure, Safety, and Reliability Plan
Responses to PUC Data Requests – Set 2 (Complete Set)**

Dear Ms. De La Rosa:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”), enclosed is the Company’s response to PUC 2-3, which completes the Company’s responses to the Public Utilities Commission’s (“PUC”) Second Set of Data Requests (“Set 2”) in the above-referenced matter.

Additionally, the Company is providing its complete set of responses to PUC Set 2 electronically to facilitate posting to the PUC’s website. Due to the voluminous nature of the Company’s responses to PUC Set 2, the Company has applied Bates stamp to the attached electronic version of its complete set of responses in this matter.

Please be advised that the Company’s attachments in response to data request PUC 2-9 contains Critical Energy Infrastructure Information (“CEII”). Pursuant to 810-RICR-00-00-1.3(H)(3) and R.I. Gen. Laws § 38-2-2(4)(B) and 2(4)(F), the Company respectfully requests that the Commission treat the requests with CEII as confidential. The Company has enclosed redacted versions of the attachments to data request PUC 2-9 for the public version of the filing.

In support of this request, the Company has enclosed a Motion for Protective Treatment of Confidential Information. In accordance with 810-RICR-00-00-1.3(H)(2), the Company also respectfully requests that the PUC make a preliminary finding that the confidential information is exempt from the mandatory public disclosure requirements of the Rhode Island Access to Public Records Act (“APRA”).

Stephanie De La Rosa, Commission Clerk
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February 28, 2025
Page 2 of 2

Thank you for your attention to this matter. If you have any questions, please contact me at 401-316-7429.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Jennifer Brooks Hutchinson", with a long horizontal flourish extending to the right.

Jennifer Brooks Hutchinson

Enclosure

cc: Docket No. 24-54-EL Service List

**STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISSION**

THE NARRAGANSETT ELECTRIC COMPANY)
d/b/a RHODE ISLAND ENERGY'S FY 2026 ELECTRIC)
INFRASTRUCTURE, SAFETY AND)
RELIABILITY PLAN)

DOCKET NO. 24-54-EL

**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 records that are the subject of this Motion that require protective treatment from public disclosure are in the Company's Attachment PUC 2-9 to its response to data request PUC 2-9 ("Confidential Records"). The Company requests protective treatment of the Confidential Records 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 Records, which are the subject of this Motion, are exempt from public disclosure pursuant to R.I. Gen. Laws § 38-2-2(4)(B) and 2(4)(F) as “[t]rade secrets and commercial or financial information obtained from a person, firm, or corporation that is of a privileged or confidential nature,” and, “[s]cientific and technological secrets...the disclosure of which would endanger the public welfare and security.” The Rhode Island Supreme Court has held that the confidential information exemption of R.I. Gen. Laws § 38-2-2(4)(B) 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.

With respect to the exemption provided under R.I. Gen. Laws § 38-2-2(4)(F), the Confidential Records are detailed maps of sections of the Company’s electric distribution system, which could be used to perpetrate acts that could endanger public safety and welfare. These records constitute confidential energy infrastructure information (“CEII”). CEII is defined by the Federal Energy Regulatory Commission (“FERC”) as:

[S]pecific engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure that:

1. Relates details about the production, generation, transmission, or distribution of energy;
2. Could be useful to a person planning an attack on critical infrastructure;
3. Is exempt from mandatory disclosure under the [Federal] Freedom of Information Act, 5 U.S.C. § 552; and
4. Does not simply give the general location of the critical information.

18 CFR § 388.113(c)(2). In turn, “critical infrastructure” is defined as:

[E]xisting and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.

18 CFR § 388.113(c)(4).

The Confidential Records consist of information the Company deems Critical Energy Infrastructure Information (“CEII”). The Company would customarily not release this information to the public. The Company’s submission of the Confidential Records stem from data requests issued by the Public Utilities Commission in the above-referenced docket. Accordingly, the Company is providing the Confidential Records to fulfil its regulatory responsibilities.

Public disclosure of the information identified as CEII in the Confidential Records would negatively impact the Company’s ability to effectively operate and to provide safe and reliable service to its customers because CEII means a system or asset of the electric distribution 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 exceptions found in R.I. Gen. Laws § 38-2-2(4)(B) and 2(4)(F).

III. CONCLUSION

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

Respectfully submitted,

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

By its attorneys,



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Dated: February 7, 2025

CERTIFICATE OF SERVICE

I hereby certify that on February 7, 2025, I delivered a true copy of the foregoing Motion via electronic mail to the parties on the Service List for Docket No. 24-54-EL.

A handwritten signature in blue ink, appearing to read "Joanne Scanlon", is centered on a light blue rectangular background.

Joanne M. Scanlon

The Narragansett Electric Company
d/b/a Rhode Island Energy
RIPUC Docket No. 24-54-EL

In Re: Proposed FY 2026 Electric Infrastructure, Safety, and Reliability Plan
Responses to the Commission's Second Set of Data Requests
Issued January 22, 2025

PUC 2-1
Budget/Spending Projections

Request:

The attached worksheet presents 5 years of ISR spending (FY 2021 through FY 2025). Pursuant to the order in Docket 23-48-EL, the FY 2025 spending includes a separate line item (Line 6) for major projects that have overall spending of \$5 million or greater. To the extent possible, for each Fiscal Year 2021 through 2024, please extract any project that would have qualified as a major project under the new guidelines (overall spending of \$5 million or greater) and include those projects on Line 6 for each respective year. Then perform the calculations to fill in the applicable boxes for the missing information on line 9.

Response:

The table below shows the ISR spending for FY 2021 through FY 2025 with projects that would have qualified as a major project under the new guidelines (substation projects with spending of \$5 million or greater) reclassified from lines 3 and 5 to line 6 for FY 2021 through FY 2024.

The Excel file is included in this response as Attachment PUC 2-1.

		<u>Electric ISR Five Year Spending History</u>						
		(a)	(b)	(c)	(d)	(e)	(g)	(h)
						<u>FY 2025</u>		
						<u>Forecast Q2</u>	<u>5-Yr Avg.</u>	<u>3-Yr Avg.</u>
Line		<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>Report</u>	<u>Actual</u>	<u>Actual</u>
1	Customer Requests	21,990	34,335	31,727	35,306	38,959	32,463	35,331
2	Damage Failure	19,491	20,200	17,461	20,811	22,577	20,108	20,283
3	Asset Condition	29,989	28,932	38,086	49,950	38,370	37,065	42,135
4	Non-Infrastructure	(57)	1,100	1,554	(1,082)	699	443	390
5	System Capacity & Performance	12,894	12,529	12,326	14,344	25,483	15,515	17,384
6	Separately Tracked Major Projects	16,320	9,634	7,291	5,397	14,800	10,688	9,163
7	Study Cost	0	0	0	0	200	40	67
8	TOTAL	100,627	106,730	108,445	124,726	141,088	116,323	124,753
9	Total w/o Major Projects & Study	84,307	97,096	101,154	119,329	126,088	105,595	115,524

PUC 2-1, page 2
Budget/Spending Projections

Please note that two substation projects have forecasted capital spending of approximately \$5 million and have not been reclassified to line 6 because they are expected to be completed in FY 2025. When the new guidelines were established, these projects were not identified as Separately Tracked Major projects because their forecasts were less than \$5 million. The projects are the Providence Study's Phase 1B Admiral Street-Rochambeau Substation Project and the Phase 4 Knightsville 4kV Substation Project.

Also, please note that the Warren Substation and New Lafayette Substation projects were identified as Separately Tracked Major Projects in the FY 2026 Proposed ISR Plan because their revised estimates exceeded \$5 million. The FY 2021 through FY 2024 capital spending for these projects has been reclassified from line 5 to line 6. The FY 2025 forecasted capital spending has not been reclassified to maintain the Q2 Forecast amount. FY 2025 forecasted spending for Warren Substation is \$0.8 million and for the New Lafayette Substation is \$0.3 million.

RIPUC
Docket 24-54-EL
FY 2026 Electric ISR

		Electric ISR Five Year Spending History						
		(a)	(b)	(c)	(d)	(e)	(g)	(h)
						FY 2025 Forecast Q2 Report	5-Yr Avg. Actual	3-Yr Avg. Actual
Line		FY 2021	FY 2022	FY 2023	FY 2024			
1	Customer Requests	21,990	34,335	31,727	35,306	38,959	32,463	35,331
2	Damage Failure	19,491	20,200	17,461	20,811	22,577	20,108	20,283
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9	Total w/o Major Projects & Study	84,307	97,096	101,154	119,329	126,088	105,595	115,524

RIPUC
Docket 24-54-EL
FY 2026 Electric ISR

		Electric ISR Five Year Spending History						
		(a)	(b)	(c)	(d)	(e)	(g)	(h)
						FY 2025 Forecast Q2 Report	5-Yr Avg. Actual	3-Yr Avg. Actual
Line		FY 2021	FY 2022	FY 2023	FY 2024			
1	Customer Requests	21,990	34,335	31,727	35,306	38,959	32,463	35,331
2	Damage Failure	19,491	20,200	17,461	20,811	22,577	20,108	20,283
3	Asset Condition	29,989	28,932	38,086	49,950	38,370	37,065	42,135
4	Non-Infrastructure	(57)	1,100	1,554	(1,082)	699	443	390
5	System Capacity & Performance	12,894	12,529	12,326	14,344	25,483	15,515	17,384
6	Separately Tracked Major Projects	16,320	9,634	7,291	5,397	14,800	10,688	9,163
7	Study Cost	0	0	0	0	200	40	67
8	TOTAL	100,627	106,730	108,445	124,726	141,088	116,323	124,753
9	Total w/o Major Projects & Study	84,307	97,096	101,154	119,329	126,088	105,595	115,524

PUC 2-2
Budget/Spending Projections

Request:

What is the Company's best estimate of the total electric distribution rate base as of the end of calendar year 2024 which will be used for earnings report purposes.

Response:

The Company's best estimate of the total electric distribution rate base as of the end of calendar year 2024 which will be used for earnings report purposes is \$1,364,542,455. Please note that for purposes of the earnings report, this will be combined with previous quarters to calculate a 5-quarter average rate base. In addition, this is the estimated rate base per the Company books and does not reflect an adjustment for hold harmless. Consistent with the 2023 earnings report filing, the Company would make a revenue adjustment for hold harmless in the overall earnings calculation and not directly to the presented rate base amount.

PUC 2-3
Budget/Spending Projections

Request:

The Commission is aware that the Company is planning to file a distribution base rate case in the second half of CY 2025, which could result in a distribution rate increase by the fall of CY 2026. Given this plan, it appears that the combination of a base rate increase and the revenue requirement impact arising out of all the proposed investments through the ISR may have a significant impact on customers. For purposes of estimating an order of magnitude of the potential revenue requirement impact arising out of the Company's ISR investment forecast shown in Attachment 3, the Commission requests the following:

- a. Assume 100% of the Company's proposals that are forecasted in the 5-Year investment plan are approved through FY 2027, as shown on line 20, page 56 of the plan (Bates p. 144);
- b. Assume (as a simplifying assumption) that all of the capital projects proposed for FY 2026 and FY 2027 are placed into service by April 1, 2027, including AMF and all other projects already approved in prior ISRs that have not been placed into service yet. (NOTE: As a simplifying assumption, for purposes of the in-service estimate, use the full year convention for AMF and all capital projects that are forecasted to have commenced spending prior to FY 2027 and the half year convention for projects that are forecasted to have commenced spending in FY 2027.);
- c. Please perform a revenue requirement calculation based on these assumptions that shows the total incremental revenue requirement impact as of April 1, 2027, compared to rates that were in effect on November 1, 2024, and rates in effect on May 1, 2022. Please also include in the assumption the revenue requirement associated with capital additions that are forecasted to be installed in FY 2026 but were not included in the ISR or have already been installed prior to FY 2026 and were not pursued through an ISR.
- d. Based on the hypothetical incremental revenue requirement impact given in (c), please state the percentage increase on distribution rates compared to distribution rates in effect on November 1, 2024, and May 1, 2022, including an estimate of the bill impact on a typical 500 kWh residential customer.

Response:

- a&b. For purposes of this response and the revenue requirement calculated in part c, the Company has made the following assumptions for simplification and to give an order of

Prepared by or under the supervision of:
Jeffrey Oliveira (c); Stephanie Briggs (c. AMF) and Tyler Shields (d)

PUC 2-3, page 2
Budget/Spending Projections

magnitude of the revenue requirement in FY 2027. Actual costs and investments to be included in future ISR filings and the next distribution base rate case for cost recovery are subject to further review and analysis.

- For ISR investments and related revenue requirement, the Company has assumed the total ISR capital spend from FY 2018 through FY 2026 on Attachment 1A, Line 17 (Bates p. 134) has been approved and placed in service by FY 2026 and the full year convention was applied to calculate the FY 2027 revenue requirement using the FY 2026 ISR revenue requirement model. Note this is a simplifying assumption and likely higher than actual investments that will be placed in service during FY 2026 as not all spend through FY 2026 will be placed in service by the end of FY 2026.
- For ISR investments and related revenue requirement, the Company has assumed the total ISR capital spend for FY 2027 on Attachment 3, Line 20 (Bates p. 144) has been approved and placed in service during FY 2027 and the half year convention was applied to calculate the FY 2027 revenue requirement. Note this is a simplifying assumption because actual spend during a period does not equate to actual capital placed in service during the same period and some of the FY 2027 spend will not be placed into service until future years. Accordingly, this hypothetical revenue requirement is likely be higher than actual revenue requirement that will result from actual capital placed in service. For the FY 2027 investments, the revenue requirement calculation uses the same model and assumptions as FY 2026, such as tax and depreciation rates, and FY 2026 levels of retirements, cost of removal, and property tax.
- For the Other investments category, this includes the investments that have been or are forecasted to be placed in service since the last distribution base rate case through FY 2027 and would be included in rate base in the next distribution rate case as reflected in the Company's supplemental response to PUC 1-5. As indicated in that response, the Company has not made final decisions on all capital investments that it may include in the upcoming base distribution rate case and the exact timing of forecasted in service estimates could potentially be refined. For simplifying assumptions, the Company has not included any cost of removal or retirements in the revenue requirement calculation for these investments. Additionally, for simplicity, the Company has used the FY 2026 ISR revenue requirement model to estimate an order of magnitude, which would use the same assumptions and depreciation rates as ISR investments; however, when included in base distribution rates, the Company would apply the actual depreciation rates for the individual types of investments.

Prepared by or under the supervision of:
Jeffrey Oliveira (c); Stephanie Briggs (c. AMF) and Tyler Shields (d)

PUC 2-3, page 3
Budget/Spending Projections

- For the AMF investments category, the revenue requirement calculation for FY 2027 uses the forecasted capital placed in service through FY 2027 and uses the methodology and assumptions that were proposed in the FY 2026 ISR filing for AMF capital investments.
- c. Please see Attachment PUC 2-3-1 for a summary of the illustrative incremental capital revenue requirement calculation for FY 2027 using the above assumptions. The revenue requirement is broken down by ISR capital investments, other Non-ISR capital, and AMF capital. On the attachment, the FY 2027 revenue requirement is compared to capital revenue requirements reflected in rates as of November 1, 2024 and May 1, 2022. The November 1, 2024 revenue requirement represents the annual ISR capital revenue requirement through FY 2025 (the rates were effective April 1, 2024 through March 31, 2025). Additionally, the May 1, 2022 revenue requirement represents the annual ISR capital revenue requirement through FY 2023 (the rates were effective April 1, 2022 through March 31, 2023). Please note that there are no revenue requirement amounts reflected in rates as of November 1, 2024 or May 1, 2022 for AMF or other Non-ISR investments because the Company has not yet pursued cost recovery for those investments. As noted above, there are many simplifying assumptions used in the calculation of the FY 2027 revenue requirement, principally regarding in-service dates for investments where the assumption was that all spend was placed in service through FY 2027. Actual in-service dates for these investments will differ, and many of the capital projects will not be placed in service until after FY 2027. Consequently, the illustrative revenue requirement presented in Attachment PUC 2-3-1 may be a reflection of the order of magnitude of the revenue requirement, but it is likely that it is an over-estimate and that the actual revenue requirement calculation at that time will be a lesser amount. Additionally, when comparing the total ISR capital revenue requirement for FY 2023 and FY 2025 to the forecasted FY 2027 capital revenue requirement on the attachment, the incremental plant in service through FY 2027 are not the only changes between the periods. Other changes between the periods such as tax and property tax rates updates will cause some less significant differences when looking at the total revenue requirements.

On Attachment PUC 2-3-1, the table on lines 1-4 includes the net AMF revenue requirements that have been offset by the forecasted deferrals. The table on lines 5-8 includes the AMF revenue requirements that have not been offset by the forecasted deferrals.

PUC 2-3, page 4
Budget/Spending Projections

- d. Please see Attachment PUC 2-3-2 for the bill impacts on a typical residential customer using 500 kWh a month. Page 1 represents the bill impacts for March 31, 2027 compared to November 1, 2024 rates, and Page 2 represents the bill impacts for March 31, 2027 compared to May 1, 2022. For simplifying assumptions, the Company assumed all other rates were unchanged from either November 1, 2024 or May 1, 2022, and the hypothetical Capex Factor for March 31, 2027 was the only update. The CapEx Factor calculated for March 31, 2027, on Page 3, includes the total revenue requirement for FY 2027 for all categories of investments as shown on Attachment PUC 2-3-1. The revenue requirement is allocated amongst rate classes in the same manner as the FY 2026 ISR CapEx Factor on Page 2, Line 4. Please note that the AMF and other Non-ISR categories may use a different method of cost recovery in the next base rate case or other filing, but for simplifying assumptions and to reflect an order of magnitude, the Company calculated a per kWh factor for all investments in this response. For purposes of the per kWh factor calculated in this response, the Company used the FY 2027 forecasted kWh.

With AMF Revenue Requirement Offset by Deferral

	FY 23 ISR Revenue Requirement (in effect as of 5/1/22)	FY 25 ISR Revenue Requirement (in effect at 11/1/24)	FY 2027 revenue requirements with AMF net of deferral	Incremental from 5/1/22 Revenue Requirement in Rates	Incremental from 11/1/24 Revenue Requirement in Rates
	(a)	(b)	(c)	(d)	(e)
1 ISR Capital Revenue Requirement	\$ 36,582,324	\$ 40,721,882	\$ 78,177,593	\$ 41,595,269	\$ 37,455,711
2 Non-ISR	-	-	15,547,370	15,547,370	15,547,370
3 AMF	-	-	11,587,230	11,587,230	11,587,230
4 Total	\$ 36,582,324	\$ 40,721,882	\$ 105,312,193	\$ 68,729,869	\$ 64,590,311

1(a) - based on approved Plan in Docket No. 5209

1(b) - based on approved Plan in Docket No. 23-48-EL

1(c) - calculated based on assumptions in this response

2(c) - based on estimated plant in service from last base rate case through FY 2027 (no current recovery)

3(c) - calculated based on assumptions in this response

4 = Sum of Lines 1+2+3

With AMF Revenue Requirement Not Offset by Deferral

	FY 23 ISR Revenue Requirement (in effect as of 5/1/22)	FY 25 ISR Revenue Requirement (in effect at 11/1/24)	FY 2027 revenue requirements with AMF not net of deferral	Incremental from 5/1/22 Revenue Requirement in Rates	Incremental from 11/1/24 Revenue Requirement in Rates
	(a)	(b)	(c)	(d)	(e)
5 ISR Capital Revenue Requirement	\$ 36,582,324	\$ 40,721,882	\$ 78,177,593	\$ 41,595,269	\$ 37,455,711
6 Non-ISR	-	-	15,547,370	15,547,370	15,547,370
7 AMF	-	-	19,217,085	19,217,085	19,217,085
8 Total	\$ 36,582,324	\$ 40,721,882	\$ 112,942,049	\$ 76,359,725	\$ 72,220,167

5(a) - based on approved Plan in Docket No. 5209

5(b) - based on approved Plan in Docket No. 23-48-EL

5(c) - calculated based on assumptions in this response

6(c) - based on estimated plant in service from last base rate case through FY 2027 (no current recovery)

7(c) - calculated based on assumptions in this response

8 = Sum of Lines 5+6+7

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to A-16 Rate Customers

Monthly kWh (a)	Rates Effective November 1, 2024				Illustrative Rates March 31, 2027				\$ Increase (Decrease)				Increase (Decrease) % of Total Bill				Percentage of Customers (r)
	Delivery Services (b)	Supply Services (c)	GET (d)	Total (e) = (a) + (b) + (c)	Delivery Services (f)	Supply Services (g)	GET (h)	Total (i) = (f) + (g) + (h)	Delivery Services (j) = (f) - (b)	Supply Services (k) = (g) - (c)	GET (l) = (h) - (d)	Total (m) = (j) + (k) + (l)	Delivery Services (n) = (j) / (e)	Supply Services (o) = (k) / (e)	GET (p) = (l) / (e)	Total (q) = (m) / (e)	
150	\$32.41	\$24.58	\$2.37	\$59.36	\$33.92	\$24.58	\$2.44	\$60.94	\$1.51	\$0.00	\$0.07	\$1.58	2.5%	0.0%	0.1%	2.7%	30.1%
300	\$54.00	\$49.16	\$4.30	\$107.46	\$57.03	\$49.16	\$4.42	\$110.61	\$3.03	\$0.00	\$0.12	\$3.15	2.8%	0.0%	0.1%	2.9%	12.9%
400	\$68.40	\$65.55	\$5.58	\$139.53	\$72.44	\$65.55	\$5.75	\$143.74	\$4.04	\$0.00	\$0.17	\$4.21	2.9%	0.0%	0.1%	3.0%	11.6%
500	\$82.80	\$81.94	\$6.86	\$171.60	\$87.85	\$81.94	\$7.07	\$176.86	\$5.05	\$0.00	\$0.21	\$5.26	2.9%	0.0%	0.1%	3.1%	9.6%
600	\$97.20	\$98.32	\$8.15	\$203.67	\$103.26	\$98.32	\$8.40	\$209.98	\$6.06	\$0.00	\$0.25	\$6.31	3.0%	0.0%	0.1%	3.1%	7.7%
700	\$111.60	\$114.71	\$9.43	\$235.74	\$118.67	\$114.71	\$9.72	\$243.10	\$7.07	\$0.00	\$0.29	\$7.36	3.0%	0.0%	0.1%	3.1%	19.0%
1,200	\$183.59	\$196.64	\$15.84	\$396.07	\$195.71	\$196.64	\$16.35	\$408.70	\$12.12	\$0.00	\$0.51	\$12.63	3.1%	0.0%	0.1%	3.2%	6.8%
2,000	\$298.77	\$327.74	\$26.10	\$652.61	\$318.97	\$327.74	\$26.95	\$673.66	\$20.20	\$0.00	\$0.85	\$21.05	3.1%	0.0%	0.1%	3.2%	2.3%

Rates Effective November 1, 2024				Illustrative Rates March 31, 2027				Line Item on Bill	
(s)				(t)					
(1) Distribution Customer Charge			\$6.00				\$6.00	Customer Charge	
(2) LIHEAP Enhancement Charge			\$0.79				\$0.79	LIHEAP Enhancement Charge	
(3) Renewable Energy Growth Program Charge			\$4.02				\$4.02	RE Growth Program	
(4) Distribution Charge (per kWh)			\$0.04580				\$0.04580		
(5) Operating & Maintenance Expense Charge			\$0.00227				\$0.00227		
(6) Operating & Maintenance Expense Reconciliation Factor			\$0.00010				\$0.00010		
(7) CapEx Factor Charge			\$0.00709				\$0.01719		
(8) CapEx Reconciliation Factor			\$0.00010				\$0.00010		
(9) Revenue Decoupling Adjustment Factor			\$0.00123				\$0.00123	Distribution Energy Charge	
(10) Pension Adjustment Factor			(\$0.00274)				(\$0.00274)		
(11) Storm Fund Replenishment Factor			\$0.00788				\$0.00788		
(12) Arrearage Management Adjustment Factor			\$0.00009				\$0.00009		
(13) Performance Incentive Factor			\$0.00000				\$0.00000		
(14) Low Income Discount Recovery Factor			\$0.00277				\$0.00277		
(15) Long-term Contracting for Renewable Energy Charge			\$0.01191				\$0.01191	Renewable Energy Distribution Charge	
(16) Net Metering Charge			\$0.01253				\$0.01253		
(17) Base Transmission Charge			\$0.03686				\$0.03686		
(18) Transmission Adjustment Factor			\$0.00421				\$0.00421	Transmission Charge	
(19) Transmission Uncollectible Factor			\$0.00054				\$0.00054		
(20) Base Transition Charge			\$0.00000				\$0.00000	Transition Charge	
(21) Transition Adjustment			\$0.00000				\$0.00000		
(22) Energy Efficiency Program Charge			\$0.01334				\$0.01334	Energy Efficiency Programs	
(23) Last Resort Service Base Charge			\$0.14918				\$0.14918		
(24) LRS Adjustment Factor			\$0.00000				\$0.00000	Supply Services Energy Charge	
(25) LRS Administrative Cost Adjustment Factor			\$0.00269				\$0.00269		
(26) Renewable Energy Standard Charge			\$0.01200				\$0.01200		
Line Item on Bill									
(27) Customer Charge			\$6.00				\$6.00		
(28) LIHEAP Enhancement Charge			\$0.79				\$0.79		
(29) RE Growth Program			\$4.02				\$4.02		
(30) Transmission Charge		kWh x	\$0.04161				\$0.04161		
(31) Distribution Energy Charge		kWh x	\$0.06459				\$0.07469		
(32) Transition Charge		kWh x	\$0.00000				\$0.00000		
(33) Energy Efficiency Programs		kWh x	\$0.01334				\$0.01334		
(34) Renewable Energy Distribution Charge		kWh x	\$0.02444				\$0.02444		
(35) Supply Services Energy Charge		kWh x	\$0.16387				\$0.16387		

Column (s): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 11/1/2024, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 10/1/2024
Column (t): Line (5) per Section 5, Page 1, Line (1), Column (a). Line (7) per Section 5, Page 1, Line (3), Column (a). All other rates per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 11/1/2024, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096 effective 10/1/2024.

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to A-16 Rate Customers

Monthly kWh (a)	Rates Effective May 1, 2022				Illustrative Rates March 31, 2027				\$ Increase (Decrease)				Increase (Decrease) % of Total Bill				Percentage of Customers (r)
	Delivery Services (b)	Supply Services (c)	GET (d)	Total (e) = (a) + (b) + (c)	Delivery Services (f)	Supply Services (g)	GET (h)	Total (i) = (f) + (g) + (h)	Delivery Services (j) = (f) - (b)	Supply Services (k) = (g) - (c)	GET (l) = (h) - (d)	Total (m) = (j) + (k) + (l)	Delivery Services (n) = (j) / (e)	Supply Services (o) = (k) / (e)	GET (p) = (l) / (e)	Total (q) = (m) / (e)	
150	\$26.90	\$11.72	\$1.61	\$40.23	\$28.52	\$11.72	\$1.68	\$41.92	\$1.62	\$0.00	\$0.07	\$1.69	4.0%	0.0%	0.2%	4.2%	30.1%
300	\$44.55	\$23.43	\$2.83	\$70.81	\$47.79	\$23.43	\$2.97	\$74.19	\$3.24	\$0.00	\$0.14	\$3.38	4.6%	0.0%	0.2%	4.8%	12.9%
400	\$56.32	\$31.24	\$3.65	\$91.21	\$60.64	\$31.24	\$3.83	\$95.71	\$4.32	\$0.00	\$0.18	\$4.50	4.7%	0.0%	0.2%	4.9%	11.6%
500	\$68.09	\$39.05	\$4.46	\$111.60	\$73.49	\$39.05	\$4.69	\$117.23	\$5.40	\$0.00	\$0.23	\$5.63	4.8%	0.0%	0.2%	5.0%	9.6%
600	\$79.86	\$46.86	\$5.28	\$132.00	\$86.34	\$46.86	\$5.55	\$138.75	\$6.48	\$0.00	\$0.27	\$6.75	4.9%	0.0%	0.2%	5.1%	7.7%
700	\$91.63	\$54.67	\$6.10	\$152.40	\$99.19	\$54.67	\$6.41	\$160.27	\$7.56	\$0.00	\$0.31	\$7.87	5.0%	0.0%	0.2%	5.2%	19.0%
1,200	\$150.47	\$93.72	\$10.17	\$254.36	\$163.43	\$93.72	\$10.71	\$267.86	\$12.96	\$0.00	\$0.54	\$13.50	5.1%	0.0%	0.2%	5.3%	6.8%
2,000	\$244.61	\$156.20	\$16.70	\$417.51	\$266.21	\$156.20	\$17.60	\$440.01	\$21.60	\$0.00	\$0.90	\$22.50	5.2%	0.0%	0.2%	5.4%	2.3%

	<u>Rates Effective May 1, 2022</u> (s)	<u>Illustrative Rates March 31, 2027</u> (t)	<u>Line Item on Bill</u>
(1) Distribution Customer Charge	\$6.00	\$6.00	Customer Charge
(2) LIHEAP Enhancement Charge	\$0.79	\$0.79	LIHEAP Enhancement Charge
(3) Renewable Energy Growth Program Charge	\$2.46	\$2.46	RE Growth Program
(4) Distribution Charge (per kWh)	\$0.04580	\$0.04580	
(5) Operating & Maintenance Expense Charge	\$0.00211	\$0.00211	
(6) Operating & Maintenance Expense Reconciliation Factor	(\$0.00010)	(\$0.00010)	
(7) CapEx Factor Charge	\$0.00639	\$0.01719	
(8) CapEx Reconciliation Factor	(\$0.00069)	(\$0.00069)	
(9) Revenue Decoupling Adjustment Factor	(\$0.00042)	(\$0.00042)	Distribution Energy Charge
(10) Pension Adjustment Factor	(\$0.00006)	(\$0.00006)	
(11) Storm Fund Replenishment Factor	\$0.00788	\$0.00788	
(12) Arrearage Management Adjustment Factor	\$0.00006	\$0.00006	
(13) Performance Incentive Factor	\$0.00008	\$0.00008	
(14) Low Income Discount Recovery Factor	\$0.00196	\$0.00196	
(15) Long-term Contracting for Renewable Energy Charge	\$0.00044	\$0.00044	Renewable Energy Distribution Charge
(16) Net Metering Charge	\$0.00488	\$0.00488	
(17) Base Transmission Charge	\$0.03524	\$0.03524	
(18) Transmission Adjustment Factor	\$0.00095	\$0.00095	Transmission Charge
(19) Transmission Uncollectible Factor	\$0.00046	\$0.00046	
(20) Base Transition Charge	\$0.00000	\$0.00000	Transition Charge
(21) Transition Adjustment	\$0.00018	\$0.00018	
(22) Energy Efficiency Program Charge	\$0.01252	\$0.01252	Energy Efficiency Programs
(23) Last Resort Service Base Charge	\$0.07174	\$0.07174	
(24) LRS Adjustment Factor	(\$0.00318)	(\$0.00318)	
(25) LRS Administrative Cost Adjustment Factor	\$0.00233	\$0.00233	Supply Services Energy Charge
(26) Renewable Energy Standard Charge	\$0.00721	\$0.00721	
Line Item on Bill			
(27) Customer Charge	\$6.00	\$6.00	
(28) LIHEAP Enhancement Charge	\$0.79	\$0.79	
(29) RE Growth Program	\$2.46	\$2.46	
(30) Transmission Charge	kWh x \$0.03665	\$0.03665	
(31) Distribution Energy Charge	kWh x \$0.06301	\$0.07381	
(32) Transition Charge	kWh x \$0.00018	\$0.00018	
(33) Energy Efficiency Programs	kWh x \$0.01252	\$0.01252	
(34) Renewable Energy Distribution Charge	kWh x \$0.00532	\$0.00532	
(35) Supply Services Energy Charge	kWh x \$0.07810	\$0.07810	

Column (s): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 11/1/2024, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 10/1/2024

Column (t): Line (5) per Section 5, Page 1, Line (1), Column (a). Line (7) per Section 5, Page 1, Line (3), Column (a). All other rates per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 11/1/2024, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096 effective 10/1/2024.

The Narragansett Electric Company
Illustrative ISR CapEx Factors
For Fiscal Year 2027

		<u>Total</u>	<u>Residential</u>	<u>Small C&I</u>	<u>General C&I</u>	<u>Large Demand</u>	<u>Lighting</u>	<u>Propulsion</u>
		<u>(a)</u>	<u>A-16 / A60</u>	<u>C-06</u>	<u>G-02</u>	<u>B-32 / G-32</u>	<u>S-05 / S-06</u>	<u>X-01</u>
		(a)	(b)	(c)	(d)	(e)	(f)	(g)
(1)	Plan Year 2026 Capital Investment Component of Revenue Requirement Including Tax Hold Harmless Adjustment	\$ 105,312,193						
(2)	Total Rate Base (\$000s)	\$729,511	\$404,995	\$75,009	\$117,155	\$123,849	\$8,296	\$208
(3)	Percentage of Total	100.00%	55.52%	10.28%	16.06%	16.98%	1.14%	0.03%
(4)	Allocated Revenue Requirement	\$105,312,193	\$58,465,025	\$10,828,259	\$16,912,521	\$17,878,850	\$1,197,554	\$29,984
(5)	Forecasted kWh - April 2026 through March 2027	7,672,251,433	3,399,222,194	748,471,930	1,228,729,669	2,241,734,383	28,441,243	25,652,014
(6)	Proposed CapEx Factor - kWh charge		\$0.01719	\$0.01446	n/a	n/a	\$0.04210	\$0.00116
(7)	Forecasted kW - April 2025 through March 2026				3,386,855	3,554,180		
(8)	Proposed CapEx Factor - kW Charge		n/a	n/a	\$4.99	\$5.03	n/a	n/a

- (1) Attachment PUC 2-3-1, Line 4, Column (c)
(2) R.I.P.U.C. 4770, Compliance Attachment 6 (August 16, 2018), (Schedule 1A), Page 1, Line 9
(3) Line (2), Columns (b) through (g) ÷ Line (2) Total
(4) Line (1) x Line (3)
(5) per Company forecasts
(6) For non demand-based rate classes, Line (4) ÷ Line (5), truncated to 5 decimal places
(7) per Company forecasts
(8) For demand-based rate classes, Line (4) ÷ Line (7), truncated to 2 decimal places
Note: charges apply to kW>10 for rate class G-02 and kW>200 for rate class B-32/G-32

PUC 2-4
Budget/Spending Projections

Request:

The total ISR-related capital spending for FY 2025 through FY 2027 is forecasted to be over a half billion dollars across three years (i.e., \$188,165,000 in FY 2025, \$247,906,000 in FY 2026, and \$244,499,000 in FY 2027 – [Bates p. 144, line19]). Assume the Commission establishes adjusted budgeting parameters on spending for FY 2026 to temper capital spending as follows:

- a. the Commission establishes a Consolidated Soft Budget Cap for FY 2026 (applicable to the categories of capital spending to which the Consolidated Soft Budget Cap applied in FY 2025) equal to the 5-year capital spending average as calculated in the response to PUC 2-[1], on line 9, col. (g), and
- b. the Commission imposes a hard cap that disallows cost recovery for any non-AMF and non-major project spending occurring during FY 2026 in excess of \$130,000,000, except for unexpected and unplanned cost incurrence that was beyond the Company's reasonable control.
 - i. Please explain whether such budget parameters would have any impact on the Company's capital spending plan for FY 2026?
 - ii. Please explain the reliability risks, if any, that the Company believes would be present on the distribution system in FY 2026 and FY 2027 (including any impacts on the Company's service quality metrics), if the Company reduced spending in FY 2026 to a total that matches or is slightly above the Soft Cap number.

Response:

The Narragansett Electric Company d/b/a Rhode Island Energy (the "Company") responds to this question based on the following understanding of the assumed adjusted budgeting parameters described in this request:

1. The Consolidated Soft Budget Cap (which applies to all capital spending except for Separately Tracked Major Projects and AMF) would be set at \$105.6 million based on the Company's response to PUC 2-1;

Prepared by or under the supervision of:
Kathy Castro as to part (b)(i) and the final three paragraphs of the Additional Explanation and Context; Ryan Constable as to part (b)(ii) and Office of General Counsel as to the first two paragraphs of the Additional Explanation and Context

PUC 2-4, page 2
Budget/Spending Projections

2. If the Company exceeded the Consolidated Soft Budget Cap by more than 2.5 percent (or in other words, spent more than \$108.24 million in FY 2026 up to \$130 million, then the Company would incur a revenue requirement penalty equal to one year of regulatory lag on the revenue requirement for the amount of spending above the \$105.6 million Consolidated Soft Budget Cap; and
3. If the Company spends more \$130 million on the Consolidated Soft Budget Cap categories, then the Company would not be permitted to recover the amounts in excess of \$130 million through the ISR mechanism, but the Company would be permitted to seek recovery of those investments through a base distribution rate filing.

Accordingly, the Company provides its responses to parts (b)(i) and (b)(ii), subject to the additional explanation and context that follows those responses.

(b)(i) The budget parameters set forth in this request would not change the Company's FY 2026 Electric ISR capital spending plan. The Company prepared its FY 2026 Electric ISR capital spending plan through a robust internal process that relied on the new budgetary framework established by the Public Utilities Commission (the "Commission") through Docket No. 23-34-EL. After preparing the proposed FY 2026 Electric ISR capital spending plan, the Company engaged in significant and substantive discussions with and the Division of Public Utilities and Carriers (the "Division") regarding the plan. That process resulted in the proposed FY 2026 Electric ISR capital spending plan that the Company has presented in this docket, and it includes the investments in capital projects that the Company has identified as reasonably needed to maintain safe and reliable service over the short and long term.¹ The establishment of new budget parameters would not cause the Company to change its plan to execute the projects set forth in the proposed FY 2026 Electric ISR capital spending plan.²

¹ To be clear, the Company does not assert that there would be a safety or reliability incident on the system definitively if it was to delay or eliminate any particular proposed investment in the FY 2026 capital spending plan (see the Company's response to b(ii) for more information). Rather, the Company acknowledges that there are conditions on the electric distribution system that create risks to safety and reliability, and the investments in the FY 2026 Electric ISR proposed capital spending plan aim to address those risks, while balancing affordability considerations for customers.

² In contrast, if the Commission was to determine through this proceeding that any of the proposed capital spending projects set forth in the FY 2026 Electric ISR Plan did not meet the criteria of being reasonably needed to maintain safe and reliable service over the short and long term, then the Company would change its FY 2026 Electric ISR capital spending plan to exclude any such projects.

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PUC 2-4, page 3
Budget/Spending Projections

The budget parameters set forth in this question, however, could certainly impact the Company's actual spending in its effort to execute on the proposed FY 2026 Electric ISR capital spending plan. The imposition of the lower Consolidated Soft Budget Cap at \$105.6 million and/or the hard cap at \$130 million and cost recovery disallowance through the ISR mechanism for any spending above that amount could lead the Company to decline to proceed with certain spending – depending on the nature of spending and what it is intended to address, as well as the Company's evaluation of system conditions at the time.³

Finally, if the Commission adopted the budgetary parameters that are the subject of this data request on a going-forward basis (and not just for FY 2026), the Company likely would make adjustments to its development of future ISR capital spending plans because of the financial implications resulting from the increased risk of reduction or elimination of cost recovery because of the lower Consolidated Soft Budget Cap and the hard cap. Currently, the Company develops its capital spending plans based on its understanding of the availability of cost recovery under the statutory language of R.I. Gen. Laws § 39-1-27.7.1(c)-(d) (the "ISR Statute") and the historical interpretation and application of the ISR Statute. The Company's cost recovery expectations are built into its five-year business plans that are shared with investors and used to attract capital. If the Company's ability to recover these capital costs through the ISR mechanism is reduced, then the Company would update the ISR assumptions included in its business plan.

(b)(ii) In responding to this question, the Company distinguishes between "risks" and "outcomes." The Company acknowledges that there are always "risks" inherent in the conditions on the electric distribution system that could result in adverse "outcomes" to safety and reliability for customers. The Company proposes investments through its ISR Plans to improve conditions on the electric distribution system and thus reduce the risk that adverse outcomes will occur.

³ The Company notes that it is unclear how it would be determined under the described budgetary parameters whether spending would qualify as "unexpected and unplanned cost incurrence that was beyond the Company's reasonable control." The degree to which the Company would be able to determine in advance whether any particular spending would qualify as "unexpected and unplanned" would impact how the Company would evaluate whether to proceed with spending on capital investment projects that would result in spending that would exceed the hard cap.

PUC 2-4, page 4
Budget/Spending Projections

The Company, therefore, cannot specifically identify any adverse outcomes that would definitively result from the reliability risks (or safety risks) that it believes would be present on the distribution system in FY 2026 and FY 2027, including whether there would be impacts to the Company's service quality metrics, if the Company reduced spending in ISR FY 2026 to a total that matches or is slightly above the Soft Cap number identified in the response to part (b)(i), above, and in the response to PUC 2-1. The Company's process always is to exercise its management discretion in light of its continuous evaluation of the conditions on the electric distribution system to determine the investments it must make to meet its obligation to provide safe and reliable service. If the Company were to curtail its investments in the FY 2026 Electric ISR Plan to align spending with the Consolidated Soft Budget Cap, then it would make decisions about which investments to curtail based on its continuous monitoring and assessment of conditions to determine, at the time, the delay that, in its professional judgment, gives rise to the lowest increased risk of an adverse outcome.

Each of the investments proposed in the FY 2026 Electric ISR capital spending plan reduces safety risks, reliability risks, or both on the electric distribution system. The Company cannot provide a quantitative estimate of the impact to reliability if the proposed capital spending plan subject to a budget cap, nor can the Company identify a particular adverse safety outcome that will result in the absence of any particular investment. The Company can, however, represent qualitatively that not making the proposed investments leads to increased risk of poorer reliability outcomes or adverse safety events as compared to making the proposed investments. That increased risk stems from the system planning criteria violations and asset condition concerns that exist on the electric distribution system today. The passage of additional time without addressing those existing conditions increases the probability of the predicted system contingency occurring and the resulting adverse safety or reliability outcomes.

For example, the Company is actively working to rebuild the Centredale substation due to asset condition issues and converting the existing 4.16kV load to 12.47kV. This project addresses conditions that give rise to a risk of failure that will only worsen if left unaddressed. The existing 4.16kV load is an electrical island and can be supplied only from Centredale substation. Therefore, if a failure occurs that de-energizes the substation, these 4.16kV customers will be without power until the equipment is repaired or replaced. If any of the equipment that serves the 12.47kV customers fails, only 65% if the customers can be transferred to other substations in a timely manner. This substation project will convert all 4.16kV customers to 12.47kV such that they can now be transferred to other substations in the event of a failure and replace all 23kV and 12.47kV equipment that have asset condition issues.

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PUC 2-4, page 5
Budget/Spending Projections

As another example, the Division Street substation asset condition project is replacing both power transformers and their protective equipment. During peak conditions in the summer, the Company disables the automatic transfer scheme because the substation load cannot be served from only one transformer. Therefore, if a power transformer failure occurs, customers will experience an outage until load is switched to adjacent substations. By replacing these two transformers, and upgrading their protective device, the Company will be able to utilize the station as intended and automatically transfer load upon a loss of transformer or bus.

Additional Explanation and Context

The Company understands and agrees with the importance of considering affordability for customers when deciding on capital spending in its ISR plans, and the Company's existing processes, as well as the new budgetary framework recently implemented by the Commission, incorporate that consideration. That said, the Company opposes making any changes to the budgetary framework for the FY 2026 ISR, and specifically opposes the potential imposition of a hard cap at any spending level.

The ISR Statute does not provide for the establishment of a hard cap on infrastructure spending. Rather the statute calls for the creation of a budget and a rate recovery mechanism to allow the Company contemporaneous cost recovery for spending on capital investments that reasonably are needed to maintain safe and reliable distribution service in the short and long term. A hard cap is antithetical to this language for two reasons. First, it would establish a spending ceiling irrespective of whether the proposed investments that would cause spending to exceed that ceiling are reasonably needed to maintain safe and reliable distribution service in the short and long term. Second, the purpose of the ISR is to disincentivize the delay of needed capital investment because of cost recovery delay concerns. The establishment of a hard cap would re-introduce the financial pressures associated with making needed infrastructure investment decisions, thereby undermining the purpose of the ISR and contradicting the objectives of the ISR Statute as set forth in R.I. Gen. Laws § 39-1-27.7.1(4) and (7). Further, establishing a hard cap on ISR capital investments likely would trigger more frequent rate cases to account for the Company's capital spending needs.

The Company needs to make investments to effectively maintain and operate its assets in a safe and reliable manner. It is the Company's legal obligation, and the risks of not doing so are too great. Recovery of these investments through the ISR mechanism provides the balance to reduce cost recovery risk in order to obtain the capital necessary to make the needed investments to

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PUC 2-4, page 6
Budget/Spending Projections

maintain safe and reliable service over the short and long term. Imposing a hard cap on ISR spending would upset that balance.

Additionally, the Company is in just the first year of the new budgetary framework established by the Commission. Accordingly, neither the Company, the Commission, nor the Division has had an opportunity to evaluate the impacts of that new framework. Rather than adjusting it before it has had an opportunity to work, the Company asserts that first there should be time to assess its efficacy. As the Company notes in connection with the FY 2026 Electric ISR Plan, although it forecasts increased spending through the Electric ISR for a few years as it completes projects identified by the completed area studies, the Company expects ISR spending to decrease thereafter. And, the Company also expects that the current budgetary framework will be effective in addressing the Commission's concerns about budget discipline.

Finally, the Company understands that the hypothetical hard cap is intended to provide a solution to cost recovery over the next few years to ease rate pressure on customers, but the Company is concerned that a hard cap would have unintended consequences, as discussed above. There may be alternative solutions worth considering that may address this problem with less potential impact on the level of reliability and safety risk on the electric distribution system and that do not have the same potential impacts on the execution of a capital spending plan. The Company, therefore, suggests that it would be best to develop any additional changes through a collaborative process with Commission and Division staff outside the context of an ongoing ISR proceeding.

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PUC 2-5
Transformers

Request:

Please update the attachment to PUC 11-10, Docket 23-48-EL to reflect any updated values. Please explain any differences from the original to the updated attachment.

<https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-03/2348-%20Resp%20PUC%20Set%2011%20%2023-11-2024.pdf>

Response:

Please see Attachment PUC 2-5, which the Company notes contains a correction from Attachment DIV 3-16 that was submitted during the consultation process with the Division of Public Utilities and Carriers on the FY 2026 ISR Plan as a result of having removed one transformer from the list, as explained below.

The subtotal in Row (22), Column (j) was corrected from a Material Cost of \$34,500,000 to \$33,900,000.

A summary of changes from the attachment to PUC 11-10, Docket 23-48-EL is outlined below:

- The number of spare transformers was reduced from 21 to 20. Upon review, the Company determined that one spare transformer with a common configuration was already owned and could be modified to support a spare transformer included on the original FY 2025 list. The spare transformer shown on row 17 of Attachment PUC 2-5 (34.5 Kilovolt(kV) to 12.47 kV 9.345 MVA with a winding configuration of Delta Zigzag) was removed.
- Upon the annual review of the Spare Transformer replacement programs, the Company reprioritized the procurement of two transformers due to one transformer having a higher probability of failure and replacement available. The first down payment for the 115kV/34.5kV dual voltage to 13.8kV 40 MVA transformer (row 10) was moved into FY 2027 from FY 2028 (Poisson value of 0.97). The 22.9kV-4.16kV 9.375 MVA transformer (row 21) was pushed out from FY 2027 into FY 2028 (Poisson value of 0.98) as one spare is currently available.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
			Spare Transformer Purchases								
	Voltage and Rating	Winding Configuration	FY25	FY26	FY27	FY28	FY29	FY30	FY31	Total Cost (\$) per Transformer	Est. Delivery Date
(1)	115-13.2kV 33/44/55 LTC	Delta-Wye	\$200,000	\$1,200,000	\$600,000					\$2,000,000	FY27
(2)	115-13.2kV 33/44/55 LTC	Delta-Wye				\$200,000	\$1,200,000	\$600,000		\$2,000,000	FY30
(3)	115-13.2 24/32/40 LTC	Delta-Wye		\$200,000	\$1,200,000	\$600,000				\$2,000,000	FY28
(4)	115-13.2 24/32/40 LTC	Delta-Wye			\$200,000	\$1,200,000	\$600,000			\$2,000,000	FY29
(5)	115-13.2 24/32/40 LTC	Delta-Wye					\$200,000	\$1,200,000	\$600,000	\$2,000,000	FY31
(6)	115-34.5kV 48/64/80	Delta-Wye		\$270,000	\$1,620,000	\$810,000				\$2,700,000	FY28
(7)	115-34.5kV 33/44/55	Wye-Wye					\$200,000	\$1,200,000	\$600,000	\$2,000,000	FY31
(8)	115-34.5kV 33/44/55	Delta-Wye					\$200,000	\$1,200,000	\$600,000	\$2,000,000	FY31
(9)	115Y/66.4kV - 34.5Y/19.92kV 33/44/55 MVA with LTC	Wye-Wye-Delta					\$200,000	\$1,200,000	\$600,000	\$2,000,000	FY31
(10)	115-34.5-13.8 24/32/40 MVA	Wye-Wye			\$180,000	\$1,080,000	\$540,000			\$1,800,000	FY29
(11)	115-23kV 30/40/50	Delta-ZigZag			\$180,000	\$1,080,000	\$540,000			\$1,800,000	FY29
(12)	115Y/66.4kV - 24kV 33/44/55 LTC	Wye-Delta		\$200,000	\$1,200,000	\$600,000				\$2,000,000	FY28
(13)	69-13.8kV 24/32/40 LTC	Delta-Wye	\$160,000	\$960,000	\$480,000					\$1,600,000	FY27
(14)	69-24 kV 25/33.3/46.6 MVA LTC	Wye-Delta				\$160,000	\$960,000	\$480,000		\$1,600,000	FY30
(15)	33.6-12.470Y kV 24/32/40 MVA LTC	Delta-Wye			\$180,000	\$1,080,000	\$540,000			\$1,800,000	FY29
(16)	34.5x23-12.47 kV 7.5/9.375 MVA	Delta-Wye			\$60,000	\$360,000	\$180,000			\$600,000	FY29
(17)	34.5-12.47kV 7.5/9.375MVA	Delta-ZigZag								\$600,000	Removed
(18)	34.5-11.0 kV 12/16/20 MVA	ZigZag-Delta	\$120,000	\$720,000	\$360,000					\$1,200,000	FY27
(19)	23.5-13.2 kV 15/20/25 MVA LTC	Delta-Wye		\$140,000	\$840,000	\$420,000				\$1,400,000	FY28
(20)	23-11.5kV 10/12.5MVA	ZigZag-Delta				\$60,000	\$360,000	\$180,000		\$600,000	FY30
(21)	22.9-4.16 kV 7.5/9.375 MVA LTC	Delta-Wye				\$80,000	\$480,000	\$240,000		\$800,000	FY30
		Count	3	4	5	4	4				
(22)	8 transformers highlighted in DIV 3-16		Total Material Cost (\$) per FY	\$480,000	\$3,690,000	\$7,100,000	\$7,730,000	\$6,200,000	\$6,300,000	\$2,400,000	\$33,900,000
(23)		Total Engineering Cost (\$) per FY	\$60,000	\$170,000	\$75,000	\$45,000	\$25,000	\$0	\$0	\$375,000	
(24)		Total Construction Cost (\$) per FY	\$0	\$0	\$1,719,145	\$459,425	\$0	\$0	\$0	\$2,178,570	
(25)		Total Overall Cost (\$) per FY	\$540,000	\$3,860,000	\$8,894,145	\$8,234,425	\$6,225,000	\$6,300,000	\$2,400,000	\$36,453,570	

PUC 2-6
Reclosers

Request:

Mr. Constable explained that the Company plans to install 39 reclosers outside of the ISR in FY 2025 and also included two reclosers in the FY 2026 Electric ISR Plan.

- a. Please describe the need for these two reclosers.
- b. There are multiple projects in progress or scheduled for the 30F2 circuit. How will those projects improve the reliability of this circuit without the reclosers? Did the BCA that was filed account for the improvements being done on the circuit? Please explain.
- c. Why did the Company choose to include the 30F2 circuit reclosers in a program that the Commission rejected last year?
- d. Although Mr. Constable testified that the Company was not seeking Commission approval for DARP in this ISR, the reclosers are in that line item and there is spending over the next five years in that program. When and how will the Company seek approval of a DARP?
- e. Is there another line item within System Capacity and Performance or Asset Condition that these reclosers would qualify for?

Response:

- a. The Company has proposed the two reclosers to address the need to improve reliability on the 30F2 circuit, which has a 5-year average interruption frequency of 3.24. This interruption frequency is substantially higher than the average circuit interruption frequency and higher than the system interruption frequency regulatory threshold of 1.05.
- b. The Company considered the other in progress and planned projects for the 30F2 circuit when conducting the reliability analysis. The original BCA, however, included only the benefits associated with the reclosers and excluded the reliability changes related to the other projects. The table below reflects the reliability improvements and benefits that result from each project in the context of all the projects in progress and planned for the 30F2 circuit. The results of the analysis reflected in the table below do not change nor affect the need nor recommendation to proceed with the two reclosers; the BCA remains substantially the same.

PUC 2-6, page 2
Reclosers

Originally filed reliability improvement

	Frequency	Duration	Valuation
Initial Values	3.23	283.5	
Recloser Additions	2.81	188.8	\$2,698,738

Revised values to demonstrate alignment with other projects

	Frequency	Duration (min)	Valuation
Initial Values	3.23	283.5	
Lafayette 30F2 Feeder Upgrade	2.97	255.2	\$1,030,111
Recloser Additions	2.55	173.9	\$2,405,919
Lafayette 30F2 Feeder Tie	2.55	141.0	\$658,904
Total			\$4,094,934

- c. The Company's position is that these reclosers meet the standard to be installed as part of the FY 2026 ISR Plan independent of whether they are part of an overall program. The Company included these reclosers in a line item for the DARP program because the Company continues to observe feeders with reliability performance significantly worse than system averages and worse than regulatory thresholds applicable to the system as a whole. Accordingly, the Company continues to assert there is a need to move forward with the DARP program in the ISR in future years, and therefore, the Company has maintained a line item for the program. As set forth in the responses to parts (d) and (e), below, the Company is not, however, seeking approval for the DARP program in this ISR filing, nor is the Company asserting that these reclosers could not have been included in another line item in the FY 2026 ISR Plan.
- d. The Company is preparing a petition seeking approval of the DARP program, which it expects to file with the Public Utilities Commission (the "Commission") in the first calendar quarter of 2025. The Company's expectation is that this petition will permit the Commission and other parties to undertake a detailed review of the DARP program, including the Fault Location, Isolation, and System Restoration ("FLISR") functionality, through a separate, non-ISR docket. The Company's goal would be that, after review of the technology and proposed program in this separate docket, the Commission would approve the DARP program, and the Company would proceed with implementing the program with recommended recloser installations and associated investments to be proposed in subsequent ISR Plan filings.

PUC 2-6, page 3

Reclosers

- e. The two reclosers proposed in the FY 2026 ISR Plan could be included in another line item such as the Reliability Blanket. The Company has proposed maintaining the DARP line item to facilitate further discussion and transparency in light of the Company's planned DARP petition, as described in the response to part (d), above.

PUC 2-7
System Improvement/Accelerated System Modification

Request:

Referencing DIV 1-10, please explain how the Company has categorized the work on the 85T3 Neutral Project as a System Improvement as compared to an Accelerated System Modification using the definitions provided in Docket Nos. 23-37-EL and 23-38-EL.

- a. When was the South County West Area Study completed?
- b. When was the 85T3 Neutral Project originally included in the ISR budget?
- c. When was the 85T3 Neutral Project originally scheduled to commence?
- d. When was the 85T3 Neutral Project originally scheduled to be in service?
- e. Please provide a timeline of all activity to identify, plan, and execute this project to date, including the DG project timelines.

Response:

The Company has removed the 85T3 Neutral Project from its fiscal year ("FY") 2026 electric infrastructure, safety, and reliability ("ISR") plan (the "FY 2026 Electric ISR Plan"). Accordingly, the Company no longer intends to proceed with the 85T3 Neutral Project in ISR FY 2026. The responses to parts (a) through (e) of this data request are set forth below, and the response to the categorization of this project follows the response to part (e).

- a. The South County West Area Study was completed in December 2021 with Revision 1 completed September 2022.
- b. The 85T3 Neutral Project was originally included in the proposed FY 2026 ISR budget.
- c. The 85T3 Neutral Project originally scheduled to commence as shown in the proposed FY 2026 ISR Budget in FY 2026.
- d. The 85T3 Neutral Project originally was scheduled to be in service in FY 2026.
- e. The following provides a timeline of all activity to identify, plan, and execute this project to date, including the DG project timelines.

PUC 2-7, page 2

System Improvement/Accelerated System Modification

- Prior to 2010 – 34.5 kV “T” circuits from the Wood River Substation established as effectively grounded circuits. However, a shared neutral was partially installed for the 85T2 and 85T3 circuits.
- November 2019 – December 2021 – Distributed Generation applications received in the area.
 - Impact Studies were initially progressed in association with Affected System Operator (ASO) #2 study. These first impact study versions assumed interconnections off of the ineffectively grounded portion of the “T” circuits without the neutral.
- Summer 2021 – The interconnection projects withdrew from ASO#2 and requested to be placed in the next ASO study due to financial reasons. The interconnection projects were placed on hold within the interconnection queue.
- Fall 2021 – ASO#3 commenced.
- December 2021 – South County West Study substantially completed.
 - This study included a project that required the shared neutral to be extended.
- Spring 2023 – New distribution impact studies were started for the interconnection projects now associated with the ASO#3 study. The basis for these studies was an effectively grounded system.
- December 2024 – ASO#3 completed.
- December 2024 – Impact Studies delivered to the interconnection projects.

Regarding whether the 85T3 Neutral Project is categorized as a System Improvement as compared to an Accelerated System Modification using the definitions provided in Docket Nos. 23-37-EL and 23-38-EL, currently the Company does not place it in either category because the Company is not performing the work in conjunction with the distributed generation (“DG”) interconnection projects with which it was previously associated.

PUC 2-7, page 3

System Improvement/Accelerated System Modification

When the Company included the 85T3 Neutral Project in the FY2026 Electric ISR Plan in the DG category, it would have categorized it as a System Improvement. The Company would have categorized it as such because it would have been work that the Company performed in conjunction with the DG interconnection because it was otherwise planned and cost effective, but it is not work that is necessary for the DG projects to interconnect. The 85T3 Neutral Project is associated with the DG interconnections because the ASO#3 study assumed the installation of the project. The DG projects, however, are able to interconnect to the Company's electric distribution system without effectively grounding the circuit. Accordingly, the 85T3 Neutral Project is not necessary for the interconnections.

Now that the Company has removed the 85T3 Neutral Project from the FY 2026 Electric ISR Plan, the Company is advising the DG developers that their interconnection work will be to the ungrounded circuit and that it is likely that, in the future, the Company will ground the circuit, which would require the DG developers to install additional equipment, at their cost, to maintain the interconnection. Accordingly, when the Company proposes to perform the 85T3 Neutral Project in the future, it likely will be categorized as a System Capacity and Performance capital investment and will not fall within the DG interconnection categories of "System Improvement" or "Accelerated System Modification."

PUC 2-8
Rescoping

Request:

Please provide further information about the Navy access challenges identified on Bates page 173 of Book 1 and the Company's activities to address the access challenges and maintain reliability on the system. Is the Navy access challenge the reason for the re-scoping of the Gate II Equipment Replacement or are there other factors (DIV 1-20). Please explain.

Response:

In order to enter the Newport Navy Base (and access the Company's Gate 2 Substation) without an escort, every Rhode Island Energy employee or contractor is required to complete a Navy background check. This is a formal process that takes approximately two weeks to review and process for approval once the form is completed. Forms require sensitive information. Once the background check is processed/cleared, employees need to visit the Navy Pass office to pick up the identification. Depending on details, the background check validity varies from 3 to 12 months requiring repeat application and Navy Pass office visits. Additional documentation is necessary to obtain a pass for a work vehicle. Access requires the personal Navy identification, federally recognized personal identification, vehicle pass, vehicle registration, and vehicle insurance documents. The Navy does not allow last minute background checks or day passes. For emergency access, Rhode Island Energy must call Navy Facilities, which may require an escort. The Company's Electric Operations personnel are vetted for 24/7 access. Rhode Island Energy contractors can be vetted for access only during business hours. Expiration of all access applications are tracked by Rhode Island Energy Operations Supervision to restart the process every 3 to 12 months. Work in the Navy Base needs to comply with additional Navy procedures including soil management plans, specific dig safe process, and rigging process.

The access challenges are not the reason for re-scoping of the Gate II Equipment Replacement project. The primary reason for rescoping the project is further asset deterioration since the completion of the area study. In light of the growing asset concerns, which require a solution to maintain reliability on the system, the access challenges were raised by Operations as one of the reasons for Engineering to consider a potential competitive cost relocation option versus the direct one-for-one equipment replacement.

PUC 2-9
Fiber

Request:

DIV 1-56 indicated that the Fiber Study would be completed in mid-December. Please provide a copy of the study.

Response:

Attachment PUC 2-9 includes the December 2024 Fiber Study. Certain routes are being coordinated with other pending work. For example, any route related to the Gate 2 Substation will be on hold until the Gate 2 reevaluation is complete. Also, the route from Anthony to Artic to New London Avenue Substations will be adjusted to avoid the Artic site. Similarly the Huntington Park and Dyer Street sites can be avoided.



RHODE ISLAND ENERGY

Summary of Findings

RI Energy - Fiber Study Project

WO# 13863962 || SP# CRI3117

REVISION 0

DECEMBER 13, 2024



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Route Summaries – Overview

Based on the revised KMZ file that was provided to Burns & McDonnell during this project, Burns & McDonnell identified 55 routes that require estimated costs and schedules. Burns & McDonnell prepared route summaries for these routes using the available data from RI Energy.

- Each route summary has at least 4 pages including a cover sheet outlining the route name and plan year for the route.
- Page 2 shows the overall scope summary, total estimated costs and breakdown for the planned route. Information regarding critical crossings and jurisdictions along the route has been identified.
- Page 3 shows the total estimated schedule and breakdown for the planned route including the material lead time. Information regarding critical crossings and jurisdictions along the route has been identified.
- Page 4 shows an overview of an aerial map of the route including stations or splice points at either end. The color of the route indicates the route difficulty score. Other high-level information of the route is shown on the title block.

Data

Based on the GIS data that Burns & McDonnell received from RI Energy, Burns & McDonnell estimated the following along the route:

- Total number of transmission and distribution poles
- Total length of the overhead and underground fiber
- Assumed number of pole replacements and make-ready
- Critical crossings (Example: Railroad, Highway, and Waterways)
- Permitting Jurisdictions.

Total Estimated Costs

Using the information above and the available data on unit costs based on assumptions, Burns & McDonnell prepared the total costs for permitting, engineering, materials, and construction.

Total Estimated Schedule

Using the information above and the available data on unit lead durations based on assumptions, Burns & McDonnell prepared the total costs for permitting, engineering, materials, and construction.

5-Year Plan Estimated Costs and Schedule:

Below are the high-level estimates to implement Fiber over a 5-year period.

Table 1 – 5-Year Plan Estimated Costs and Schedule

Year	Cost¹	Number of Routes²
2025	\$ 3,136,839.28	7
2026	\$ 7,712,329.24	15
2027	\$ 10,104,086.75	15
2028	\$ 5,331,675.66	12
2029	\$ 2,019,614.57	6
Total	\$ 28,304,545.49	55

¹ These costs are adjusted to an assumed inflation of 2.5% every year, starting from year 2025. This inflation assumption is not an indicative of future prediction, the actual inflation may vary.

² Refer to the “Route Summaries” that are submitted along with this document for details such as route names and breakdown of costs and schedules including materials lead time.

Route Summaries – Assumptions

Burns & McDonnell assumes the following to come up with the route summaries.

General Project Assumptions

- 1) Plan Year Logic:
 - a. Year 01 (2025) is a ramp up year as RI Energy trains contractors and ramps up teams through 2026. The route between Gate II 38 and Newport 203 is in this year so teams learn the requirements for designing, obtaining personnel clearances, and building on and around military property.
 - b. Years 02 through 04 have half difficult builds (bridges and railroads) and half cluster builds to reduce construction mobilization costs.
 - c. Year 05 (2029) is a ramp down year to finish new fiber builds.
- 2) The difficulty score color (green, light green, yellow, orange, and red) of the route within the route summary is based on total estimated cost and its relation to other routes within the program.
- 3) The fiber length has an assumed 9% added on the route 2D path to account for sag, elevation changes, and waste.
- 4) New fiber reel end splices assumed every 10,000 feet.
- 5) New 100 feet of fiber slack assumed every 1,000 feet.
- 6) Fiber for routes per email "RIE Fiber Study Project - RFI" dated Nov. 13, 2024, which was confirmed or superseded by email "RIE Fiber Study - Preliminary Route Summary Feedback" dated Dec. 03, 2024.
 - a. Dual 48 fiber cables for the following routes:
 - i. Tower Hill 88 – Eldred 45
 - ii. Eldred 45 – Clarke Street 65
 - iii. Clarke Street 65 – Kingston 131
 - iv. Kingston 131 – Gate II 38
 - v. Gate II 38 - Newport 203
 - vi. Newport 203 - Jepson 37
 - vii. Bristol 51 to New OPGW

- viii. Wampanoag 48 – Barrington 4
 - ix. Barrington 4 – Warren 5
 - b. Dual 144 fiber cables for the following routes:
 - i. Wood River 85 - Kenyon 68
 - ii. Kenyon 68 - West Kingston 62
 - c. Single 48 fiber cable for remaining routes not listed in either 4.a and 4.b.
- 7) New fiber builds can terminate existing or proposed splice closures which leave fibers stranded beyond that splice in that existing cable per email "RIE Fiber Study Project - RFI" dated Nov. 13, 2024.
 - 8) Program kickoff is assumed around July 2025 resulting in less schedule to start and complete new fiber builds that year.
 - 9) Estimates for underground includes an assumed 10% adder for encountering rock.
 - 10) Outage coordination assumed to take 30 calendar days which can run in parallel with material procurement and permit approvals
 - 11) Splice cases are expected to be located approximately 10 feet from the ground per email "RI Energy Fiber Study Project - RFI" dated Nov. 13, 2024. Splice cases on existing fiber and projects underway are assumed to be located near the intersection of a route within this project scope if not found using street view per email "Fiber Study Project - RFI" dated Nov. 15, 2024.
 - 12) Police escorts in cities is capped at \$1,000 per route.
 - 13) New fiber build clarifications:
 - a. Weaver Hill substation is a new substation planned for construction near P. 64 Weaver Hill Rd., West Greenwich, R.I. per email "RIE Fiber Study Project - RFI #02" dated Nov. 11, 2024.
 - b. Tiverton Power is a new fiber build that is removed from this project scope so RI Energy can complete this fiber build.
 - c. Blackburn (T) – Designing this route would result in 56 summaries for this study scope but Burns & McDonnell recommends that RI Energy completes this new fiber build with its current contractor(s) as the project underway is installed between Sockanosset 24 - Drumrock 14. A potential splice closure could be the pole within the substation resulting in a more cost-effective EPC project for the Blackburn new fiber build compared to training and mobilizing different contractors.
 - d. Some routes were moved from new fiber build to now be projects underway per email "RI Energy Fiber Study - Preliminary Route Summary Feedback" dated Dec.

03, 2024, but Burns & McDonnell decided to produce summaries based on the timing of the notification and the team already completed reviews for the following routes:

- i. Chase Hill 155 to Wood River 85
- ii. Lincoln Avenue 72 to Splice Point
- iii. Nasonville 127 to Splice Point

14) All costs to move communication cables are assumed to be paid by the entity causing the moves which are embedded into the make ready labor cost per pole.

15) Make Ready per route had the following assumptions if the route is along roadways:

- a. Pole Replacement (Difficulty Score 5) = 20% of poles along the route.
- b. Heavy Make Ready (Difficulty Score 4) = 05% of poles along the route.
- c. Medium Make Ready (Difficulty Score 3) = 10% of poles along the route.
- d. Light Make Ready (Difficulty Score 2) = 15% of poles along the route.
- e. No Make Ready (Difficulty Score 1) = 50% of poles along the route.

16) The following routes assumed less make ready as they plan to attach to poles located on right of way (or private easements) with assumed less equipment and clearance risks:

- a. Bonnet 42 to Splice Point
- b. Chase Hill 155 to Wood River 85
- c. Chopmist 34 to West Greenville 45
- d. Dyer Street 2 to South Street Switch Yard (all existing underground)
- e. Eldred 45 (D) - From Tower Hill 88
- f. Kenyon 68 to West Kingston 62
- g. Kilvert Street 97 (T)
- h. Nasonville 127 to Splice Point
- i. Peacedale 59 to Splice Point
- j. Wakefield 17 (D) - From Peacedale 59
- k. Westerly 16 to Chase Hill 155
- l. Wood River 85 to Kenyon 68

- 17) The overall route cost and schedule estimates are based on a broader assumption, but the actual cost and schedule may differ during the detailed engineering, permitting, material procurement, and construction stages due to other factors such as inflation, market conditions, material availability, and other unforeseen circumstances. Burns & McDonnell assumes no responsibility in the accuracy of the estimated costs and schedule due such unforeseen circumstances.
- 18) Burns & McDonnell would like to clarify that the estimated costs in the “Route Summaries” for each year exclude inflation from year over year. Please refer to Table 1 of this document, for inflation adjusted estimated costs from year 2025 through year 2029. Burns & McDonnell assumed an inflation of 2.5% from year to year, starting from 2025. This inflation assumption is not an indicative of future prediction, and the actual inflation may vary.

Calculation Assumptions

Table 2: Calculation Assumptions

Project Activity	Unit of Measure	Quantity per unit
Engineering Cost	\$ per pole	250
Engineering Labor Lead	days per pole	0.5
RR Permit Cost	\$ per permit	32,000
DOT Permit Cost	\$ per permit	2,000
Large Environmental Permit Cost	\$ per permit	10,000
Small Environmental Permit Cost	\$ per permit	5,000
City/County Permit Cost	\$ per city in project	1,000
RR Permit Lead	If a crossing is in project, days	270
DOT Permit Lead	If a crossing is in project, days	45
Large Environmental Permit Cost	If a crossing is in project, days	360
Small Environmental Permit Cost	If a crossing is in project, days	180
City/County Permit Lead	days	30
MR Material Cost DS =1	\$ per pole	350
MR Material Cost DS =2	\$ per pole	600
MR Material Cost DS =3	\$ per pole	1,150
MR Material Cost DS =4	\$ per pole	2,750
MR Material Cost DS =5, no Tx	\$ per pole	4,850
MR Material Cost DS =5, Tx	\$ per pole	6,305
MR Material Lead DS =1	If a score is in project, days	0
MR Material Lead DS =2	If a score is in project, days	21
MR Material Lead DS =3	If a score is in project, days	28

Project Activity	Unit of Measure	Quantity per unit
MR Material Lead DS =4	If a score is in project, days	35
MR Material Lead DS =5	If a score is in project, days	90
Snowshoe Material Cost	\$ per 1,000ft	85
Vault Material Cost	\$ per 500ft	475
Splice closure Material Cost	\$ per 10,000ft	320
Riser Material Cost	\$ per riser	185
Overhead Fiber Material Cost (48ct ADSS)	\$ per foot (136ft average network span length)	1.16
Underground Material Cost (48ct ADSS * 1" SDR 13.5 Orange Empty * 1" SDR 13.5 Orange Empty * 1" SDR 13.5 Orange Empty)	\$ per foot	1.98
Snowshoe Material Lead	If a unit is in project, days	91
Vault Material Lead	If a underground is in project, days	42
Splice closure Material Lead	If a unit is in project, days	35
Riser Material Lead	If a riser is in project, days	140
Overhead Fiber Material Lead(48ct ADSS)	If a unit is in project, days	140
MRE Labor Cost DS = 1	\$ per pole	0
MRE Labor Cost DS = 2	\$ per pole	600
MRE Labor Cost DS = 3, no Tx	\$ per pole	1,900
MRE Labor Cost DS = 4, no Tx	\$ per pole	5,600
MRE Labor Cost DS = 5, no Tx	\$ per pole	10,500
MRE Labor Cost Tx	\$ per pole	2,000
Underground Material Lead	If underground is in a project, days	140
Overhead Construction Labor Cost	\$ per foot	7.35
Underground Construction Labor Cost	\$ per foot	20.22
Splice & Test Cost	\$ per Strand	39
Splice & Test Lead	days	7
Lead Summary	days	Maximum Lead +30
Construction Cost	\$	Sum of all Construction cost units
Materials Cost	\$	Sum of all Material cost units
Total Cost	\$	Sum of Construction, Material, Permit, and Engineering Cost





ROUTE NAME	CENTREDALE 50 TO SPLICE POINT
PLAN YEAR	2025

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: CENTREDALE 50 TO SPLICE POINT
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 2.3 miles of fiber optic build from Centredale 50 to Splice Point. The route will attach to approximately 94 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Johnston
Smithfield
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	94
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	12,038
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	83
ESTIMATED POLE REPLACEMENTS (COUNT)	19
ESTIMATED MAKE-READY POLES (COUNT)	47
ESTIMATED PERMITTING COST (USD)	\$10,000.00
ESTIMATED ENGINEERING COST (USD)	\$23,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$156,316.00
ESTIMATED CONSTRUCTION COST (USD)	\$344,484.00
ESTIMATED TOTAL COST (USD)	\$534,300.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: CENTREDALE 50 TO SPLICE POINT
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 2.3 miles of fiber optic build from Centredale 50 to Splice Point. The route will attach to approximately 94 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Johnston
Smithfield
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	9
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	CHOPMIST 34 TO WEST GREENVILLE 45
PLAN YEAR	2025

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: CHOPMIST 34 TO WEST GREENVILLE 45
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 6.78 miles of fiber optic build from Chopmist 34 to West Greenville 45. The route will attach to approximately 136 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 1

The route crossing into the following jurisdictions(s):

Providence County
Scituate
N Scituate
Glocester
Smithfield
North Scituate
Greenville
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	136
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	35,500
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	302
ESTIMATED POLE REPLACEMENTS (COUNT)	1
ESTIMATED MAKE-READY POLES (COUNT)	4
ESTIMATED PERMITTING COST (USD)	\$13,000.00
ESTIMATED ENGINEERING COST (USD)	\$34,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$11,232.00
ESTIMATED MATERIALS COST (USD)	\$97,975.00
ESTIMATED CONSTRUCTION COST (USD)	\$277,857.00
ESTIMATED TOTAL COST (USD)	\$422,832.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: CHOPMIST 34 TO WEST GREENVILLE 45
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 6.78 miles of fiber optic build from Chopmist 34 to West Greenville 45. The route will attach to approximately 136 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 1

The route crossing into the following jurisdictions(s):

Providence County
Scituate
N Scituate
Glocester
Smithfield
North Scituate
Greenville
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	14
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	15
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	GATE II 38 TO NEWPORT 203
PLAN YEAR	2025

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: GATE II 38 TO NEWPORT 203
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 0.43 miles of fiber optic build from Gate II 38 to Newport 203. The route will attach to approximately 20 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 1
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	20
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	1,882
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	400
ESTIMATED POLE REPLACEMENTS (COUNT)	0
ESTIMATED MAKE-READY POLES (COUNT)	1
ESTIMATED PERMITTING COST (USD)	\$34,000.00
ESTIMATED ENGINEERING COST (USD)	\$5,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$11,232.00
ESTIMATED MATERIALS COST (USD)	\$14,573.00
ESTIMATED CONSTRUCTION COST (USD)	\$32,716.00
ESTIMATED TOTAL COST (USD)	\$86,289.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: GATE II 38 TO NEWPORT 203
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 0.43 miles of fiber optic build from Gate II 38 to Newport 203. The route will attach to approximately 20 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 1
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	2
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	3
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	NASONVILLE 127 TO SPLICE POINT
PLAN YEAR	2025

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: NASONVILLE 127 TO SPLICE POINT
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 1.81 miles of fiber optic build from Nasonville 127 to Splice Point. The route will attach to approximately 68 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Burrillville
North Smithfield
Harrisville

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	68
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	9,180
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	371
ESTIMATED POLE REPLACEMENTS (COUNT)	7
ESTIMATED MAKE-READY POLES (COUNT)	32
ESTIMATED PERMITTING COST (USD)	\$4,000.00
ESTIMATED ENGINEERING COST (USD)	\$17,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$11,232.00
ESTIMATED MATERIALS COST (USD)	\$111,827.00
ESTIMATED CONSTRUCTION COST (USD)	\$155,054.00
ESTIMATED TOTAL COST (USD)	\$287,881.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: NASONVILLE 127 TO SPLICE POINT
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 1.81 miles of fiber optic build from Nasonville 127 to Splice Point. The route will attach to approximately 68 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Burrillville
North Smithfield
Harrisville

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	7
ESTIMATED PERMITTING LEAD TIME	4
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	VALLEY SUB 102 TO SPLICE POINT
PLAN YEAR	2025

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: VALLEY SUB 102 TO SPLICE POINT
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 1.38 miles of fiber optic build from Valley Sub 102 to Splice Point. The route will attach to approximately 40 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 1

The route crossing into the following jurisdictions(s):

Providence County
Valley Falls
Cumberland
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	40
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	6,969
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	342
ESTIMATED POLE REPLACEMENTS (COUNT)	8
ESTIMATED MAKE-READY POLES (COUNT)	20
ESTIMATED PERMITTING COST (USD)	\$10,000.00
ESTIMATED ENGINEERING COST (USD)	\$10,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$14,976.00
ESTIMATED MATERIALS COST (USD)	\$80,042.00
ESTIMATED CONSTRUCTION COST (USD)	\$168,239.00
ESTIMATED TOTAL COST (USD)	\$268,281.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: VALLEY SUB 102 TO SPLICE POINT
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 1.38 miles of fiber optic build from Valley Sub 102 to Splice Point. The route will attach to approximately 40 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 1

The route crossing into the following jurisdictions(s):

Providence County
Valley Falls
Cumberland
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	4
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	WARWICK 52 TO APPONAUG 3
PLAN YEAR	2025

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: WARWICK 52 TO APPONAUG 3
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 3.54 miles of fiber optic build from Warwick 52 to Apponaug 3. The route will attach to approximately 156 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 1
DOT: 5
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Warwick
RIDOT
Environmental
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	156
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	18,563
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	105
ESTIMATED POLE REPLACEMENTS (COUNT)	31
ESTIMATED MAKE-READY POLES (COUNT)	78
ESTIMATED PERMITTING COST (USD)	\$49,000.00
ESTIMATED ENGINEERING COST (USD)	\$39,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$255,231.00
ESTIMATED CONSTRUCTION COST (USD)	\$552,083.00
ESTIMATED TOTAL COST (USD)	\$895,314.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: WARWICK 52 TO APPONAUG 3
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 3.54 miles of fiber optic build from Warwick 52 to Apponaug 3. The route will attach to approximately 156 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 1
DOT: 5
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Warwick
RIDOT
Environmental
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	16
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	WEST GREENVILLE 45 TO SPLICE POINT
PLAN YEAR	2025

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: WEST GREENVILLE 45 TO SPLICE POINT
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 2.32 miles of fiber optic build from West Greenville 45 to Splice Point. The route will attach to approximately 98 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 5
Waterbody: 1

The route crossing into the following jurisdictions(s):

Providence County
Greenville
Smithfield
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	98
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	12,196
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	75
ESTIMATED POLE REPLACEMENTS (COUNT)	20
ESTIMATED MAKE-READY POLES (COUNT)	50
ESTIMATED PERMITTING COST (USD)	\$19,000.00
ESTIMATED ENGINEERING COST (USD)	\$24,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$163,509.00
ESTIMATED CONSTRUCTION COST (USD)	\$358,425.00
ESTIMATED TOTAL COST (USD)	\$565,434.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: WEST GREENVILLE 45 TO SPLICE POINT
PLAN YEAR: 2025

ISSUED: 12/13/2024

The project consist of 2.32 miles of fiber optic build from West Greenville 45 to Splice Point. The route will attach to approximately 98 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 5
Waterbody: 1

The route crossing into the following jurisdictions(s):

Providence County
Greenville
Smithfield
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	10
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	APPONAUG 3 TO DRUMROCK 14
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: APPONAUG 3 TO DRUMROCK 14
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 1.16 miles of fiber optic build from Apponaug 3 to Drumrock 14. The route will attach to approximately 40 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 4
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Warwick
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	40
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	5,949
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	195
ESTIMATED POLE REPLACEMENTS (COUNT)	8
ESTIMATED MAKE-READY POLES (COUNT)	20
ESTIMATED PERMITTING COST (USD)	\$15,000.00
ESTIMATED ENGINEERING COST (USD)	\$10,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$68,279.00
ESTIMATED CONSTRUCTION COST (USD)	\$159,280.00
ESTIMATED TOTAL COST (USD)	\$252,559.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: APPONAUG 3 TO DRUMROCK 14
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 1.16 miles of fiber optic build from Apponaug 3 to Drumrock 14. The route will attach to approximately 40 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 4
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Warwick
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	4
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	BRISTOL 51 TO SPLICE POINT
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: BRISTOL 51 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 6.18 miles of fiber optic build from Bristol 51 to Splice Point. The route will attach to approximately 227 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 5
Waterbody: 2

The route crossing into the following jurisdictions(s):

Bristol County
Newport County
Bristol
Portsmouth
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	227
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	26,567
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	6,043
ESTIMATED POLE REPLACEMENTS (COUNT)	45
ESTIMATED MAKE-READY POLES (COUNT)	113
ESTIMATED PERMITTING COST (USD)	\$24,000.00
ESTIMATED ENGINEERING COST (USD)	\$56,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$37,440.00
ESTIMATED MATERIALS COST (USD)	\$429,301.00
ESTIMATED CONSTRUCTION COST (USD)	\$929,470.00
ESTIMATED TOTAL COST (USD)	\$1,439,521.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: BRISTOL 51 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 6.18 miles of fiber optic build from Bristol 51 to Splice Point. The route will attach to approximately 227 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 5
Waterbody: 2

The route crossing into the following jurisdictions(s):

Bristol County
Newport County
Bristol
Portsmouth
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	23
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	15
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	CHASE HILL 155 TO WOOD RIVER 85
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: CHASE HILL 155 TO WOOD RIVER 85
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 3.91 miles of fiber optic build from Chase Hill 155 to Wood River 85. The route will attach to approximately 150 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 1
DOT: 2
Waterbody: 2

The route crossing into the following jurisdictions(s):

Washington County
Charlestown
Hopkinton
Bradford
RIDOT
Environmental
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	150
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	20,171
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	493
ESTIMATED POLE REPLACEMENTS (COUNT)	7
ESTIMATED MAKE-READY POLES (COUNT)	12
ESTIMATED PERMITTING COST (USD)	\$50,000.00
ESTIMATED ENGINEERING COST (USD)	\$37,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$22,464.00
ESTIMATED MATERIALS COST (USD)	\$141,742.00
ESTIMATED CONSTRUCTION COST (USD)	\$215,658.00
ESTIMATED TOTAL COST (USD)	\$444,900.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: CHASE HILL 155 TO WOOD RIVER 85
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 3.91 miles of fiber optic build from Chase Hill 155 to Wood River 85. The route will attach to approximately 150 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 1
DOT: 2
Waterbody: 2

The route crossing into the following jurisdictions(s):

Washington County
Charlestown
Hopkinton
Bradford
RIDOT
Environmental
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	15
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	KENYON 68 TO WEST KINGSTON 62
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: KENYON 68 TO WEST KINGSTON 62
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 4.46 miles of fiber optic build from Kenyon 68 to West Kingston 62. The route will attach to approximately 88 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 2

The route crossing into the following jurisdictions(s):

Washington County
South Kingstown
Charlestown
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	88
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	23,321
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	211
ESTIMATED POLE REPLACEMENTS (COUNT)	1
ESTIMATED MAKE-READY POLES (COUNT)	48
ESTIMATED PERMITTING COST (USD)	\$13,000.00
ESTIMATED ENGINEERING COST (USD)	\$22,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$56,160.00
ESTIMATED MATERIALS COST (USD)	\$119,580.00
ESTIMATED CONSTRUCTION COST (USD)	\$258,673.00
ESTIMATED TOTAL COST (USD)	\$413,253.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: KENYON 68 TO WEST KINGSTON 62
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 4.46 miles of fiber optic build from Kenyon 68 to West Kingston 62. The route will attach to approximately 88 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 2

The route crossing into the following jurisdictions(s):

Washington County
South Kingstown
Charlestown
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	9
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	LANGWORTHY CORNER 86 TO WESTERLY 16
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: LANGWORTHY CORNER 86 TO WESTERLY 16
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 6.19 miles of fiber optic build from Langworthy Corner 86 to Westerly 16. The route will attach to approximately 227 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 1
DOT: 5
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
Westerly
RIDOT
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	227
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	32,514
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	195
ESTIMATED POLE REPLACEMENTS (COUNT)	45
ESTIMATED MAKE-READY POLES (COUNT)	113
ESTIMATED PERMITTING COST (USD)	\$44,000.00
ESTIMATED ENGINEERING COST (USD)	\$56,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$9,360.00
ESTIMATED MATERIALS COST (USD)	\$375,638.00
ESTIMATED CONSTRUCTION COST (USD)	\$838,914.00
ESTIMATED TOTAL COST (USD)	\$1,315,302.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: LANGWORTHY CORNER 86 TO WESTERLY 16
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 6.19 miles of fiber optic build from Langworthy Corner 86 to Westerly 16. The route will attach to approximately 227 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 1
DOT: 5
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
Westerly
RIDOT
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	23
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	15
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	NATICK 29 TO SPLICE POINT
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: NATICK 29 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 0.58 miles of fiber optic build from Natick 29 to Splice Point. The route will attach to approximately 21 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Kent County
Warwick

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	21
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	3,033
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	44
ESTIMATED POLE REPLACEMENTS (COUNT)	4
ESTIMATED MAKE-READY POLES (COUNT)	10
ESTIMATED PERMITTING COST (USD)	\$2,000.00
ESTIMATED ENGINEERING COST (USD)	\$5,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$3,744.00
ESTIMATED MATERIALS COST (USD)	\$34,293.00
ESTIMATED CONSTRUCTION COST (USD)	\$79,017.00
ESTIMATED TOTAL COST (USD)	\$120,560.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: NATICK 29 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 0.58 miles of fiber optic build from Natick 29 to Splice Point. The route will attach to approximately 21 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Kent County
Warwick

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	2
ESTIMATED PERMITTING LEAD TIME	4
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	PAWTUCKET 1 107 SUB TO ROCHAMBEAU AVENUE
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: PAWTUCKET 1 107 SUB TO ROCHAMBEAU AVENUE 37
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 2.04 miles of fiber optic build from Pawtucket 1 107 Sub to Rochambeau Avenue 37. The route will attach to approximately 105 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Pawtucket

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	105
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	10,246
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	535
ESTIMATED POLE REPLACEMENTS (COUNT)	21
ESTIMATED MAKE-READY POLES (COUNT)	53
ESTIMATED PERMITTING COST (USD)	\$3,000.00
ESTIMATED ENGINEERING COST (USD)	\$26,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$171,033.00
ESTIMATED CONSTRUCTION COST (USD)	\$368,512.00
ESTIMATED TOTAL COST (USD)	\$568,795.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: PAWTUCKET 1 107 SUB TO ROCHAMBEAU AVENUE 37
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 2.04 miles of fiber optic build from Pawtucket 1 107 Sub to Rochambeau Avenue 37. The route will attach to approximately 105 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Pawtucket

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	11
ESTIMATED PERMITTING LEAD TIME	4
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	PEACEDALE 59 TO SPLICE POINT
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: PEACEDALE 59 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 3.32 miles of fiber optic build from Peacedale 59 to Splice Point. The route will attach to approximately 37 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 2

The route crossing into the following jurisdictions(s):

Washington County
South Kingstown
Kingston
West Kingston
Wakefield
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	37
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	17,398
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	136
ESTIMATED POLE REPLACEMENTS (COUNT)	1
ESTIMATED MAKE-READY POLES (COUNT)	9
ESTIMATED PERMITTING COST (USD)	\$18,000.00
ESTIMATED ENGINEERING COST (USD)	\$9,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$9,360.00
ESTIMATED MATERIALS COST (USD)	\$43,477.00
ESTIMATED CONSTRUCTION COST (USD)	\$140,564.00
ESTIMATED TOTAL COST (USD)	\$211,291.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: PEACEDALE 59 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 3.32 miles of fiber optic build from Peacedale 59 to Splice Point. The route will attach to approximately 37 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 2

The route crossing into the following jurisdictions(s):

Washington County
South Kingstown
Kingston
West Kingston
Wakefield
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	4
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	QUONSET 83 TO SPLICE POINT
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: QUONSET 83 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 0.93 miles of fiber optic build from Quonset 83 to Splice Point. The route will attach to approximately 27 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 3
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
North Kingstown
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	27
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	3,189
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	1,732
ESTIMATED POLE REPLACEMENTS (COUNT)	1
ESTIMATED MAKE-READY POLES (COUNT)	5
ESTIMATED PERMITTING COST (USD)	\$99,000.00
ESTIMATED ENGINEERING COST (USD)	\$6,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$28,084.00
ESTIMATED CONSTRUCTION COST (USD)	\$70,891.00
ESTIMATED TOTAL COST (USD)	\$204,725.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: QUONSET 83 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 0.93 miles of fiber optic build from Quonset 83 to Splice Point. The route will attach to approximately 27 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 3
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
North Kingstown
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	3
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	VALLEY SUB 102 TO PAWTUCKET 1 107 SUB - 1
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: VALLEY SUB 102 TO PAWTUCKET 1 107 SUB - 1
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 5.22 miles of fiber optic build from Valley Sub 102 to Pawtucket 1 107 Sub - 1. The route will attach to approximately 245 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 4
DOT: 4
Waterbody: 2

The route crossing into the following jurisdictions(s):

Providence County
Bristol County
Pawtucket
Valley Falls
Central Falls
Attleboro
Cumberland
RIDOT
Environmental
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	245
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	27,061
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	524
ESTIMATED POLE REPLACEMENTS (COUNT)	49
ESTIMATED MAKE-READY POLES (COUNT)	123
ESTIMATED PERMITTING COST (USD)	\$153,000.00
ESTIMATED ENGINEERING COST (USD)	\$61,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$18,720.00
ESTIMATED MATERIALS COST (USD)	\$429,003.00
ESTIMATED CONSTRUCTION COST (USD)	\$880,686.00
ESTIMATED TOTAL COST (USD)	\$1,523,939.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: VALLEY SUB 102 TO PAWTUCKET 1 107 SUB - 1
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 5.22 miles of fiber optic build from Valley Sub 102 to Pawtucket 1 107 Sub - 1. The route will attach to approximately 245 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 4
DOT: 4
Waterbody: 2

The route crossing into the following jurisdictions(s):

Providence County
Bristol County
Pawtucket
Valley Falls
Central Falls
Attleboro
Cumberland
RIDOT
Environmental
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	25
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	VALLEY SUB 102 TO PAWTUCKET 1 107 SUB - 2
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: VALLEY SUB 102 TO PAWTUCKET 1 107 SUB - 2
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 4.12 miles of fiber optic build from Valley Sub 102 to Pawtucket 1 107 Sub - 2. The route will attach to approximately 166 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 2
DOT: 2
Waterbody: 2

The route crossing into the following jurisdictions(s):

Providence County
Bristol County
Pawtucket
Attleboro
Valley Falls
Cumberland
Central Falls
RIDOT
Environmental
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	166
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	15,144
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	6,629
ESTIMATED POLE REPLACEMENTS (COUNT)	33
ESTIMATED MAKE-READY POLES (COUNT)	83
ESTIMATED PERMITTING COST (USD)	\$85,000.00
ESTIMATED ENGINEERING COST (USD)	\$41,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$22,464.00
ESTIMATED MATERIALS COST (USD)	\$313,096.00
ESTIMATED CONSTRUCTION COST (USD)	\$719,810.00
ESTIMATED TOTAL COST (USD)	\$1,159,406.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: VALLEY SUB 102 TO PAWTUCKET 1 107 SUB - 2
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 4.12 miles of fiber optic build from Valley Sub 102 to Pawtucket 1 107 Sub - 2. The route will attach to approximately 166 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 2
DOT: 2
Waterbody: 2

The route crossing into the following jurisdictions(s):

Providence County
Bristol County
Pawtucket
Attleboro
Valley Falls
Cumberland
Central Falls
RIDOT
Environmental
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	17
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	WAKEFIELD 17 (D) - FROM DILLONS CORNER 165
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: WAKEFIELD 17 (D) - FROM DILLONS CORNER 165
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 0.74 miles of fiber optic build from Wakefield 17 (D) - From Dillons Corner 165. The route will attach to approximately 27 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
Wakefield-peace Dale
South Kingstown
Narragansett
Wakefield
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	27
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	3,540
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	342
ESTIMATED POLE REPLACEMENTS (COUNT)	5
ESTIMATED MAKE-READY POLES (COUNT)	13
ESTIMATED PERMITTING COST (USD)	\$9,000.00
ESTIMATED ENGINEERING COST (USD)	\$6,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$44,046.00
ESTIMATED CONSTRUCTION COST (USD)	\$103,182.00
ESTIMATED TOTAL COST (USD)	\$162,978.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: WAKEFIELD 17 (D) - FROM DILLONS CORNER 165
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 0.74 miles of fiber optic build from Wakefield 17 (D) - From Dillons Corner 165. The route will attach to approximately 27 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
Wakefield-peace Dale
South Kingstown
Narragansett
Wakefield
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	3
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	WAKEFIELD 17 (D) - FROM PEACEDALE 59
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: WAKEFIELD 17 (D) - FROM PEACEDALE 59
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 3.46 miles of fiber optic build from Wakefield 17 (D) - From Peacedale 59. The route will attach to approximately 80 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 1

The route crossing into the following jurisdictions(s):

Washington County
South Kingstown
Wakefield-peace Dale
Kingston
Wakefield
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	80
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	18,008
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	280
ESTIMATED POLE REPLACEMENTS (COUNT)	0
ESTIMATED MAKE-READY POLES (COUNT)	11
ESTIMATED PERMITTING COST (USD)	\$13,000.00
ESTIMATED ENGINEERING COST (USD)	\$20,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$9,360.00
ESTIMATED MATERIALS COST (USD)	\$54,743.00
ESTIMATED CONSTRUCTION COST (USD)	\$147,408.00
ESTIMATED TOTAL COST (USD)	\$235,151.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: WAKEFIELD 17 (D) - FROM PEACEDALE 59
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 3.46 miles of fiber optic build from Wakefield 17 (D) - From Peacedale 59. The route will attach to approximately 80 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 1

The route crossing into the following jurisdictions(s):

Washington County
South Kingstown
Wakefield-peace Dale
Kingston
Wakefield
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	8
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	3
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	WARWICK MALL 28 TO SPLICE POINT
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: WARWICK MALL 28 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 1.33 miles of fiber optic build from Warwick Mall 28 to Splice Point. The route will attach to approximately 26 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 4
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Warwick
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	26
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	6,797
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	251
ESTIMATED POLE REPLACEMENTS (COUNT)	5
ESTIMATED MAKE-READY POLES (COUNT)	13
ESTIMATED PERMITTING COST (USD)	\$15,000.00
ESTIMATED ENGINEERING COST (USD)	\$6,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$48,678.00
ESTIMATED CONSTRUCTION COST (USD)	\$117,604.00
ESTIMATED TOTAL COST (USD)	\$187,782.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: WARWICK MALL 28 TO SPLICE POINT
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 1.33 miles of fiber optic build from Warwick Mall 28 to Splice Point. The route will attach to approximately 26 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 4
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Warwick
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	3
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	WESTERLY 16 TO CHASE HILL 155
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: WESTERLY 16 TO CHASE HILL 155
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 4.63 miles of fiber optic build from Westerly 16 to Chase Hill 155. The route will attach to approximately 86 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 1

The route crossing into the following jurisdictions(s):

Washington County
Westerly
Hopkinton
Ashaway
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	86
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	24,023
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	439
ESTIMATED POLE REPLACEMENTS (COUNT)	4
ESTIMATED MAKE-READY POLES (COUNT)	34
ESTIMATED PERMITTING COST (USD)	\$13,000.00
ESTIMATED ENGINEERING COST (USD)	\$21,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$18,720.00
ESTIMATED MATERIALS COST (USD)	\$121,480.00
ESTIMATED CONSTRUCTION COST (USD)	\$236,133.00
ESTIMATED TOTAL COST (USD)	\$392,113.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: WESTERLY 16 TO CHASE HILL 155
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 4.63 miles of fiber optic build from Westerly 16 to Chase Hill 155. The route will attach to approximately 86 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 1

The route crossing into the following jurisdictions(s):

Washington County
Westerly
Hopkinton
Ashaway
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	9
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	WOOD RIVER 85 TO KENYON 68
PLAN YEAR	2026

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: WOOD RIVER 85 TO KENYON 68
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 4.12 miles of fiber optic build from Wood River 85 to Kenyon 68. The route will attach to approximately 98 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
Charlestown
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	98
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	21,415
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	349
ESTIMATED POLE REPLACEMENTS (COUNT)	2
ESTIMATED MAKE-READY POLES (COUNT)	48
ESTIMATED PERMITTING COST (USD)	\$6,000.00
ESTIMATED ENGINEERING COST (USD)	\$24,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$56,160.00
ESTIMATED MATERIALS COST (USD)	\$130,428.00
ESTIMATED CONSTRUCTION COST (USD)	\$263,294.00
ESTIMATED TOTAL COST (USD)	\$424,222.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: WOOD RIVER 85 TO KENYON 68
PLAN YEAR: 2026

ISSUED: 12/13/2024

The project consist of 4.12 miles of fiber optic build from Wood River 85 to Kenyon 68. The route will attach to approximately 98 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
Charlestown
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	10
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	ANTHONY 64 TO ARTIC
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: ANTHONY 64 TO ARTIC
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.35 miles of fiber optic build from Anthony 64 to Artic. The route will attach to approximately 113 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 0

The route crossing into the following jurisdictions(s):

Kent County
Coventry
West Warwick
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	113
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	12,017
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	398
ESTIMATED POLE REPLACEMENTS (COUNT)	23
ESTIMATED MAKE-READY POLES (COUNT)	57
ESTIMATED PERMITTING COST (USD)	\$10,000.00
ESTIMATED ENGINEERING COST (USD)	\$28,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$187,266.00
ESTIMATED CONSTRUCTION COST (USD)	\$405,464.00
ESTIMATED TOTAL COST (USD)	\$630,980.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: ANTHONY 64 TO ARTIC
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.35 miles of fiber optic build from Anthony 64 to Artic. The route will attach to approximately 113 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 0

The route crossing into the following jurisdictions(s):

Kent County
Coventry
West Warwick
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	11
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	ARTIC TO NEW LONDON AVE 150
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: ARTIC TO NEW LONDON AVE 150
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 1.55 miles of fiber optic build from Artic to New London Ave 150. The route will attach to approximately 55 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Warwick
West Warwick
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	55
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	7,264
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	913
ESTIMATED POLE REPLACEMENTS (COUNT)	11
ESTIMATED MAKE-READY POLES (COUNT)	28
ESTIMATED PERMITTING COST (USD)	\$13,000.00
ESTIMATED ENGINEERING COST (USD)	\$13,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$95,371.00
ESTIMATED CONSTRUCTION COST (USD)	\$224,406.00
ESTIMATED TOTAL COST (USD)	\$346,527.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: ARTIC TO NEW LONDON AVE 150
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 1.55 miles of fiber optic build from Artic to New London Ave 150. The route will attach to approximately 55 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Warwick
West Warwick
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	6
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	CLARKE STREET 65 (D) - FROM KINGSTON 131
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: CLARKE STREET 65 (D) - FROM KINGSTON 131
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 4.42 miles of fiber optic build from Clarke Street 65 (D) - From Kingston 131. The route will attach to approximately 109 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 1
DOT: 2
Waterbody: 1

The route crossing into the following jurisdictions(s):

Newport County
Newport
Jamestown
RIDOT
Environmental
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	109
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	11,646
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	11,674
ESTIMATED POLE REPLACEMENTS (COUNT)	22
ESTIMATED MAKE-READY POLES (COUNT)	54
ESTIMATED PERMITTING COST (USD)	\$50,000.00
ESTIMATED ENGINEERING COST (USD)	\$27,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$20,592.00
ESTIMATED MATERIALS COST (USD)	\$245,434.00
ESTIMATED CONSTRUCTION COST (USD)	\$616,417.00
ESTIMATED TOTAL COST (USD)	\$939,101.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: CLARKE STREET 65 (D) - FROM KINGSTON 131
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 4.42 miles of fiber optic build from Clarke Street 65 (D) - From Kingston 131. The route will attach to approximately 109 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 1
DOT: 2
Waterbody: 1

The route crossing into the following jurisdictions(s):

Newport County
Newport
Jamestown
RIDOT
Environmental
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	11
ESTIMATED PERMITTING LEAD TIME	51
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	56

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	COVENTRY 54 TO SPLICE POINT
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: COVENTRY 54 TO SPLICE POINT
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 3.77 miles of fiber optic build from Coventry 54 to Splice Point. The route will attach to approximately 112 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 2

The route crossing into the following jurisdictions(s):

Kent County
Coventry
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	112
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	19,867
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	36
ESTIMATED POLE REPLACEMENTS (COUNT)	22
ESTIMATED MAKE-READY POLES (COUNT)	56
ESTIMATED PERMITTING COST (USD)	\$19,000.00
ESTIMATED ENGINEERING COST (USD)	\$28,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$189,922.00
ESTIMATED CONSTRUCTION COST (USD)	\$441,078.00
ESTIMATED TOTAL COST (USD)	\$678,000.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: COVENTRY 54 TO SPLICE POINT
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 3.77 miles of fiber optic build from Coventry 54 to Splice Point. The route will attach to approximately 112 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 2

The route crossing into the following jurisdictions(s):

Kent County
Coventry
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	11
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	ELDRED 45 (D) - FROM TOWER HILL 88
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: ELDRED 45 (D) - FROM TOWER HILL 88
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 6.49 miles of fiber optic build from Eldred 45 (D) - From Tower Hill 88. The route will attach to approximately 82 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 2

The route crossing into the following jurisdictions(s):

Newport County
Washington County
Jamestown
North Kingstown
Saunderstown
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	82
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	21,437
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	12,843
ESTIMATED POLE REPLACEMENTS (COUNT)	2
ESTIMATED MAKE-READY POLES (COUNT)	9
ESTIMATED PERMITTING COST (USD)	\$27,000.00
ESTIMATED ENGINEERING COST (USD)	\$20,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$22,464.00
ESTIMATED MATERIALS COST (USD)	\$151,168.00
ESTIMATED CONSTRUCTION COST (USD)	\$497,389.00
ESTIMATED TOTAL COST (USD)	\$696,057.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: ELDRED 45 (D) - FROM TOWER HILL 88
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 6.49 miles of fiber optic build from Eldred 45 (D) - From Tower Hill 88. The route will attach to approximately 82 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 2

The route crossing into the following jurisdictions(s):

Newport County
Washington County
Jamestown
North Kingstown
Saunderstown
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	8
ESTIMATED PERMITTING LEAD TIME	51
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	56

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	ELMWOOD 7 - OUTDOOR TO AUBURN 73
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: ELMWOOD 7 - OUTDOOR TO AUBURN 73
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 1.67 miles of fiber optic build from Elmwood 7 - Outdoor to Auburn 73. The route will attach to approximately 76 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Cranston
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	76
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	8,649
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	184
ESTIMATED POLE REPLACEMENTS (COUNT)	15
ESTIMATED MAKE-READY POLES (COUNT)	38
ESTIMATED PERMITTING COST (USD)	\$9,000.00
ESTIMATED ENGINEERING COST (USD)	\$19,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$124,761.00
ESTIMATED CONSTRUCTION COST (USD)	\$273,263.00
ESTIMATED TOTAL COST (USD)	\$426,024.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: ELMWOOD 7 - OUTDOOR TO AUBURN 73
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 1.67 miles of fiber optic build from Elmwood 7 - Outdoor to Auburn 73. The route will attach to approximately 76 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Cranston
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	8
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	HOPE 15 TO SPLICE POINT
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ESTIMATED SCHEDULE

PROJECT: HOPE 15 TO SPLICE POINT
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 3.04 miles of fiber optic build from Hope 15 to Splice Point. The route will attach to approximately 117 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 0

The route crossing into the following jurisdictions(s):

Kent County
Providence County
Coventry
Hope
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	12
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	HOPKINS HILL 63 TO SPLICE POINT
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: HOPKINS HILL 63 TO SPLICE POINT
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.14 miles of fiber optic build from Hopkins Hill 63 to Splice Point. The route will attach to approximately 82 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Kent County
Coventry
West Greenwich
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	82
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	11,172
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	144
ESTIMATED POLE REPLACEMENTS (COUNT)	16
ESTIMATED MAKE-READY POLES (COUNT)	40
ESTIMATED PERMITTING COST (USD)	\$5,000.00
ESTIMATED ENGINEERING COST (USD)	\$20,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$134,074.00
ESTIMATED CONSTRUCTION COST (USD)	\$299,385.00
ESTIMATED TOTAL COST (USD)	\$458,959.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: HOPKINS HILL 63 TO SPLICE POINT
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.14 miles of fiber optic build from Hopkins Hill 63 to Splice Point. The route will attach to approximately 82 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Kent County
Coventry
West Greenwich
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	8
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	HUNTINGTON PARK 67 TO ELMWOOD 7 - OUTDOOR
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: HUNTINGTON PARK 67 TO ELMWOOD 7 - OUTDOOR
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 1.57 miles of fiber optic build from Huntington Park 67 to Elmwood 7 - Outdoor. The route will attach to approximately 75 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Cranston
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	75
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	8,007
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	281
ESTIMATED POLE REPLACEMENTS (COUNT)	15
ESTIMATED MAKE-READY POLES (COUNT)	38
ESTIMATED PERMITTING COST (USD)	\$5,000.00
ESTIMATED ENGINEERING COST (USD)	\$18,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$124,360.00
ESTIMATED CONSTRUCTION COST (USD)	\$270,639.00
ESTIMATED TOTAL COST (USD)	\$418,749.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: HUNTINGTON PARK 67 TO ELMWOOD 7 - OUTDOOR
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 1.57 miles of fiber optic build from Huntington Park 67 to Elmwood 7 - Outdoor. The route will attach to approximately 75 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Cranston
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	8
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	HUNTINGTON PARK 67 TO SPLICE POINT
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: HUNTINGTON PARK 67 TO SPLICE POINT
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 1.56 miles of fiber optic build from Huntington Park 67 to Splice Point. The route will attach to approximately 69 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 1
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Cranston
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	69
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	8,088
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	174
ESTIMATED POLE REPLACEMENTS (COUNT)	14
ESTIMATED MAKE-READY POLES (COUNT)	40
ESTIMATED PERMITTING COST (USD)	\$35,000.00
ESTIMATED ENGINEERING COST (USD)	\$17,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$9,360.00
ESTIMATED MATERIALS COST (USD)	\$119,029.00
ESTIMATED CONSTRUCTION COST (USD)	\$263,830.00
ESTIMATED TOTAL COST (USD)	\$435,109.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: HUNTINGTON PARK 67 TO SPLICE POINT
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 1.56 miles of fiber optic build from Huntington Park 67 to Splice Point. The route will attach to approximately 69 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 1
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Cranston
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	7
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	KNIGHTSVILLE 66 TO HUNTINGTON PARK 67
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: KNIGHTSVILLE 66 TO HUNTINGTON PARK 67
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.99 miles of fiber optic build from Knightsville 66 to Huntington Park 67. The route will attach to approximately 123 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 4
Waterbody: 1

The route crossing into the following jurisdictions(s):

Providence County
Cranston
Providence
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	123
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	15,462
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	332
ESTIMATED POLE REPLACEMENTS (COUNT)	25
ESTIMATED MAKE-READY POLES (COUNT)	61
ESTIMATED PERMITTING COST (USD)	\$16,000.00
ESTIMATED ENGINEERING COST (USD)	\$30,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$13,104.00
ESTIMATED MATERIALS COST (USD)	\$222,545.00
ESTIMATED CONSTRUCTION COST (USD)	\$457,426.00
ESTIMATED TOTAL COST (USD)	\$726,721.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: KNIGHTSVILLE 66 TO HUNTINGTON PARK 67
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.99 miles of fiber optic build from Knightsville 66 to Huntington Park 67. The route will attach to approximately 123 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 4
Waterbody: 1

The route crossing into the following jurisdictions(s):

Providence County
Cranston
Providence
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	12
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	LAKEWOOD 57 TO AUBURN 73
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: LAKEWOOD 57 TO AUBURN 73
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.78 miles of fiber optic build from Lakewood 57 to Auburn 73. The route will attach to approximately 121 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 1
DOT: 4
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Providence County
Warwick
Cranston
RIDOT
Environmental
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	121
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	14,477
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	198
ESTIMATED POLE REPLACEMENTS (COUNT)	24
ESTIMATED MAKE-READY POLES (COUNT)	60
ESTIMATED PERMITTING COST (USD)	\$49,000.00
ESTIMATED ENGINEERING COST (USD)	\$30,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$9,360.00
ESTIMATED MATERIALS COST (USD)	\$199,342.00
ESTIMATED CONSTRUCTION COST (USD)	\$436,316.00
ESTIMATED TOTAL COST (USD)	\$714,908.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: LAKEWOOD 57 TO AUBURN 73
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.78 miles of fiber optic build from Lakewood 57 to Auburn 73. The route will attach to approximately 121 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 1
DOT: 4
Waterbody: 1

The route crossing into the following jurisdictions(s):

Kent County
Providence County
Warwick
Cranston
RIDOT
Environmental
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	12
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	PHILLIPSDALE 20 TO DUNNELL PARK
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: PHILLIPSDALE 20 TO DUNNELL PARK
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.03 miles of fiber optic build from Phillipsdale 20 to Dunnell Park. The route will attach to approximately 103 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 1
DOT: 4
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
East Providence
Pawtucket
Rumford
RIDOT
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	103
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	10,433
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	308
ESTIMATED POLE REPLACEMENTS (COUNT)	21
ESTIMATED MAKE-READY POLES (COUNT)	51
ESTIMATED PERMITTING COST (USD)	\$44,000.00
ESTIMATED ENGINEERING COST (USD)	\$25,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$14,976.00
ESTIMATED MATERIALS COST (USD)	\$181,166.00
ESTIMATED CONSTRUCTION COST (USD)	\$370,429.00
ESTIMATED TOTAL COST (USD)	\$621,345.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: PHILLIPSDALE 20 TO DUNNELL PARK
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.03 miles of fiber optic build from Phillipsdale 20 to Dunnell Park. The route will attach to approximately 103 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 1
DOT: 4
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
East Providence
Pawtucket
Rumford
RIDOT
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	10
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	TIOGUE AVE 100 TO ANTHONY 64
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: TIOGUE AVE 100 TO ANTHONY 64
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.48 miles of fiber optic build from Tiogue Ave 100 to Anthony 64. The route will attach to approximately 94 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 6
Waterbody: 3

The route crossing into the following jurisdictions(s):

Kent County
Coventry
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	94
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	12,976
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	98
ESTIMATED POLE REPLACEMENTS (COUNT)	19
ESTIMATED MAKE-READY POLES (COUNT)	47
ESTIMATED PERMITTING COST (USD)	\$29,000.00
ESTIMATED ENGINEERING COST (USD)	\$23,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$157,465.00
ESTIMATED CONSTRUCTION COST (USD)	\$351,336.00
ESTIMATED TOTAL COST (USD)	\$561,301.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: TIOGUE AVE 100 TO ANTHONY 64
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 2.48 miles of fiber optic build from Tiogue Ave 100 to Anthony 64. The route will attach to approximately 94 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 6
Waterbody: 3

The route crossing into the following jurisdictions(s):

Kent County
Coventry
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	9
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	WEAVER HILL (D)
PLAN YEAR	2027

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: WEAVER HILL (D)
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 5.61 miles of fiber optic build from Weaver Hill (D). The route will attach to approximately 178 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 8
Waterbody: 3

The route crossing into the following jurisdictions(s):

Kent County
West Greenwich
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	178
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	29,232
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	402
ESTIMATED POLE REPLACEMENTS (COUNT)	36
ESTIMATED MAKE-READY POLES (COUNT)	90
ESTIMATED PERMITTING COST (USD)	\$34,000.00
ESTIMATED ENGINEERING COST (USD)	\$44,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$13,104.00
ESTIMATED MATERIALS COST (USD)	\$305,433.00
ESTIMATED CONSTRUCTION COST (USD)	\$704,275.00
ESTIMATED TOTAL COST (USD)	\$1,088,208.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: WEAVER HILL (D)
PLAN YEAR: 2027

ISSUED: 12/13/2024

The project consist of 5.61 miles of fiber optic build from Weaver Hill (D). The route will attach to approximately 178 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 8
Waterbody: 3

The route crossing into the following jurisdictions(s):

Kent County
West Greenwich
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	18
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	15
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	BARRINGTON 4 TO WAMPANOAG 48
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: BARRINGTON 4 TO WAMPANOAG 48
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 6.2 miles of fiber optic build from Barrington 4 to Wampanoag 48. The route will attach to approximately 219 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 7
Waterbody: 1

The route crossing into the following jurisdictions(s):

Bristol County
Providence County
Barrington
East Providence
Riverside
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	219
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	32,350
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	377
ESTIMATED POLE REPLACEMENTS (COUNT)	44
ESTIMATED MAKE-READY POLES (COUNT)	110
ESTIMATED PERMITTING COST (USD)	\$24,000.00
ESTIMATED ENGINEERING COST (USD)	\$54,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$22,464.00
ESTIMATED MATERIALS COST (USD)	\$404,880.00
ESTIMATED CONSTRUCTION COST (USD)	\$841,372.00
ESTIMATED TOTAL COST (USD)	\$1,325,002.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: BARRINGTON 4 TO WAMPANOAG 48
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 6.2 miles of fiber optic build from Barrington 4 to Wampanoag 48. The route will attach to approximately 219 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 7
Waterbody: 1

The route crossing into the following jurisdictions(s):

Bristol County
Providence County
Barrington
East Providence
Riverside
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	22
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	15
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	BARRINGTON 4 TO WARREN 5
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: BARRINGTON 4 TO WARREN 5
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 2.35 miles of fiber optic build from Barrington 4 to Warren 5. The route will attach to approximately 90 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 2

The route crossing into the following jurisdictions(s):

Bristol County
Barrington
Warren
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	90
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	11,996
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	393
ESTIMATED POLE REPLACEMENTS (COUNT)	18
ESTIMATED MAKE-READY POLES (COUNT)	46
ESTIMATED PERMITTING COST (USD)	\$20,000.00
ESTIMATED ENGINEERING COST (USD)	\$22,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$11,232.00
ESTIMATED MATERIALS COST (USD)	\$165,422.00
ESTIMATED CONSTRUCTION COST (USD)	\$345,269.00
ESTIMATED TOTAL COST (USD)	\$553,191.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: BARRINGTON 4 TO WARREN 5
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 2.35 miles of fiber optic build from Barrington 4 to Warren 5. The route will attach to approximately 90 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 2

The route crossing into the following jurisdictions(s):

Bristol County
Barrington
Warren
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	9
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	BONNET 42 TO SPLICE POINT
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: BONNET 42 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 3.22 miles of fiber optic build from Bonnet 42 to Splice Point. The route will attach to approximately 106 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
North Kingstown
Narragansett
Saunderstown
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	106
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	16,916
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	67
ESTIMATED POLE REPLACEMENTS (COUNT)	0
ESTIMATED MAKE-READY POLES (COUNT)	19
ESTIMATED PERMITTING COST (USD)	\$7,000.00
ESTIMATED ENGINEERING COST (USD)	\$26,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$73,250.00
ESTIMATED CONSTRUCTION COST (USD)	\$163,096.00
ESTIMATED TOTAL COST (USD)	\$269,846.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: BONNET 42 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 3.22 miles of fiber optic build from Bonnet 42 to Splice Point. The route will attach to approximately 106 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Washington County
North Kingstown
Narragansett
Saunderstown
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	11
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	5
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	DIVISION STREET 61 TO SPLICE POINT
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: DIVISION STREET 61 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 1.73 miles of fiber optic build from Division Street 61 to Splice Point. The route will attach to approximately 43 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 5

The route crossing into the following jurisdictions(s):

Kent County
Warwick
East Greenwich
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	43
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	8,550
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	601
ESTIMATED POLE REPLACEMENTS (COUNT)	9
ESTIMATED MAKE-READY POLES (COUNT)	21
ESTIMATED PERMITTING COST (USD)	\$32,000.00
ESTIMATED ENGINEERING COST (USD)	\$10,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$14,976.00
ESTIMATED MATERIALS COST (USD)	\$94,513.00
ESTIMATED CONSTRUCTION COST (USD)	\$165,900.00
ESTIMATED TOTAL COST (USD)	\$303,163.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: DIVISION STREET 61 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 1.73 miles of fiber optic build from Division Street 61 to Splice Point. The route will attach to approximately 43 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 5

The route crossing into the following jurisdictions(s):

Kent County
Warwick
East Greenwich
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	4
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	DYER STREET 2 TO SOUTH STREET SWITCH YARD
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: DYER STREET 2 TO SOUTH STREET SWITCH YARD
PLAN YEAR: 2028ISSUED: 12/13/2024

The project consist of 0.44 miles of fiber optic build from Dyer Street 2 to South Street Switch Yard. The route will attach to approximately 2 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	2
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	0
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	2,334
ESTIMATED POLE REPLACEMENTS (COUNT)	1
ESTIMATED MAKE-READY POLES (COUNT)	2
ESTIMATED PERMITTING COST (USD)	\$2,000.00
ESTIMATED ENGINEERING COST (USD)	\$500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$3,744.00
ESTIMATED MATERIALS COST (USD)	\$16,701.00
ESTIMATED CONSTRUCTION COST (USD)	\$61,081.00
ESTIMATED TOTAL COST (USD)	\$80,282.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: DYER STREET 2 TO SOUTH STREET SWITCH YARD
PLAN YEAR: 2028
ISSUED: 12/13/2024

The project consist of 0.44 miles of fiber optic build from Dyer Street 2 to South Street Switch Yard. The route will attach to approximately 2 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	0
ESTIMATED PERMITTING LEAD TIME	4
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	0
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	ELDRED 45 (D) - FROM CLARKE STREET 65
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: ELDRED 45 (D) - FROM CLARKE STREET 65
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 2.43 miles of fiber optic build from Eldred 45 (D) - From Clarke Street 65. The route will attach to approximately 89 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 3

The route crossing into the following jurisdictions(s):

Newport County
Jamestown
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	89
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	12,192
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	623
ESTIMATED POLE REPLACEMENTS (COUNT)	0
ESTIMATED MAKE-READY POLES (COUNT)	9
ESTIMATED PERMITTING COST (USD)	\$18,000.00
ESTIMATED ENGINEERING COST (USD)	\$22,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$22,464.00
ESTIMATED MATERIALS COST (USD)	\$85,873.00
ESTIMATED CONSTRUCTION COST (USD)	\$170,201.00
ESTIMATED TOTAL COST (USD)	\$296,324.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: ELDRED 45 (D) - FROM CLARKE STREET 65
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 2.43 miles of fiber optic build from Eldred 45 (D) - From Clarke Street 65. The route will attach to approximately 89 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 3

The route crossing into the following jurisdictions(s):

Newport County
Jamestown
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	9
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	5
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	KILVERT STREET 97 (T)
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: KILVERT STREET 97 (T)
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 0.04 miles of fiber optic build from Kilvert Street 97 (T). The route will attach to approximately 1 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

N/A

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	1
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	0
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	185
ESTIMATED POLE REPLACEMENTS (COUNT)	1
ESTIMATED MAKE-READY POLES (COUNT)	1
ESTIMATED PERMITTING COST (USD)	\$0.00
ESTIMATED ENGINEERING COST (USD)	\$250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$11,232.00
ESTIMATED MATERIALS COST (USD)	\$7,147.00
ESTIMATED CONSTRUCTION COST (USD)	\$17,355.00
ESTIMATED TOTAL COST (USD)	\$24,752.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: KILVERT STREET 97 (T)
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 0.04 miles of fiber optic build from Kilvert Street 97 (T). The route will attach to approximately 1 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

N/A

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	0
ESTIMATED PERMITTING LEAD TIME	0
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	0
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	KINGSTON 131 TO GATE II 38
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: KINGSTON 131 TO GATE II 38
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 1.79 miles of fiber optic build from Kingston 131 to Gate II 38. The route will attach to approximately 62 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 1
DOT: 2
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport
RIDOT
Railroad

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	62
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	8,833
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	624
ESTIMATED POLE REPLACEMENTS (COUNT)	12
ESTIMATED MAKE-READY POLES (COUNT)	30
ESTIMATED PERMITTING COST (USD)	\$38,000.00
ESTIMATED ENGINEERING COST (USD)	\$15,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$20,592.00
ESTIMATED MATERIALS COST (USD)	\$115,315.00
ESTIMATED CONSTRUCTION COST (USD)	\$254,040.00
ESTIMATED TOTAL COST (USD)	\$422,855.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: KINGSTON 131 TO GATE II 38
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 1.79 miles of fiber optic build from Kingston 131 to Gate II 38. The route will attach to approximately 62 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 1
DOT: 2
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport
RIDOT
Railroad

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	6
ESTIMATED PERMITTING LEAD TIME	39
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	43

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	LINCOLN AVENUE 72 TO SPLICE POINT
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: LINCOLN AVENUE 72 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 0.12 miles of fiber optic build from Lincoln Avenue 72 to Splice Point. The route will attach to approximately 6 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Kent County
Warwick

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	6
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	430
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	206
ESTIMATED POLE REPLACEMENTS (COUNT)	2
ESTIMATED MAKE-READY POLES (COUNT)	3
ESTIMATED PERMITTING COST (USD)	\$2,000.00
ESTIMATED ENGINEERING COST (USD)	\$1,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$11,232.00
ESTIMATED MATERIALS COST (USD)	\$16,996.00
ESTIMATED CONSTRUCTION COST (USD)	\$22,801.00
ESTIMATED TOTAL COST (USD)	\$43,297.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: LINCOLN AVENUE 72 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 0.12 miles of fiber optic build from Lincoln Avenue 72 to Splice Point. The route will attach to approximately 6 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Kent County
Warwick

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	1
ESTIMATED PERMITTING LEAD TIME	4
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	LIPPITT HILL 79 TO SPLICE POINT
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: LIPPITT HILL 79 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 0.78 miles of fiber optic build from Lippitt Hill 79 to Splice Point. The route will attach to approximately 37 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
North Providence
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	37
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	3,493
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	616
ESTIMATED POLE REPLACEMENTS (COUNT)	7
ESTIMATED MAKE-READY POLES (COUNT)	19
ESTIMATED PERMITTING COST (USD)	\$5,000.00
ESTIMATED ENGINEERING COST (USD)	\$9,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$60,709.00
ESTIMATED CONSTRUCTION COST (USD)	\$137,815.00
ESTIMATED TOTAL COST (USD)	\$212,774.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: LIPPITT HILL 79 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 0.78 miles of fiber optic build from Lippitt Hill 79 to Splice Point. The route will attach to approximately 37 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
North Providence
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	4
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	MANTON 69 TO SPLICE POINT
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: MANTON 69 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 1.24 miles of fiber optic build from Manton 69 to Splice Point. The route will attach to approximately 61 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Johnston
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	61
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	6,462
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	103
ESTIMATED POLE REPLACEMENTS (COUNT)	12
ESTIMATED MAKE-READY POLES (COUNT)	30
ESTIMATED PERMITTING COST (USD)	\$8,000.00
ESTIMATED ENGINEERING COST (USD)	\$15,250.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$98,268.00
ESTIMATED CONSTRUCTION COST (USD)	\$212,429.00
ESTIMATED TOTAL COST (USD)	\$333,947.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: MANTON 69 TO SPLICE POINT
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 1.24 miles of fiber optic build from Manton 69 to Splice Point. The route will attach to approximately 61 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 2
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
Johnston
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	6
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	NEWPORT 203 TO JEPSON 37
PLAN YEAR	2028

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: NEWPORT 203 TO JEPSON 37
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 4.08 miles of fiber optic build from Newport 203 to Jepson 37. The route will attach to approximately 163 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 1

The route crossing into the following jurisdictions(s):

Newport County
Newport
Newport East
Middletown
Portsmouth
RIDOT
Environmental

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	163
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	21,061
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	503
ESTIMATED POLE REPLACEMENTS (COUNT)	33
ESTIMATED MAKE-READY POLES (COUNT)	81
ESTIMATED PERMITTING COST (USD)	\$17,000.00
ESTIMATED ENGINEERING COST (USD)	\$40,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$18,720.00
ESTIMATED MATERIALS COST (USD)	\$295,806.00
ESTIMATED CONSTRUCTION COST (USD)	\$611,930.00
ESTIMATED TOTAL COST (USD)	\$965,486.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: NEWPORT 203 TO JEPSON 37
PLAN YEAR: 2028

ISSUED: 12/13/2024

The project consist of 4.08 miles of fiber optic build from Newport 203 to Jepson 37. The route will attach to approximately 163 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 3
Waterbody: 1

The route crossing into the following jurisdictions(s):

Newport County
Newport
Newport East
Middletown
Portsmouth
RIDOT
Environmental

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	16
ESTIMATED PERMITTING LEAD TIME	26
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	10
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	30

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	EAST GEORGE ST 77 TO SPLICE POINT
PLAN YEAR	2029

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: EAST GEORGE ST 77 TO SPLICE POINT
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 1.19 miles of fiber optic build from East George St 77 to Splice Point. The route will attach to approximately 67 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	67
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	6,075
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	230
ESTIMATED POLE REPLACEMENTS (COUNT)	6
ESTIMATED MAKE-READY POLES (COUNT)	32
ESTIMATED PERMITTING COST (USD)	\$4,000.00
ESTIMATED ENGINEERING COST (USD)	\$16,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$80,184.00
ESTIMATED CONSTRUCTION COST (USD)	\$166,638.00
ESTIMATED TOTAL COST (USD)	\$267,572.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: EAST GEORGE ST 77 TO SPLICE POINT
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 1.19 miles of fiber optic build from East George St 77 to Splice Point. The route will attach to approximately 67 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	7
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

- 1. Splice equipment is to be used every 10,000 ft
- 2. Snowshoes to be used every 1000 ft
- 3. New poles for pole change outs priced at \$15,000.00
- 4. Underground construction is not differentiated between trench and bore
- 5. There is an assumed 5% adder to account for sag and waste.
- 6. There is an assumed 7% adder for estimated rock encounters
- 7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
- 8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	GENEVA 71 TO CLARKSON STREET 13
PLAN YEAR	2029

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: GENEVA 71 TO CLARKSON STREET 13
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 1.84 miles of fiber optic build from Geneva 71 to Clarkson Street 13. The route will attach to approximately 83 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
North Providence
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	83
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	8,999
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	695
ESTIMATED POLE REPLACEMENTS (COUNT)	17
ESTIMATED MAKE-READY POLES (COUNT)	41
ESTIMATED PERMITTING COST (USD)	\$5,000.00
ESTIMATED ENGINEERING COST (USD)	\$20,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$7,488.00
ESTIMATED MATERIALS COST (USD)	\$138,372.00
ESTIMATED CONSTRUCTION COST (USD)	\$307,164.00
ESTIMATED TOTAL COST (USD)	\$471,286.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: GENEVA 71 TO CLARKSON STREET 13
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 1.84 miles of fiber optic build from Geneva 71 to Clarkson Street 13. The route will attach to approximately 83 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Providence County
Providence
North Providence
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	8
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	HARRISON 32 TO WEST HOWARD 154
PLAN YEAR	2029

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: HARRISON 32 TO WEST HOWARD 154
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 1.18 miles of fiber optic build from Harrison 32 to West Howard 154. The route will attach to approximately 55 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	55
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	5,728
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	493
ESTIMATED POLE REPLACEMENTS (COUNT)	11
ESTIMATED MAKE-READY POLES (COUNT)	28
ESTIMATED PERMITTING COST (USD)	\$2,000.00
ESTIMATED ENGINEERING COST (USD)	\$13,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$9,360.00
ESTIMATED MATERIALS COST (USD)	\$92,742.00
ESTIMATED CONSTRUCTION COST (USD)	\$207,442.00
ESTIMATED TOTAL COST (USD)	\$315,934.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: HARRISON 32 TO WEST HOWARD 154
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 1.18 miles of fiber optic build from Harrison 32 to West Howard 154. The route will attach to approximately 55 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	6
ESTIMATED PERMITTING LEAD TIME	4
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

- 1. Splice equipment is to be used every 10,000 ft
- 2. Snowshoes to be used every 1000 ft
- 3. New poles for pole change outs priced at \$15,000.00
- 4. Underground construction is not differentiated between trench and bore
- 5. There is an assumed 5% adder to account for sag and waste.
- 6. There is an assumed 7% adder for estimated rock encounters
- 7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
- 8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	HOSPITAL SUB 146 TO KINGSTON 131
PLAN YEAR	2029

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: HOSPITAL SUB 146 TO KINGSTON 131
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 0.36 miles of fiber optic build from Hospital Sub 146 to Kingston 131. The route will attach to approximately 18 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	18
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	1,547
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	364
ESTIMATED POLE REPLACEMENTS (COUNT)	4
ESTIMATED MAKE-READY POLES (COUNT)	10
ESTIMATED PERMITTING COST (USD)	\$2,000.00
ESTIMATED ENGINEERING COST (USD)	\$4,500.00
ESTIMATED SPLICE AND TEST COST (USD)	\$5,616.00
ESTIMATED MATERIALS COST (USD)	\$34,115.00
ESTIMATED CONSTRUCTION COST (USD)	\$79,251.00
ESTIMATED TOTAL COST (USD)	\$119,866.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: HOSPITAL SUB 146 TO KINGSTON 131
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 0.36 miles of fiber optic build from Hospital Sub 146 to Kingston 131. The route will attach to approximately 18 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	2
ESTIMATED PERMITTING LEAD TIME	4
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	MERTON 51 TO WEST HOWARD 154
PLAN YEAR	2029

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: MERTON 51 TO WEST HOWARD 154
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 0.82 miles of fiber optic build from Merton 51 to West Howard 154. The route will attach to approximately 31 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	31
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	2,822
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	1,526
ESTIMATED POLE REPLACEMENTS (COUNT)	6
ESTIMATED MAKE-READY POLES (COUNT)	16
ESTIMATED PERMITTING COST (USD)	\$2,000.00
ESTIMATED ENGINEERING COST (USD)	\$7,750.00
ESTIMATED SPLICE AND TEST COST (USD)	\$11,232.00
ESTIMATED MATERIALS COST (USD)	\$56,499.00
ESTIMATED CONSTRUCTION COST (USD)	\$143,269.00
ESTIMATED TOTAL COST (USD)	\$209,518.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: MERTON 51 TO WEST HOWARD 154
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 0.82 miles of fiber optic build from Merton 51 to West Howard 154. The route will attach to approximately 31 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 0
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	3
ESTIMATED PERMITTING LEAD TIME	4
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	0
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")



ROUTE NAME	WEST HOWARD 154 TO KINGSTON 131
PLAN YEAR	2029

ISSUED: DECEMBER 13, 2024



ESTIMATED COSTS

PROJECT: WEST HOWARD 154 TO KINGSTON 131
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 1.49 miles of fiber optic build from West Howard 154 to Kingston 131. The route will attach to approximately 72 distribution poles and 0 transmission poles. The following estimate should be used as a high level estimate of the project cost and should not be considered a firm quote. The estimate below should be used for budgetary purposes only.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport
RIDOT

SUMMARY	QUANTITY
ESTIMATED DISTRIBUTION POLES (COUNT)	72
ESTIMATED TRANSMISSION POLES (COUNT)	0
ESTIMATED OVERHEAD FIBER LENGTH (IN FT)	7,339
ESTIMATED UNDERGROUND FIBER LENGTH (IN FT)	552
ESTIMATED POLE REPLACEMENTS (COUNT)	14
ESTIMATED MAKE-READY POLES (COUNT)	36
ESTIMATED PERMITTING COST (USD)	\$4,000.00
ESTIMATED ENGINEERING COST (USD)	\$18,000.00
ESTIMATED SPLICE AND TEST COST (USD)	\$9,360.00
ESTIMATED MATERIALS COST (USD)	\$118,204.00
ESTIMATED CONSTRUCTION COST (USD)	\$260,665.00
ESTIMATED TOTAL COST (USD)	\$400,869.00

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate



ESTIMATED SCHEDULE

PROJECT: WEST HOWARD 154 TO KINGSTON 131
PLAN YEAR: 2029

ISSUED: 12/13/2024

The project consist of 1.49 miles of fiber optic build from West Howard 154 to Kingston 131. The route will attach to approximately 72 distribution poles and 0 transmission poles. The following lead times were estimated based on estimated route complexity and general material lead times. 30 days has been added to the final material acquisition to account for construction timelines. Engineering and permitting weeks are measured in work weeks while other lead times are measured in full weeks.

The route includes the following crossings:

Railroad: 0
DOT: 1
Waterbody: 0

The route crossing into the following jurisdictions(s):

Newport County
Newport
RIDOT

SUMMARY	LEAD TIME, WEEK(S)
ESTIMATED ENGINEERING LEAD TIME	7
ESTIMATED PERMITTING LEAD TIME	6
ESTIMATED FIBER CABLE LEAD TIME	20
ESTIMATED SPLICE CLOSURE LEAD TIME	5
ESTIMATED SPLICE AND TEST LEAD TIME	1
ESTIMATED VAULT LEAD TIME	6
ESTIMATED POLE ATTACHMENT LEAD TIME	13
ESTIMATED SNOWSHOE LEAD TIME	13
ESTIMATED TOTAL LEAD TIME	24

**The following assumptions were made during the cost estimate:*

1. Splice equipment is to be used every 10,000 ft
2. Snowshoes to be used every 1000 ft
3. New poles for pole change outs priced at \$15,000.00
4. Underground construction is not differentiated between trench and bore
5. There is an assumed 5% adder to account for sag and waste.
6. There is an assumed 7% adder for estimated rock encounters
7. Some activities are assumed to be done in tandem where applicable to expedite project lead times.
8. Non-UL Materials used for estimate

REDACTED

Contains Critical Energy Infrastructure Information ("CEII")

PUC 2-10
Fiber

Request:

The Company's response to DIV 1-57 states that the money for Fiber is to complete the study and proceed to detailed engineering but the response to DIV 1-58 indicates that the "do nothing" option may be less expensive. Please provide updated information about the Fiber Study results and the Company's activities in FY 2025, those expected in FY 2026, and why the funding is in System Capacity and Performance before a final determination has been made about the most effective plan.

Response:

The December 2024 Fiber Study Report indicates the routes are viable with estimated costs. The current estimate for all the communication routes is approximately \$28.3 million. The funding is in the System Capacity and Performance category for consistency and clarity of communication to prior year filings. The Company initially presented the fiber project in the fiscal year ("FY") 2024 ISR proposal. During discussions for the FY 2024 proposal, which continued into the FY 2025 proposal, the Company acknowledged and agreed that a rescoping study was appropriate. The Company is currently reviewing the Fiber Study and aligning scope with ongoing and future projects. The Company plans to complete preliminary engineering and design work in FY 2026, which could include procurement of long lead-time items. The study remains in the budget and discussions continue based on this history.

PUC 2-11
AMF Depreciation

Request:

Please confirm that the company is using the following depreciation rates and lives for the following AMF assets (see Schedule SAB-1, pages 2 through 5 of 10):

Meters	4.49% or 22 years
Systems	14.29% or 7 years
Network	5.00% or 20 years
MDMS	14.29% or 7 years

- a. Docket No. 4770 included a depreciation rate for ADMS but not for MDMS. Why is Rhode Island Energy applying the IS depreciation rates from the Docket 4770 PST investments to the MDMS instead of the ADMS depreciation rate of 2.89%?
- b. Where in the Docket No. 4770 Settlement does the 4.49% depreciation rate for meters appear?
- c. Please recalculate Schedule SAB-1, Page 1 of 10 using a depreciation rate of 2.89% for MDMS.
- d. Please recalculate Schedule SAB-1, Page 1 of 10 using a depreciation rate of 3.16% for all AMF components.

Response:

The Company confirms that the revenue requirement in Schedule SAB-1 was calculated using the above stated depreciation rates for the respective AMF assets.

- a. In Docket 4770, the depreciation rate applied to ADMS was the filed composite book depreciation rate of 2.89%. MDMS is a key system for customer billing and settlement functionality while ADMS has different operational functionality. As such, the Company asserts that the depreciation rate for Systems/Software of 7 years is the more appropriate rate to use for MDMS and is more representative of the expected life of the investment than the composite book depreciation rate. Please note that the Company anticipates evaluating the software depreciation rates in the next base distribution rate case.

PUC 2-11, page 2
AMF Depreciation

- b. In Docket No. 4770 Settlement, Compliance Attachment 2, Schedule 6-ELEC, Page 3 of 5, Line 55, Column (f), for Meters Bare Cost Domestic has a rate of 5.61%. This rate is a combination of the original cost annual rate of 4.488% plus the cost of removal annual accrual rate of 1.122% (from the 2018 depreciation study by component prepared by Witness Ned W. Allis) for the total of 5.61%. For purposes of calculating the depreciation for the new AMF meters, the Company used the original cost annual rate of 4.488% (or 4.49%).
- c. Please see Attachment PUC 2-11-1 for the recalculated Schedule SAB-1, Page 1 of 10.
- d. Please see Attachment PUC 2-11-2 for the recalculated Schedule SAB-1, Page 1 of 10.

The Narragansett Electric Company
d/b/a Rhode Island Energy
Electric Infrastructure, Safety, and Reliability (ISR) Plan - AMF
Annual Revenue Requirement Summary - AMF Capital Investment

Line No.		Fiscal Year 4/1/25 - 3/31/26
		<u>2026</u> (a)
	<u>AMF Incremental Capital Investment:</u>	
1	Meters - Forecasted Revenue Requirement on FY 2026 Incremental Capital included in ISR	\$4,571,324
2	Software - Forecasted Revenue Requirement on FY 2026 Incremental Capital included in ISR	\$2,914,554
3	Network - Forecasted Revenue Requirement on FY 2026 Incremental Capital included in ISR	\$865,271
4	Subtotal	<u>\$8,351,150</u>
5	MDMS Software - Depreciation - No Return (using depreciation of 2.89%)	\$23,679
6	Total AMF Capital Investment Component of Revenue Requirement	<u>\$8,374,829</u>
7	Deferrals to Offset AMF Capital Investment Revenue Requirement	<u>(8,374,829)</u>
8	Net AMF Capital Investment Component of Revenue Requirement	<u>\$0</u>

**The Narragansett Electric Company
d/b/a Rhode Island Energy
Electric Infrastructure, Safety, and Reliability (ISR) Plan - AMF
Annual Revenue Requirement Summary - AMF Capital Investment**

Line No.		Fiscal Year 4/1/25 - 3/31/26
		<u>2026</u> (a)
	<u>AMF Incremental Capital Investment:</u>	
1	Meters - Forecasted Revenue Requirement on FY 2026 Incremental Capital included in ISR	\$4,098,440
2	Software - Forecasted Revenue Requirement on FY 2026 Incremental Capital included in ISR	\$1,475,065
3	Network - Forecasted Revenue Requirement on FY 2026 Incremental Capital included in ISR	\$745,380
4	Subtotal	<u>\$6,318,885</u>
5	MDMS Software - Depreciation - No Return	\$25,891
6	Total AMF Capital Investment Component of Revenue Requirement	<u>\$6,344,776</u>
7	Deferrals to Offset AMF Capital Investment Revenue Requirement	<u>(6,344,776)</u>
8	Net AMF Capital Investment Component of Revenue Requirement	<u>\$0</u>

PUC 2-12
IIJA

Request:

On Bates page 8, Ms. Gooding explains that “Some of the proposed Plan investments also may be eligible for cost reimbursement through the Company’s award under the United States Department of Energy’s IIJA Grid Resilience and Innovative Partnerships (“GRIP”) Funding Opportunity, Smart Grid Topic Area. This award may provide an opportunity to reduce the amount of spending the Company seeks to recover from its customers.”

- a. What plan investments may be eligible for cost reimbursement?
- b. If known, what is the potential timeline of a reimbursement(s)?
- c. What is the company’s plan in the event IIJA funds are received and the company has already collected funds from ratepayers to support the reimbursed project(s)?

Response:

- a. Please see the Company’s response to Division 1-61 in this docket for the list of investments that are eligible for cost reimbursement.
- b. The Company’s understanding is that the reimbursement period spans five years, beginning October 1, 2024. The Company is inquiring with the Department of Energy (“DOE”) if investments made prior to October 1, 2024, but included in the original proposal, would be eligible for reimbursement.

Pending acceptance of the award, the Company intends to submit for reimbursement quarterly. The Company is unsure of the review and approval period as well as the timing of the reimbursement.

The Company also notes that at this time, it is unclear what, if any, impact President Trump’s Unleashing American Energy Executive Order will have on the Company’s grant award. This Executive Order directs all agencies to pause IIJA funding disbursements and review the IIJA programs disbursements for consistency with the law and policies outlined in the Executive Order. The agencies need to report to the Director of the National Economic Council (“NEC”) and Director of Office of Management and Budget (“OMB”) within 90 days on the agencies’ findings and recommendations. No funds can be disbursed until the Director of OMB and Assistant to the President for Economic Policy determine that the disbursements are consistent with the

PUC 2-12, page 2
IIJA

recommendations they decide to adopt. Rhode Island Energy will assess next steps after it receives further information whether the Director of OMB and Assistant to the President for Economic Policy determine that the disbursements are consistent with the recommendations they decide to adopt; however, at this time, there remain many unknowns and a risk that the Company does not receive any federal funding for the project.

- c. As noted in the Company's response to Division 1-64, the Company does not anticipate this scenario occurring. Subject to the response in part b., above and receipt of federal funding, the Company will be required to submit requests for reimbursement through the Department of Energy's Service Center as it incurs costs for the eligible investments. The Company would then apply any IIJA reimbursements against the costs of the investments before placing the investment into service and including it in the revenue requirement or rates in a reconciliation filing.

PUC 2-13
IIJA

Request:

The testimony of Ms. Castro refers to investments that relate to a potential award of \$50 million pursuant to an application filed by the Company under a program referred to in the testimony as the "IIJA." (Testimony of Castro at 9-12). For the record, please define the acronym "IIJA" and describe the program with citations to the applicable law.

Response:

"IIJA" stands for Infrastructure Investment and Jobs Act and is in accordance with Public Law No: 117-58.¹

According to the Funding Opportunity Announcement, included in Attachment PUC 2-13, the program is described as,

[F]unding to support investments to build a clean and equitable energy economy that achieves pollution free electricity by 2035 and puts the United States on a path to achieve net-zero emissions economywide by no later than 2050 to benefit all Americans. As new load and generation come online as the market moves in line with these goals, deploying the projects that will support a more resilient and reliable grid will be critical. At present, aging grid infrastructure leaves the grid increasingly vulnerable to attacks. The increasing frequency of extreme weather events is leading to energy supply disruptions that threaten the economy, put public health and safety at risk, and can devastate affected communities all over the country.²

¹ <https://www.congress.gov/bill/117th-congress/house-bill/3684>

² See Funding Opportunity Announcement (FOA) Number: DE-FOA-0002740, issued April 11, 2023, at 13 (citing [Executive Order \(EO\) 14008](#), "Tackling the Climate Crisis at Home and Abroad," January 27, 2021; ICF International, Electric Grid Security and Resilience: Establishing a Baseline for Adversarial Threats, at 26 (June 2016)).

FINANCIAL ASSISTANCE FUNDING OPPORTUNITY ANNOUNCEMENT



Department of Energy (DOE) Grid Deployment Office (GDO) Office of Clean Energy Demonstrations (OCED)

BIL – Grid Resilience and Innovation Partnerships (GRIP)

Funding Opportunity Announcement (FOA) Number: DE-FOA-0002740

FOA Type: **Amendment 000007**

Assistance Listing Number: 81.254

FOA Amendment 000007 Issue Date:	04/11/2023
1st Informational Webinar:	11/29/2022 2:00pm ET
2nd Informational Webinar:	02/08/2023 2:00pm ET
3rd Informational Webinar:	02/27/2023 1:00pm ET
4th Informational Webinar:	02/28/2023 1:00pm ET
Additional Webinars	To Be Announced*
Submission Deadline for Concept Papers (Topic Area 1):	12/16/2022 5:00pm ET
Submission Deadline for Concept Papers (Topic Area 2):	12/16/2022 5:00pm ET
Submission Deadline for Concept Papers (Topic Area 3):	01/13/2023 5:00pm ET
Submission Deadline for Full Applications (Topic Area 1):	04/06/2023 5:00pm ET
Submission Deadline for Full Applications (Topic Area 2):	03/17/2023 5:00pm ET
Submission Deadline for Full Applications (Topic Area 3):	05/19/2023 5:00pm ET
Expected Date for DOE Selection Notifications (Topic Area 1):	Summer 2023
Expected Date for DOE Selection Notifications (Topic Area 2):	Summer 2023
Expected Date for DOE Selection Notifications (Topic Area 3):	Fall 2023
Expected Timeframe for Award Negotiations (Topic Area 1):	Fall 2023
Expected Timeframe for Award Negotiations (Topic Area 2):	Fall 2023
Expected Timeframe for Award Negotiations (Topic Area 3):	Winter 2023

- Applicants must submit a Concept Paper by 5:00pm ET on the due date listed above to be eligible to submit a Full Application.
- *See Section VIII.P for more information on additional webinar(s).
- To apply to this FOA, applicants must register with and submit application materials through Grants.gov at <https://www.grants.gov/>.
- Applicants must designate primary and backup points-of-contact with whom DOE will communicate to conduct award negotiations. If an application is selected for award negotiations, it is not a commitment to issue an award. It is imperative that the applicant/selectee be responsive during award negotiations and meet negotiation deadlines. Failure to do so may result in cancelation of further award negotiations and rescission of the selection.

Registration Requirements

There are several one-time actions that must be completed before submitting an application in response to this Funding Opportunity Announcement (FOA) (e.g., register with the System for Award Management (SAM), obtain a Unique Entity Identifier (UEI) number, register with Grants.gov, and register with FedConnect.net to submit questions). It is vital that applicants address these items as soon as possible. Some may take several weeks, and failure to complete them could interfere with an applicant's ability to apply to this FOA.

- **SAM** – Applicants must register with SAM at <https://www.sam.gov/> prior to submitting an application in response to this FOA. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Failure to register with SAM will prevent your organization from applying through Grants.gov. The applicant must maintain an active SAM registration with current information at all times during which it has an active Federal award or application under consideration. More information about SAM registration for applicants is found at: https://www.fsd.gov/gsafsd_sp?id=gsafsd_kb_articles&sys_id=650d493e1bab7c105465eaccac4bcbcb.

NOTE: If clicking the SAM links do not work, please copy and paste the link into your browser.

Due to the high demand of SAM registrations and UEI requests, entity legal business name and address validations are taking longer than expected to process. Entities should start the SAM and UEI registration process as soon as possible. If entities have technical difficulties with the SAM registration or UEI validation process they should utilize the HELP feature on SAM.gov. SAM.gov will work entity service tickets in the order in which they are received and asks that entities not create multiple service tickets for the same request or technical issue. Additional entity validation resources can be found here: [GSAFSD Tier 0 Knowledge Base - Validating your Entity](#).

- **UEI** – Applicants must obtain an UEI from the SAM to uniquely identify the entity. The UEI is available in the SAM entity registration record.

NOTE: Subawardees/subrecipients at all tiers must also obtain an UEI from the SAM and provide the UEI to the Prime Recipient before the subaward can be issued.

- **Grants.gov** – Applicants must register with Grants.gov and set up your Workspace. You cannot submit an application through Grants.gov unless you are registered. Please read the registration requirements carefully and start the process immediately.

- 1) The Authorized Organizational Representative (AOR) must register at: <https://apply07.grants.gov/apply/OrcRegister>.

- 2) An email is sent to the E-Business (E-Biz) POC listed in SAM. The E-Biz POC must approve the AOR registration using their MPIN from their SAM registration.

More information about the registration steps for Grants.gov is provided at:
<https://www.grants.gov/web/grants/applicants/registration.html>.

In addition:

- Add a Profile to a Grants.gov Account: A profile in Grants.gov corresponds to a single applicant organization the user represents (i.e., an applicant) or an individual applicant. If you work for or consult with multiple organizations and have a profile for each, you may log in to one Grants.gov account to access all of your grant applications. To add an organizational profile to your Grants.gov account, enter the UEI for the organization in the UEI field while adding a profile. For more detailed instructions about creating a profile on Grants.gov, refer to: <https://www.grants.gov/web/grants/applicants/registration/add-profile.html>.
- *EBiz POC Authorized Profile Roles*: After you register with Grants.gov and create an Organization Applicant Profile, the organization applicant's request for Grants.gov roles and access is sent to the EBiz POC. The EBiz POC will then log in to Grants.gov and authorize the appropriate roles, which may include the AOR role, thereby giving you permission to complete and submit applications on behalf of the organization. You will be able to submit your application online any time after you have been assigned the AOR role.

NOTE: When applications are submitted through Grants.gov, the name of the organization applicant with the AOR role that submitted the application is inserted into the signature line of the application, serving as the electronic signature. The EBiz POC **must** authorize people who are able to make legally binding commitments on behalf of the organization as a user with the AOR role; **this step is often missed and it is crucial for valid and timely submissions.**

For more detailed instructions about creating a profile on Grants.gov, refer to:
<https://www.grants.gov/web/grants/applicants/registration/authorize-roles.html>.

To track your role request, refer to:
<https://www.grants.gov/web/grants/applicants/registration/track-role-status.html>.

Questions relating to the **registration process, system requirements, or how an application form works** must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov.

- **FedConnect.net** – Applicants must register with FedConnect to submit questions.
FedConnect website: <https://www.fedconnect.net/>

All questions and answers related to this FOA will be posted on the FedConnect portal at: <https://www.FedConnect.net> and on the Grid Resilience and Innovation Partnerships (GRIP) Program web page at: [Grid Resilience Innovation Partnership Programs | Department of Energy](#).

See Section IV for Application and Submission Information (including how to create a WorkSpace).

Amendments

Amend. No.	Date	Description of Amendment
000001	11/18/2022	This Amendment is to issue the initial version of the FOA. This version (Amendment 00001) supersedes the previous draft version that was released for public comment (the Draft). The Draft version is now obsolete. Applicants are advised to use Amendment 00001 to prepare the concept paper and full application.
000002	11/29/2022	This Amendment is to revise Section IV.D.xvi to replace the hyperlink to the Community Benefits Plan Scoring Rubric; to remove a reference to program-specific Community Benefits Plan Guidance; and to move the instructions for submitting the Community Benefits Plan to the end of the section. Text that is revised or newly incorporated with this amendment is highlighted in yellow.
000003	12/13/2022	This Amendment revises the following sections: <ul style="list-style-type: none"> the Registration Requirements section and Section VII to include the GRIP web page as an additional resource for Applicants to view FOA questions and answers. Section I.B.ii to include the GRIP web page as an additional resource for Applicants to view the Teaming Partner List and any updates to it. Section II.A.ii to include additional funding information, including plans for issuing the second competitive funding opportunity for GRIP in Fiscal Year 2024. Section IV.A. and IV.C. to clarify concept paper submission information. Text that is revised or newly incorporated with this amendment is highlighted in yellow.
000004	02/06/2023	The Amendment revises the following: <ul style="list-style-type: none"> The FOA Cover Page and Section VIII.P to notify applicants that additional informational webinars are planned. Please see Section VIII.P for additional webinar information. Section I.B and I.C to reflect that for Topic Area 1, new distribution lines below 69 kV, reconductoring, undergrounding and other upgrades to existing transmission infrastructure are considered eligible; and applications that include new transmission lines at or

		<p>above 69 kV are not of interest. A correction to Footnote 40 was also made in this section.</p> <ul style="list-style-type: none"> Section IV.D.xvi to remove the hyperlink to the Community Benefits Plan Scoring Rubric. The Community Benefits Plan Scoring Rubric will no longer be available. Section IV.D.xx to correctly reflect the reference to the Project Description and Assurances Document Template (PDAD) template as Appendix F. <p>Text that is revised or newly incorporated with this amendment is highlighted in yellow.</p>
000005	02/23/2023	<p>The Amendment revises the following:</p> <ul style="list-style-type: none"> The FOA Cover Page and Section VIII.P to notify applicants that additional informational webinars are scheduled. Please see Section VIII.P for additional webinar information. Section II.A.ii to correct the anticipated length of the period of performance. Section IV.D.xx to add the text of the “Locations of Work” full application content requirement. The Locations of Work template is now available as an attachment to this announcement for use. <p>Text that is revised or newly incorporated with this amendment is highlighted in yellow.</p>
000006	03/20/2023	<p>The purpose of this Amendment is to re-open the FOA to accommodate the submission of full applications to Topic Area 1 and Topic Area 3 <u>only</u>. See the FOA Cover Page for Application Due Dates and Times. Please note, the application period for Topic Area 2 is closed.</p> <p>There are no changes being made to the FOA document as a result of this amendment.</p>
000007	04/11/2023	<p>The purpose of this Amendment is to re-open the FOA to accommodate the submission of full applications to Topic Area 3 <u>only</u>. See the FOA Cover Page for Application Due Dates and Times. Please note, the application period is now closed for Topic Area 1 and Topic Area 2.</p> <p>This amendment also revises Section VII to increase the number of days for which questions and comments concerning this FOA shall be submitted, from 3 business days to not later than 5</p>

		<p>business days, prior to the application due date for Topic Area 3.</p> <p>Text that is revised or newly incorporated with this amendment is highlighted in yellow.</p>
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I. Funding Opportunity Description

A. Background and Context

The Grid Deployment Office (GDO), in conjunction with the Office of Clean Energy Demonstrations (OCED), is issuing this Funding Opportunity Announcement (FOA). Awards made under this FOA will be funded, in whole or in part, with funds appropriated by the Infrastructure Investment and Jobs Act¹ (IIJA), also more commonly known as the Bipartisan Infrastructure Law (BIL).

The BIL is a once-in-a-generation investment in infrastructure, designed to modernize and upgrade American infrastructure to enhance U.S. competitiveness, driving the creation of good-paying union jobs, tackling the climate crisis, and ensuring stronger access to economic, environmental, and other benefits for disadvantaged communities (DACs). The BIL appropriates more than \$62 billion to the Department of Energy (DOE)² including funding to support investments to build a clean and equitable energy economy that achieves pollution free electricity by 2035 and puts the United States on a path to achieve net-zero emissions economy-wide by no later than 2050³ to benefit all Americans. As new load and generation come online as the market moves in line with these goals, deploying the projects that will support a more resilient and reliable grid will be critical. At present, aging grid infrastructure leaves the grid increasingly vulnerable to attacks.⁴ The increasing frequency of extreme weather events is leading to energy supply disruptions that threaten the economy, put public health and safety at risk, and can devastate affected communities all over the country.

Among other programs DOE has to support the grid, three BIL programs covered by this FOA – each with specific statutory requirements– will invest approximately \$10.5 billion for the five-year period encompassing FY22 through FY26 to deploy technologies to increase grid reliability and resilience. The activities to be funded under this FOA support three BIL sections including 40101(c), 40107 and 40103(b).⁵ Together DOE refers to these programs as the Grid Resilience and Innovation Partnerships (GRIP) program.

¹ Infrastructure Investment and Jobs Act, Public Law 117-58 (November 15, 2021). <https://www.congress.gov/bills/117/congress/house-bill/3684>. This FOA uses the more common name “Bipartisan Infrastructure Law”.

² U.S. Department of Energy. November 2021. “DOE Fact Sheet: The Bipartisan Infrastructure Deal Will Deliver For American Workers, Families and Usher in the Clean Energy Future.” <https://www.energy.gov/articles/doe-fact-sheet-bipartisan-infrastructure-deal-will-deliver-american-workers-families-and-0>

³ [Executive Order \(EO\) 14008](#), “Tackling the Climate Crisis at Home and Abroad,” January 27, 2021.

⁴ See ICF International, Electric Grid Security and Resilience: Establishing a Baseline for Adversarial Threats, at 26 (June 2016)

⁵ 42 USC §18711(c); 42 USC §18712(b); 42 USC §17386

Principles of equity, justice, and advancing accessible good-paying jobs with the free and fair choice to join a union will guide implementation of this program, in alignment with the Administration's Justice40 Initiative and commitment to American workers. The Department commits to robust engagement and collaboration with States, U.S. Territories, and Indian Tribes, as well as with other interested stakeholders, including industry, unions, and local communities, for successful implementation of the GRIP program.

These BIL sections that make up the GRIP program are:

- Section 40101(c): Grid Resilience Grants
- Section 40107: Smart Grid Grants
- Section 40103(b): Grid Innovation Program

i. Program Purpose

Climate change is increasing the threats to our power system infrastructure. Disruptive weather events are more intense in terms of temperature extremes and precipitation and are becoming broader in scope and affecting larger areas at a time. Other climate impacts like droughts are long-lasting, compounding the potential impact of disruptive events and increasing other threats such as wildfires, floods, and mudslides. Previous methods and approaches to prepare for disruptions are no longer sufficient to meet the increasing threats to the power system due to climate change. Increasing interdependencies between critical infrastructure systems will continue to impact our power system.

With these trends in mind, building a more resilient and reliable grid is critical. Studies indicate a more resilient and reliable grid must inherently have the following characteristics: increased grid reliability and flexibility, the ability to easily interconnect new clean energy to enhance generation mix diversity, and improved system cost-effectiveness.⁶ There is currently insufficient development of projects that will support these characteristics that are critical to reliability and resilience of the grid, particularly in projects that would achieve the following outcomes: 1) increasing transfer capacity between regions, 2) addressing the most consequential system needs and challenges that cause or contribute to the problematic and increasing interconnection queue time for clean energy, and 3) increasing supply of a geographically and technologically diverse sets of location-constrained energy resources to enhance resource adequacy and reduce correlated generation outages.⁷ Therefore, DOE is eager to leverage federal dollars under the GRIP program to bring together state, Tribal,

⁶ National Renewable Energy Laboratory (NREL). Interconnections Seam Study. October 2020. <https://www.nrel.gov/analysis/seams.html>

⁷ Lawrence Berkeley National Laboratory (LBNL). "Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection." April 2022. <https://emp.lbl.gov/queues>

community, and industry stakeholders to support these outcomes and others of equal or greater public benefit to build the grid that America needs.

Additionally, as the need for grid investment that can enhance reliability and resilience grows, historical trends show that investments by major U.S. electric utilities—representing about 70% of total U.S. electric load—into the distribution system has been more than double that into the transmission system.^{8,9} DOE is looking to leverage funding to unlock transformative projects that would not be built and deployed without the federal funding under the GRIP program across the transmission system, distribution system, and combination system approaches – including catalyzing and unlocking increased investment into the transmission system to support greater overall grid resilience and reliability at the greatest scale. With the funding provided by the BIL across these three programs there is an opportunity to not only invest in power system infrastructure that addresses critical national, interregional, and regional needs, but also a unique chance to build partnerships between states, local governments, Tribes, and power system operators that align industry objectives with broader regional, interregional, and national goals to enhance reliability, all-hazards resilience, and efficiency of the electric grid. A comprehensive approach that considers all the opportunities available within the BIL can result in more coordinated efforts across relevant stakeholders that can ultimately guide investment strategies for improving resilience beyond what the BIL can support directly.

Concurrently, infrastructure investments in power system resilience offer the opportunity to include a diverse set of populations, including underserved and disadvantaged communities, in the development of resilience strategies that focus on communities, and equitable access to opportunities and the benefits that derive from them. DOE believes there are significant benefits to be realized by coordinating the implementation of the three BIL programs focused on power sector infrastructure, grid reliability and resilience.

As part of the whole-of-government approach to advance equity and encourage worker organizing and collective bargaining^{10,11,12} and in alignment with BIL sections 40101(c), 40107, and 40103(b), this FOA and any related activities will seek to encourage meaningful engagement and participation of labor unions and

⁸ Energy Information Administration (EIA). “Utilities continue to increase spending on transmission infrastructure.” February 9, 2018. <https://www.eia.gov/todayinenergy/detail.php?id=34892>

⁹ EIA. “Major utilities continue to increase spending on U.S. electric distribution systems.” July 20, 2018. <https://www.eia.gov/todayinenergy/detail.php?id=36675>

¹⁰ EO 13985, “Advancing Racial Equity and Support for Underserved Communities Through the Federal Government” (Jan. 20, 2021).

¹¹ EO 14025, “Worker Organizing and Empowerment,” April 26, 2021.

¹² EO 14052, “Implementation of the Infrastructure Investment and Jobs Act,” November 18, 2021.

underserved communities and underrepresented groups, including consultation with Tribal Nations^{13,14}. Consistent with Executive Order 14008, this FOA is designed to help meet the goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities and drive the creation of accessible good-paying jobs with the free and fair chance for workers to join a union.

ii. Strategic Goals

This FOA seeks applications to address these three goals:

1. Transform community, regional, interregional, and national resilience, including in consideration of future shifts in generation and load
2. Catalyze and leverage private sector and non-federal public capital for impactful technology and infrastructure deployment
3. Advance community benefits

1. Transform community, regional, interregional, and national resilience, including in consideration of future shifts in generation and load

As explained in DOE's Building a Better Grid Initiative Notice of Intent, modernizing, hardening, and expanding the grid will enhance the resilience of our entire electric system, and ensure that electricity is available to customers when it is needed most.¹⁵ Projects funded by the GRIP program should be designed to enable significant national, regional, or community resilience improvements, consistent with grid needs that will manifest as a result of aging grid infrastructure, increasing climate change-related or other hazards to reliability, and the clean energy transition. An important objective of community and regional resilience and transformation is improving the electric grid's ability to avoid, mitigate and recover from major disruptions and plan for future disruptions across all hazards. Grid investments can enhance resilience by, among other things:

- i. increasing regional and interregional electricity transfer capacity,
- ii. addressing the most consequential system needs and challenges that cause or contribute to the problematic and increasing interconnection queue time for clean energy,

¹³ [EO 13175](#), November 6, 2000 "Consultation and Coordination With Indian Tribal Governments", charges all executive departments and agencies with engaging in regular, meaningful, and robust consultation with Tribal officials in the development of Federal policies that have Tribal implications.

¹⁴ Presidential Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships. January 26, 2021. <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/26/memorandum-on-tribal-consultation-and-strengthening-nation-to-nation-relationships/>

¹⁵ Building a Better Grid Initiative To Upgrade and Expand the Nation's Electric Transmission Grid To Support Resilience, Reliability, and Decarbonization. [87 FR 2769](#)

- iii. facilitating clean energy deployment, generation mix diversity, and other system benefits.

A systemic approach can consider all aspects of physical infrastructure and the ability of power system owners and operators to mitigate outages and restore power to communities as well as the ability of communities to work towards recovery. Therefore, alignment with state, regional, and national energy planning is important to understand threats, mitigation approaches, and system needs, and to help with the prioritization of funding. BIL investments can leverage these plans as well as industry and other investments to assist in community transformation. Applications may consider emphasis on a specific threat, such as wildfire or flooding, and how an approach can transform a region or community resulting in a significant resilience and other economic benefits, with an emphasis on equity.

2. Catalyze and leveraging private sector and non-federal public capital for impactful technology and infrastructure deployment

Investments should prioritize driving innovative approaches to achieving grid infrastructure deployment at-scale where significant economic benefits to mitigate threats and impacts of disruptive events to communities can be attained.

DOE is looking for applications that will leverage private sector and non-federal public capital to advance deployment goals. These efforts will be aligned with state, regional, or other planning activities and goals. As state resilience plans continue to be updated annually and evaluate future risks, DOE is interested in how Federal funds will leverage industry investments towards hardening their system and/or advancing innovative solutions to enhance system resilience.

DOE is also interested in leveraging Federal infrastructure funding to maximize grid infrastructure deployment at-scale. Successful projects will demonstrate how federal investments under the GRIP program can lead to additional future investments by industry, communities, venture capital, and other private debt and equity capital. Investments should prioritize grid improvements especially in cases where GRIP investments can overcome institutional barriers, perceived risk, and the like so as to both deliver beneficial grid outcomes and demonstrate an approach suitable for replication.

3. Advance Community Benefits

Increasing grid reliability and resilience provides notable benefits such as reducing outages resulting from extreme events and/or other causes, by

reducing restoration times from such outages, or by reducing risks to health and safety for the affected community.

In keeping with the Administration's goals, and as an agency whose mission includes strengthening our country's energy prosperity, DOE seeks projects that should not only contribute to the country's energy technology and climate goals, but also meet the following four priority goals (1) support meaningful community and labor engagement; (2) invest in the American workforce; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities (the Justice40 Initiative).

iii. Community Benefits Plan: Job Quality and Equity

To support the goal of building a clean and equitable energy economy, the BIL-funded projects are expected to (1) support meaningful community and labor engagement; (2) invest in America's workforce; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the President's goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities (the Justice40 Initiative). To ensure these goals are met, applications must include a Community Benefits Plan that describes how the proposed project would incorporate the four objectives stated above.

Applicants are encouraged to submit Community and Labor Partnership Documentation from established labor and community-based organizations that demonstrate the applicant's ability to achieve the above goals as outlined in the Community Benefits Plan. Within the Community Benefits Plan, the applicant is encouraged to provide specific detail on how to ensure the delivery of measurable community and jobs benefits, ideally through the use of negotiated agreements between the applicant and the community, and/or the applicant and labor unions referred to collectively here as "Workforce and Community Agreements." These include good neighbor agreements, community benefits agreements, community workforce agreements, project labor agreements, and other collective bargaining agreements. See Section IV.D.xv for the Community Benefits Plan content requirements.

a. Community and Labor Engagement

The project planning should include engagement with an inclusive collection of local labor unions, governments Tribal entities, and other stakeholders -- such as, residents and businesses, entities that carry out workforce development programs, and community-based organizations that support or work with disadvantaged communities. Considering the importance of the four priorities listed above and the financial investment in the projects to be funded under this FOA, stakeholder engagement is a relatively small cost that delivers high value.

Proactive and meaningful engagement with stakeholders ensures stakeholders' perspectives can be incorporated into the project plan, allows for transparency, and helps reduce or eliminate certain risks associated with the project.

b. Quality Jobs

In keeping with the Administration's goals, and to ensure the agency's energy projects contribute to overall economic prosperity, the DOE strongly supports investments that expand accessible good-paying jobs, with assurances that workers will have a free and fair chance to join a union; promote worker power for marginalized workers and in hard-to-organize and changing industries; improve job quality through the adoption of strong labor standards; support responsible employers; and foster safe, healthy, and inclusive workplaces and communities free from harassment and discrimination, and support strategies that develop a skilled and inclusive local workforce to build and maintain the country's energy infrastructure and grow domestic manufacturing.

c. Diversity, Equity, Inclusion, and Accessibility

Advancing equity, civil rights, racial justice, and equal opportunity is a key priority of the Biden Administration. The term "equity" means the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.¹⁶

As part of a whole of government approach to advancing equity, this FOA seeks to encourage the participation of underserved communities¹⁷ and underrepresented groups, ensure equitable access to business opportunities, good-paying jobs, career-track training, and other economic opportunities. Partnerships with community-based organizations, comprehensive support services to reduce barriers to access to opportunities and ensuring business and employment opportunities for members of DACs are key tools. Applicants are

¹⁶ Executive Order 13985, "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government" (Jan. 20, 2021).

¹⁷ The term "underserved communities" refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, as exemplified by the list of in the definition of "equity." E.O. 13985. For purposes of this FOA, communities identified as disadvantaged or underserved communities by their respective States; communities identified on the Index of Deep Disadvantage referenced at <https://news.umich.edu/new-index-ranks-americas-100-most-disadvantaged-communities/>, and communities that otherwise meet the definition of "underserved communities" stated above.

required to describe how diversity, equity, inclusion, and accessibility objectives will be incorporated in the project.

Further, Applicants are highly encouraged to include individuals from groups historically underrepresented^{18,19} in science, technology, engineering and math (STEM) fields on their project teams.

Minority Serving Institutions²⁰, Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, Veteran Owned Businesses, Tribal Colleges and Universities, or entities located in an underserved community that meet the eligibility requirements (See Section III) are encouraged to apply as the prime applicant or participate on an application as a proposed partner to the prime applicant. The Selection Official may consider the inclusion of these types of entities as part of the selection decision (See Section V.C.i. Program Policy Factors).

d. Justice40 Initiative

In addition to the Federal government's initiative to achieve greater participation from underserved communities and underrepresented groups, this FOA supports DOE's commitment to the Justice40 Initiative.²¹ Benefits include (but are not

¹⁸ According to the National Science Foundation's 2019 report titled, "Women, Minorities and Persons with Disabilities in Science and Engineering", women, persons with disabilities, and underrepresented minority groups—blacks or African Americans, Hispanics or Latinos, and American Indians or Alaska Natives—are vastly underrepresented in the STEM (science, technology, engineering and math) fields that drive the energy sector. That is, their representation in STEM education and STEM employment is smaller than their representation in the U.S. population. <https://nces.nsf.gov/pubs/nsf19304/digest/about-this-report> For example, in the U.S., Hispanics, African Americans and American Indians or Alaska Natives make up 24 percent of the overall workforce, yet only account for 9 percent of the country's science and engineering workforce. DOE seeks to inspire underrepresented Americans to pursue careers in energy and support their advancement into leadership positions. <https://www.energy.gov/articles/introducing-minorities-energy-initiative>

¹⁹ See also. Note that Congress recognized in Section 305 of the American Innovation and Competitiveness Act of 2017, Public Law 114-329:

(1) [I]t is critical to our Nation's economic leadership and global competitiveness that the United States educate, train, and retain more scientists, engineers, and computer scientists; (2) there is currently a disconnect between the availability of and growing demand for STEM-skilled workers; (3) historically, underrepresented populations are the largest untapped STEM talent pools in the United States; and (4) given the shifting demographic landscape, the United States should encourage full participation of individuals from underrepresented populations in STEM fields.

²⁰ Minority Serving Institutions refers to universities and colleges that serve a significant percentage of students from minority groups, including Historically Black Colleges and Universities/Other Minority Institutions as educational entities recognized by the Office of Civil Rights (OCR), U.S. Department of Education, and identified on the OCR's Department of Education U.S. accredited postsecondary minorities' institution list. See <https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html>.

²¹ The Justice40 initiative, created by E.O. 14008, establishes a goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities. The Justice40 Interim Guidance provides a broad

limited to) measurable direct or indirect investments or positive project outcomes that achieve or contribute to the following in DACs: (1) a decrease in energy burden; (2) a decrease in environmental exposure and burdens; (3) an increase in access to low-cost capital; (4) an increase in high-quality job creation, the clean energy job pipeline, and job training for individuals; (5) increases in clean energy enterprise creation and contracting (e.g., minority-owned or disadvantaged business enterprises); (6) increases in energy democracy, including community ownership; (7) increased parity in clean energy technology access and adoption; and (8) an increase in energy resilience.

B. Topic Areas

i. Topic Areas

The proposed objectives, eligibility, and the technical approach for each of the three programs within the GRIP program are outlined below. DOE will be requesting and reviewing concept papers as part of the application process. Based on DOE's review of the concept papers, DOE will encourage a subset of applicants to submit Full Applications.

- Topic Area 1: Grid Resilience Grants (BIL section 40101(c))
- Topic Area 2: Smart Grid Grants (BIL section 40107²²)
- Topic Area 3: Grid Innovation Program (BIL section 40103(b))

Topic Area 1: Grid Resilience Grants (40101(c))

Objectives:

This program supports activities that reduce the likelihood and consequence of impacts to the electric grid due to extreme weather, wildfire, and natural disaster. The statutory language requires prioritization of projects that will generate the greatest regional or community benefit (whether rural or urban) in reducing the likelihood and consequences of disruptive events.²³

definition of disadvantaged communities (Page 2): <https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf>. The DOE, Office of Management and Budget, and/or the Federal Council on Environmental Quality (CEQ) may issue additional and subsequent guidance regarding the designation of disadvantaged communities and recognized benefits under the Justice40 Initiative. DOE will also recognize disadvantaged communities as defined and identified by the White House Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST), which can be located at <https://screeningtool.geoplatform.gov/>

²² Topic Area 2 is authorized under section 1306 of the Energy Independence and Security Act of 2007, which was later amended by section 40107 of the BIL. The authority is codified at 42 USC §17386.

²³ 42 USC §18711(c)(4)

DOE is seeking projects that address comprehensive transformational transmission and distribution technology solutions that will mitigate one or multiple hazards across a region or within a community, including but not limited to wildfires, floods, hurricanes, extreme heat, extreme cold, storms, and any other event that can cause a disruption to the power system.

Consistent with the broader overall objectives of the GRIP programs, projects in this area should demonstrate that they will provide significant economic and justice benefits to communities, can leverage capital investment, and lead to repeatable solutions for other entities.

Technical approaches of interest include (but are not limited to) the following:

Grants under this program are for projects and activities that increase the ability of applicants to reduce the likelihood and consequences of impacts to the electric grid due to extreme weather, wildfire, natural disaster and other disruptive events.

Applicants will demonstrate a transformational, comprehensive approach to mitigating one or more hazards across a region or within a community. Concurrently, DOE encourages applicants to align proposed grid resilience and grid hardening investments with broader State, Tribal, or regional resilience or energy security plans.

DOE is particularly interested in applications for adaptive storage deployment, microgrid deployment, and the undergrounding of existing distribution and transmission lines – in addition to other eligible projects and solutions that provide significant benefit. In the selection process, DOE will prioritize applications that address community transformation or the ability to leverage capital investments.

For Topic Area 1, there are a broad range of activities, technologies, equipment, and hardening measures to reduce the likelihood and consequences of disruptive events that are eligible for funding²⁴, which include:

- (A) weatherization technologies and equipment;
- (B) fire-resistant technologies and fire prevention systems;
- (C) monitoring and control technologies;
- (D) the undergrounding of electrical equipment;
- (E) utility pole management;
- (F) the relocation of power lines or the reconductoring of power lines with low-sag, advanced conductors;

²⁴ See BIL section 40101(e)(1)(A)-(L), as codified at 42 USC 18711(e)(1)(A)-(L).

- (G) vegetation and fuel-load management;
- (H) the use or construction of distributed energy resources for enhancing system adaptive capacity during disruptive events, including—
 - a. microgrids; and
 - b. battery-storage subcomponents;
- (I) adaptive protection technologies;
- (J) advanced modeling technologies;
- (K) hardening of power lines, facilities, substations, of other systems;
- (L) the replacement of old overhead conductors and underground cables; and
- (M) new distribution lines below 69 kV, reconductoring, undergrounding and other upgrades to existing transmission infrastructure.

The following activities are NOT eligible²⁵ for funding under Topic Area 1:
construction of a new— (I) electric generating facility; or (II) large-scale battery-storage facility that is not used for enhancing system adaptive capacity during disruptive events; (III) transmission lines at or above 69 kV; nor cybersecurity.

Topic Area 1 Requirements

- Small utility set-aside. Thirty percent (30%) of the total funding available for Topic Area 1 will be set aside for small utilities, which are defined as entities that sell no more than 4,000,000 MWh of electricity per year.²⁶ Entities applying for this set aside must demonstrate their eligibility by submitting their total retail electricity sales to ultimate customers as reported to the Energy Information Administration (EIA) on Form 861 for the last reporting year.

In addition to submission of the Form 861, applications to Topic Area 1 must include a Project Description and Assurances Document (PDAD) certifying the applicant is a Small Utility (sells no more than 4,000,000 MWh of electricity per year). The PDAD template is provided as Appendix F.

- Report on Resilience Investments. An applicant must submit as part of their application, a report detailing past, current, and future efforts by the eligible entity to reduce the likelihood and consequences of disruptive events.²⁷ The report must summarize any program and related approved funding that the applicant's organization has implemented over the past 3 years to reduce the likelihood of events in which operations of the electric grid are disrupted, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster. The report must also summarize current and

²⁵ See BIL section 40101(e)(2), as codified at 42 USC 18711(e)(2).

²⁶ 42 USC §18711(c)(5)

²⁷ 42 USC §18711(c)(2)(B)

future efforts planned over at least the next 3 years to reduce the likelihood and consequences of disruptive events.

In addition to submission of the report, applications to Topic Area 1 must include a PDAD that confirms the total amount (USD) of qualifying resilience investments that have been spent for the previous 3 years and the time period utilized for calculation of the reported amount by completing and certifying the PDAD. The PDAD template is provided as Appendix F.

- Funding supplemental to existing efforts. Grants under this program are in general intended to be supplemental to existing hardening efforts of applicants for any given year.²⁸ The applicant should describe in a narrative how the grant funding provided by this program would result in proposed activities that are additional to efforts that would have been undertaken but-for the funding and will generate the greatest community or regional resilience benefit in reducing the likelihood and consequences of disruptive events. This may include the acceleration or expansion of planned activities that would not be accelerated or expanded but-for the funding. The narrative should reference the *Report on Resilience Investments* to demonstrate how the proposed activities would be additional to existing planned investments.
- Biennial Report to Congress. Every two years DOE will submit a report to Congress covering data on the cost of projects, the types of activities funded, and the extent to which the ability of the power grid to withstand disruptive events has increased.²⁹ Awardees will be required to track and report this data to DOE.
- Section 40101(d), ALRD 2736. Per BIL section 40101(e)(2) (C) APPLICATION LIMITATIONS.—*An eligible entity may not submit an application for a grant provided by the Secretary under subsection (c) and a grant provided by a State or Indian Tribe pursuant to subsection (d) during the same application cycle.* If the applicant is a subaward/subcontract recipient for an application submitted under IIJA Section 40101(d), ALRD 2736, the applicant must describe the differences between the GRIP FOA 2740 application [40101(c)] and the ALRD 2736 [40101(d)] application in the PDAD. The PDAD template is provided as Appendix F.

Topic Area 1 Teaming Arrangements

Eligible applicants include electric grid operators; electricity generators; electricity storage operators; transmission owners or operators; distribution

²⁸ 42 USC §18711(c)(1)(A)

²⁹ 42 USC §18711(i)

providers; and fuel suppliers.³⁰ Applicants must certify that the prime applicant is an eligible entity type as listed above via completion and submission of the PDAD. The PDAD template is provided as Appendix F.

As appropriate, ensuring that the state, Indian Tribe or territory is engaged in the approach is important. The expectation of the Department is that regulatory stakeholders will be engaged in this process to ensure cost recovery of the concepts are achieved.

Topic Area 2: Smart Grid Grants (40107)

Objectives

Topic Area 2 seeks to deploy and catalyze technology solutions that increase the flexibility, efficiency, reliability, and resilience of the electric power system, with particular focus on enhancing the system's capabilities to meet the following objectives:

- increase the capacity of transmission facilities or the capability of the transmission system to reliably transfer increased amounts of electric energy;
- prevent faults that may lead to wildfires or other system disturbances;
- integrate variable renewable energy resources at the transmission and distribution levels; and,
- facilitate the aggregation and integration (edge-computing) of electric vehicles and other grid-edge devices or electrified loads.

According to a 2018 DOE report, the sum of real-time congestion cost for 2016 among major system operators— specifically, the California Independent System Operator (CAISO), the Electricity Reliability Council of Texas (ERCOT), Independent System Operator New England (ISO-NE), Midcontinent Independent System Operator (MISO), New York Independent System Operator (NYISO), and PJM — was \$4.8 billion.³¹ Another study from DOE found that grid-enhancing technologies (GETs) have significant potential to modernize the grid to increase capacity to reduce clean energy curtailment, unlock additional clean energy generation, and enable more resilient grid operation.³² Complimentary modeling of the impact of deploying three specific types of GETs – Advanced Power Flow Control, Dynamic Line Ratings and Topology Optimization – at a national scale could deliver \$5 billion in yearly energy production cost savings, with upfront investment paid back in just 6 months, and double the amount of renewables that can be integrated into the electricity grid prior to building new

³⁰ 42 USC §18711(a)(2)

³¹ U.S. Department of Energy. "Annual U.S. transmission data review." 2018.

³² [U.S. Department of Energy](#). "Grid-Enhancing Technologies: A Case Study on Ratepayer Impact." February 2022.

large-scale transmission lines. A more granular assessment conducted under the same study looked at the Southwest Power Pool system and found that deploying the same three types of GETs could enable 2 adjoining states, to integrate 5,200 MW of wind and solar generation currently in interconnection queues by 2025 without any new large-scale transmission buildout, more than double the development possible without the technologies.³³ DOE is interested in applications that deploy GETs to modernize the grid and unlock significant public benefit, and therefore demonstrate the suggested benefit shown by various studies. DOE is also interested in other eligible types of applications that deploy scalable solutions that deliver significant public benefit.

Applicants are encouraged to coordinate with and support broader State, local, Tribal, and regional strategies on resilience, energy security, energy & environmental justice, and decarbonization. In addition, smart grid technologies funded and deployed at-scale under this program should have a pathway to wider market adoption such that the funding significantly encourages and facilitates the development of a smart grid.³⁴ Aggregation of smart grid technologies is encouraged to accelerate deployment.

Technical approaches of interest include (but are not limited to) the following:

A broad set of eligible smart grid investments and capabilities is allowed under statute,³⁵ and any combination of smart grid investments and functions that support the objectives are eligible. DOE will require that projects support data standards (e.g., Green Button Connect³⁶), interoperability, and non-discriminatory data access on a real-time basis.

Priority investments in Topic Area 2 include the following:

- Increasing transmission capacity and operational transfer capacity through grid enhancing technologies such as dynamic line rating, flow control devices, advanced conductors, and network topology optimization, to improve system efficiency and reliability.
- Improving the visibility of the electrical system to grid operators, to help quickly rebalance the electrical system with autonomous controls, through data analytics, software, and sensors.

³³ [The Brattle Group](#). "Unlocking the Queue with Grid-Enhancing Technologies." February 1, 2021.

³⁴ 42 USC §17386(e)(1)(C)

³⁵ 42 USC §17386(b) and (d)

³⁶ Green Button Connect is the energy industry standard enabling easy access to, and secure sharing of, utility-customer energy-usage data.

- Enhance secure communication and data flow between distribution components, through investments in optical ground wire, dark fiber, operational fiber, and wireless broadband communications networks.
- Aggregation and integration of distributed energy resources and other “grid-edge” devices to provide system benefits, such as renewable energy resources, electric vehicle charging infrastructure, vehicle-to-grid technologies and capabilities, and smart building technologies.
- Enhancing interoperability and data architecture of systems that support two-way flow of both electric power and localized analytics to provide information between electricity system operators and consumers.
- Anticipate and mitigate the impacts of extreme weather or natural disaster on grid resiliency, including investments to increase the ability to redirect or shut of power to minimize blackouts, prevent wildfires, and avoid further damage.

Complete list of qualifying investments under Topic Area 2³⁷ includes:

1. In the case of appliances covered for purposes of establishing energy conservation standards under part B of title III of the Energy Policy and Conservation Act of 1975,³⁸ the documented expenditures incurred by a manufacturer of such appliances associated with purchasing or designing, creating the ability to manufacture, and manufacturing and installing for one calendar year, internal devices that allow the appliance to engage in Smart Grid functions.
2. In the case of specialized electricity-using equipment, including motors and drivers, installed in industrial or commercial applications, the documented expenditures incurred by its owner or its manufacturer of installing devices or modifying that equipment to engage in Smart Grid functions.
3. In the case of transmission and distribution equipment fitted with monitoring and communications devices to enable smart grid functions, the documented expenditures incurred by the electric utility to purchase and install such monitoring and communications devices.
4. In the case of metering devices, sensors, control devices, and other devices integrated with and attached to an electric utility system or retail distributor or marketer of electricity that are capable of engaging in Smart

³⁷ 42 USC §17386(b)

³⁸ 42 USC §6291

Grid functions, the documented expenditures incurred by the electric utility, distributor, or marketer and its customers to purchase and install such devices.

5. In the case of software that enables devices or computers to engage in Smart Grid functions, the documented purchase costs of the software.
6. In the case of entities that operate or coordinate operations of regional electric grids, the documented expenditures for purchasing and installing such equipment that allows Smart Grid functions to operate and be combined or coordinated among multiple electric utilities and between that region and other regions.
7. In the case of persons or entities other than electric utilities owning and operating a distributed electricity generator, the documented expenditures of enabling that generator to be monitored, controlled, or otherwise integrated into grid operations and electricity flows on the grid utilizing Smart Grid functions.
8. In the case of electric or hybrid-electric vehicles, the documented expenses for devices that allow the vehicle to engage in Smart Grid functions (but not the costs of electricity storage for the vehicle).
9. In the case of data analytics that enable software to engage in Smart Grid functions, the documented purchase costs of the data analytics.
10. In the case of buildings, the documented expenses for devices and software, including for installation, that allow buildings to engage in demand flexibility or Smart Grid functions.
11. In the case of utility communications, the documented expenditures incurred by the electric utility to purchase and install operational fiber and wireless broadband communications networks to enable data flow between distribution system components.
12. In the case of advanced transmission technologies such as dynamic line rating, flow control devices, advanced conductors, network topology optimization, or other hardware, software, and associated protocols applied to existing transmission facilities that increase the operational transfer capacity of a transmission network, the documented expenditures to purchase and install those advanced transmission technologies.
13. In the case of extreme weather or natural disasters, the documented expenses for monitoring, control devices and other equipment that enable

the ability to redirect or shut off power to minimize blackouts and avoid further damage.

The following expenditures and investments are not eligible for Smart Grid grant funding under Topic Area 2³⁹:

1. Investments or expenditures for Smart Grid technologies, devices, or equipment that utilize specific tax credits or deductions under the Internal Revenue Code, as amended.
2. Expenditures for electricity generation, transmission, or distribution infrastructure or equipment not directly related to enabling Smart Grid functions.
3. After the final date for State consideration of the Smart Grid Information Standard under section 2621(d)(17) of title 16, an investment that is not in compliance with such standard.
4. After the development and publication by the Institute²² of protocols and model standards for interoperability of smart grid devices and technologies, an investment that fails to incorporate any of such protocols or model standards.
5. Expenditures for physical interconnection of generators or other devices to the grid except those that are directly related to enabling Smart Grid functions.
6. Expenditures for ongoing salaries, benefits, or personnel costs not incurred in the initial installation, training, or startup of smart grid functions.
7. Expenditures for travel, lodging, meals or other personal costs.
8. Ongoing or routine operation, billing, customer relations, security, and maintenance expenditures.

Teaming Arrangements

DOE encourages applicant teams to include a broad set of stakeholders, including but not limited to, electric grid operator or owners, technology vendors, system integrators, subject matter experts, local energy and environmental justice organizations, and community leaders. In addition, State,

³⁹ 42 USC §17386(c)

Tribal, territory, or regulatory stakeholders should be engaged in the approach as appropriate.

Topic Area 3: Grid Innovation Program (40103(b))

DOE is interested in both technical and non-technical approaches that improve grid reliability and resilience on a local, regional, and interregional scale. Innovative approaches can include advanced technologies, innovative partnerships, financial arrangements, deployment of projects identified by innovative planning and cost allocation approaches, and environmental siting and permitting strategies. Applications may address the transmission system, the distribution system, or both, and may include elements such as: distributed generation assets; load point flexibility enhancements; energy storage systems and other flexibility enhancements; technologies to increase the capacity of the transmission and distribution system; grid-edge technologies; sensing, communications, and control technologies and approaches; grid-forming power electronics; integrated system designs; projects with innovative financing and permitting solutions; projects with uncommon or innovative regulatory structures, projects that are a product of innovative planning, modeling, or cost-allocation approaches, and other similar projects.

There is currently insufficient development of projects that are critical to reliability and resilience of the grid, particularly in projects that would achieve the following outcomes for the transmission system: 1) increasing transfer capacity between regions, 2) addressing the most consequential system needs and challenges that cause or contribute to long and increasing interconnection queue time for clean energy, and 3) increasing supply of a geographically and technologically diverse sets of location-constrained energy resources to enhance resource adequacy and reduce correlated generation outages. DOE is particularly interested in applications that demonstrate innovative models, methods, technologies, or other ways to achieve these outcomes that enable grid resilience and reliability. DOE is also interested in all other eligible grid projects that support similar or greater public resilience and reliability benefit.

Applications combining multiple approaches are encouraged, and all applications should demonstrate how the proposed new, innovative approaches interact with each other and any existing infrastructure to increase overall system resiliency. Hardening of assets and infrastructure may be included but must show a clear contribution to overall system resiliency. Project results should enable asset owners and operators to effectively articulate within local, state, and Federal decision-making frameworks the economic, technical, and societal benefits of new innovative approaches that improve system reliability and resilience. Applications that invest in America's workforce; advance energy and environmental justice and support the goals of the Justice40 Initiative; engage in

meaningful community and stakeholder engagement; and advance diversity, equity, inclusion and accessibility are of particular importance in this topic area.

Entities who are eligible to apply to Topic Area 3 include States, local governments, Tribes, and public utility commissions. Applicants must certify that the prime applicant is an eligible entity via completion and submission of the PDAD. The PDAD template is provided as Appendix F.

Objectives

This program seeks to provide financial assistance to eligible entities (States, local governments, Tribes, public utility commissions) to facilitate coordination, and collaboration with electric sector owners and operators to:

- demonstrate innovative approaches to transmission, storage, and distribution infrastructure to harden and enhance resilience and reliability; and
- demonstrate new approaches to enhance regional grid resilience, implemented through States by public and rural electric cooperative entities on a cost-shared basis.⁴⁰

DOE is soliciting projects that contribute significantly to one or more of the following primary objectives:

- Ensuring reliable grid operations by reducing the frequency, scale, and/or duration of disruptions, reducing capacity interconnection time, increasing regional and interregional transfer capacity, or reducing costs associated with increased reliability.
- Improving overall grid resilience in terms of avoiding, withstanding, responding to, and recovering from disruptions, including deliberate attacks, accidents, the growing threats of extreme weather events and climate change, and other naturally occurring threats or incidents. Projects may demonstrate:
 - Individual technologies and solutions (or multiple technologies and solutions working as a system) that address resilience in one part of the power system (e.g., transmission system).
 - Technologies and solutions that address resilience across the traditional boundaries in the power system (e.g., between transmission and distribution).
- Enhancing collaboration between and among eligible entities and private and public sector owners and operators on grid resilience, including in alignment with regional resilience strategies and plans. This includes collaboration across state and other territorial boundaries such as grid operators or other balancing authorities, with a particular focus on innovating planning processes,

⁴⁰ [42 USC 18712: Electric grid reliability and resilience research, development, and demonstration \(house.gov\)](#)

modeling, cost allocation, permitting, reduction of interconnection queue waiting time, inter-regional projects and other activities aided by collaborative approaches.

- Contributing to the decarbonization of the electricity and broader energy system in a way that supports system resilience, reliability, and affordability by improving access to technologically and geographically diverse energy resources, including distributed energy resources and electrification opportunities.
- Providing enhanced system value, improving current and future system cost-effectiveness, and delivering economic benefits to community members, underrepresented regions, or other stakeholders. Applications should clearly identify their value proposition for each individual stakeholder group.

Project results should enable asset owners and operators to effectively articulate within local, state, regional and federal decision-making frameworks the economic, technical, and societal benefits of deploying new innovative technologies that improve system reliability and resilience.

Technical Approaches of interest include (but are not limited to) the following:

Applications to this topic area may address the transmission system, the distribution system, storage, or a combination.

Applications combining multiple approaches are encouraged, and all applications should demonstrate how proposed innovative approaches interact with each other and any existing infrastructure to increase overall system resilience. Innovative approaches can include advanced technologies; innovative partnerships; new financial arrangements; deployment of projects identified by innovative planning, modeling, or cost allocation approaches; and/or innovative environmental siting, permitting strategies, or community engagement practices. Hardening of assets and infrastructure may be included but must show a clear contribution to overall system resilience.

DOE has identified the three areas of interest for this program spanning the transmission system, distribution system, and combination system approaches. These are not exhaustive, nor intended to be fully independent. Applications that address more than one area of interest, or that present alternative approaches to accomplish the key objectives outside of the specified areas of interest, are encouraged.

Area of Interest 1: Transmission system applications

The transmission system in operation today is the backbone of the electricity delivery system that connects all grid resources and acts as the path for electricity to flow from generation to demand. Transmission capacity constraints and

congestion can prevent delivery of clean, cost-effective electricity to consumers, harming overall system reliability. Advanced transmission technologies, coupled with advanced computational and advanced dynamic situational awareness, are a suite of tools that can help address transmission challenges, improve the efficiency and effectiveness of electricity delivery, and increase the reliability and resilience of the system. Innovative project approaches, including those leveraging advanced transmission technologies can reduce or remove the existing technical, economic, and/or regulatory barrier(s) necessary to accelerate widescale transmission expansion and renewable energy interconnection. Proposed solutions should demonstrate enhanced transmission system operational flexibility or capacity while enhancing reliability.

Applications in this area could include technologies, solutions, and advanced functionalities such as:

- Investments and strategies that accelerate interconnection of clean energy generation and/or storage;
- Interregional or cross-ISO/RTO projects that address key grid reliability, flexibility, and/or resilience challenges;
- Projects addressing grid access challenges for remote, stranded, or novel low-carbon resources;
- Planning, modeling, cost allocation, or other approaches that enable a transition to innovative financial and/or regulatory constructs that accelerate transmission expansion;
- Underground or underwater HVDC systems in challenging environments;
- Capacity enhancing approaches such as advanced conductors or dynamic line rating systems;
- Congestion management techniques including energy storage and integrated controls;
- Transmission-scale reactive power devices;
- Flexible alternating current transmission system (FACTS) devices;
- Solid state transformers;
- Power flow controllers for AC or High Voltage Direct Current (HVDC) systems.

Area of Interest 2: Distribution system applications

The distribution system serves as a highly interconnected system providing reliable electricity to consumers. The integration of variable distributed energy sources such wind and solar power, new loads such as electric vehicle charging, and energy storage into these networks is creating new challenges and opportunities for power system control and operation. Solutions should demonstrate improved cost-value characteristics relative to alternative approaches, managing distribution grid integration costs and traditional asset

upgrade costs while maintaining or enhancing system reliability and service provision.

In addition, extreme weather events have led to an increase in the frequency and duration of de-energization events. These occurrences, along with other experienced or potential disruptions of the distribution grid highlight the importance of improved system resilience. Solutions should demonstrate improved system resilience in response to disruptions and/or recovery from these events with an emphasis on community transformation.

Applications in this area could include demonstration of technologies, solutions, and advanced functionalities such as:

- Adaptive microgrid formation, reliable islanded operations, and service provision during grid-tied operations;
- Demonstration of reliable and resilient system operations utilizing high levels of distributed renewable generation and energy storage, or increased levels of non-emitting, non-electric distributed energy resources (e.g., renewable heating or cooling);
- Black-start capable systems and control approaches to minimize negative impacts during power grid disruptions;
- Provision of grid services from distributed, advanced grid-forming inverter-based systems at sufficient scale and system complexity;
- Behind the meter asset operations, aggregation, and coordination to provide demand response and grid services, including building systems, distributed generation, energy storage, electric vehicle fleets and others.

Area of Interest 3: Combination systems applications

While there is a clear differentiation between transmission and distribution systems in the current electrical grid, they both function within the same overall systems. Area of Interest 3 is intended to highlight opportunities to improve joint resilience and functionality across both grid sectors. This could involve using assets in one sector to provide services to the other in a manner that reduces upgrade or expansion requirements, or efforts to improve visibility and communication across sectors to allow for more complete optimization of grid operations.

Applications in this area could include demonstration of technologies, solutions, and advanced functionalities such as:

- Utilization of distribution grid assets to provide backup power and reduce transmission requirements;

- Utilization of distribution grid dispatchable loads, distributed generation, and energy storage to manage transmission congestion and limit required upgrades;
- Optimized integrated management of transmission and distribution systems;
- Monitoring and control technologies, that can provide improved resilience and extend grid visibility & situational awareness across the entire electric delivery system by providing real-time situational awareness across the system.

Requirements

Topic Area 3 will prioritize large scale and complex system projects that demonstrate innovative approaches while offering the greatest public benefit with a clear path to replication, scale, and ability to impact decarbonization objectives; projects that provide equitable access to innovative technologies and business models; and demonstrations that involve multiple communities and diverse asset compositions including electrical, thermal, building and transportation solutions.

Successful applications in this Topic Area 3 will clearly explain:

- The scale of the proposed project and the differentiated value that this scale will bring to the project and the subject area.
- The replicability, extensibility, and scalability of the method, model, financing, planning, regulatory approach, technology, or other solution given the system in which it will be demonstrated.
- Estimated costs and value propositions for the proposed project including contribution to system cost effectiveness, as well as a relative value comparison to alternative approaches.
- How quantitative, measurable metrics relating to the intended improvements in grid outcomes will be utilized to evaluate success.
- The readiness, viability, and expected timing of the deployment strategy, including key milestones relating to critical financial, development, and implementation stages of the project.
- The project management strategy, including use of project funds to secure subrecipient or vendor expertise to support prime recipients on project management, accounting, environmental justice community engagement, federal reporting, and technical oversight.

- Note: this approach has been identified as a potential path forward to address resource limitations at recipient organizations. It is not required that external expertise and groups be included, but use of project funds to support these functions will be allowed in accordance with applicable federal cost principles (Section I.i Allowable Costs)
- How federal funding to address the risks identified in the application will increase the likelihood of securing additional public and/or private investment.
- How the project will invest in America's workforce, meaningfully engage communities and stakeholders, advance energy and environmental justice, and ensure diversity, equity, inclusion, and accessibility.

Teaming Arrangements

This topic area seeks to support demonstrations at sufficient scale and within a system of sufficient complexity to establish confidence in the value proposition of the proposed approach. Applicants are encouraged to assemble diverse and multi-functional project teams capable of receiving and managing federal and matching funds, executing on technology deployments and upgrades, conducting operational testing and validation, analyzing resultant data and performance, and clearly communicating and disseminating findings to key stakeholders and decision makers. The team must designate one team member to serve as the prime recipient and that team member must qualify as an eligible applicant. See Section III.

In addition, all teams should clearly articulate their **strategy to enable wide-scale adoption** of their proposed solutions following a successful demonstration and their **intended commitment** to utilize these or resultant solutions within their own systems and jurisdictions. Projects selected under this topic area will attempt to resolve technical and commercial adoption barriers by increasing stakeholder confidence in the performance, cost, and value characteristics of their proposed system. In order to ensure maximum impact following these demonstrations, a clear plan to disseminate findings, replicate successes, incorporate the outcomes of the demonstrations into investment decision-making frameworks, and activate additional public and private capital is crucial. These plans should consider which stakeholders and decision makers must be informed as to the demonstration results, what types and quality of information would lead to concrete investment decisions, and how to integrate with local, Tribal, state, and regional energy strategies and transition plans to amplify overall impact and rate of adoption. Initial strategies should be presented in the

application, but it is expected that these plans will be developed more fully over the course of the project.

All work for projects selected under this FOA must be performed in the United States. See Section IV.I.iii. and Appendix B.

Project Management Plan: Successful applicants under all topic areas will be required to prepare a Project Management Plan (PMP). The initial PMP is due 30 days after award. The PMP shall be revised and resubmitted as often as necessary, during the course of the project, to capture any major/significant changes to the planned approach, budget, key personnel, major resources, etc. A sample PMP is available at: [BIL-GRIP Application Forms and Templates | netl.doe.gov](https://netl.doe.gov/BIL-GRIP-Application-Forms-and-Templates).

ii. Teaming Partner List

DOE is compiling a “Teaming Partner List” to facilitate the formation of new project teams for this FOA. The Teaming Partner List allows organizations who may wish to participate on an application to express their interest to other applicants and to explore potential partnerships.

Updates to the Teaming Partner List will be available in the FedConnect (<https://www.fedconnect.net/>) website and on the Grid Resilience and Innovation Partnerships (GRIP) Program web page: [Grid Resilience Innovation Partnership Programs | Department of Energy](#). The Teaming Partner List will be regularly updated to reflect new teaming partners who provide their organization’s information. Applicants must register with FedConnect to have access to the Teaming Partner List (and any updates to it) in FedConnect.

SUBMISSION INSTRUCTIONS: Any organization that would like to be included on this list should submit the following information: Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, Brief Description of Capabilities, and Topic Area(s) of Interest. Interested parties should complete the Excel file titled DOE-FOA-0002740 Teaming Partner List provided as an attachment to this announcement and email it to GDOFOA@hq.doe.gov with the subject line “Teaming Partner Information.”

DISCLAIMER: By submitting a request to be included on the Teaming Partner List, the requesting organization consents to the publication of the above-referenced information. By facilitating the Teaming Partner List, DOE is not endorsing, sponsoring, or otherwise evaluating the qualifications of the individuals and organizations that are self-identifying themselves for placement on this Teaming Partner List. DOE will not pay for the provision of any information, nor will it

compensate any applicants or requesting organizations for the development of such information.

C. Applications Specifically Not of Interest

The following types of applications will be deemed nonresponsive and will not be reviewed or considered (See Section III.D. of the FOA):

- Applications that fall outside the technical parameters specified in Sections I.A. and I.B. of the FOA.
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the laws of thermodynamics).
- Topic Area 1: Applications that propose the construction of a new—(I) electric generating facility; or (II) large-scale battery-storage facility that is not used for enhancing system adaptive capacity during disruptive events; (III) transmission lines at or above 69 kV; nor cybersecurity.
- Topic Area 2: See full list of investments not included in section I.B.

D. Authorizing Statutes

The programmatic authorizing statute is as follows:

- Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL):
 - Section 40101(c) – 42 USC §18711(c);
 - Section 40107 – 42 USC §17386;
 - Section 40103(b) – 42 USC §18712(b).
- Public Law (PL) 95-91, DOE Organization Act;
- PL 109-58, Energy Policy Act 2005;
- PL 110-140 Energy Independence and Security Act of 2007.

Awards made under this announcement will fall under the purview of 2 Code of Federal Regulation (CFR) Part 200 as amended by 2 CFR Part 910.

E. Notice of Bipartisan Infrastructure Law-Specific Requirements

Be advised that special terms and conditions apply to projects funded by the BIL relating to:

- Reporting, tracking and segregation of incurred costs;
- Reporting on job creation and preservation;
- Publication of information on the Internet;
- Access to records by Inspectors General and the Government Accountability Office;

- Requiring all of the iron, steel, manufactured goods, and construction materials used in the infrastructure activities of applicable projects are produced in the United States;
- Ensuring laborers and mechanics employed by contractors or subcontractors on BIL-funded projects are paid wages equivalent to prevailing wages on similar projects in the area;
- Protecting whistleblowers and requiring prompt referral of evidence of a false claim to an appropriate inspector general; and
- Certification and Registration.

Recipients of funding appropriated by the BIL must comply with requirements of all applicable Federal, State, and local laws, regulations, DOE policy and guidance, and instructions in this FOA. Recipients must flow down the requirements to subrecipients to ensure the recipient's compliance with the requirements.

II. Award Information

A. Award Overview

i. Estimated Funding

Under BIL sections 40101(c), 40107, and 40103(b), the BIL appropriated approximately \$10.5 billion for the five-year period encompassing FY22 through FY26, via annual release of competitive FOAs. This FOA will include both fiscal years 2022 and 2023, totaling approximately \$3.9 Billion of federal funding that DOE expects to make available for new awards under this FOA, subject to the availability of appropriated funds. DOE anticipates making approximately 40-100 awards under this FOA. DOE may issue one, multiple, or no awards. Individual award amounts vary by topic area, see details below.

Please note, the second competitive funding opportunity is expected to be issued in the first quarter of Fiscal Year 2024 and will include approximately \$2 Billion in federal funding for FY 2024, subject to the availability of appropriated funds, along with any unspent funds from the current FY22-23 funding cycle.

DOE may issue awards in one, multiple, or none of the following topic areas:

Topic Area Number	Topic Area Title	Anticipated Number of Awards	Anticipated Minimum Award Size for Any One Individual	Anticipated Maximum Award Size for Any One Individual	Approximate Total Federal Funding	Anticipated Period of Performance (months)
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			Award (Fed Share)	Award (Fed Share)	Available for All Awards	
1	Grid Resilience Grants (40101(c))	10*	N/A	Either the total of the applicant's last three years of resilience investments or \$100 million, whichever is lower**	\$918 Million	60 months
2	Smart Grid Grants (40107)	25-40	N/A	\$50 Million	\$1,080 Million	60 months
3	Grid Innovation Program (40103(b))	4-40	N/A	\$250 Million (Increased award size of \$1 Billion per award for interregional transmission projects only)	\$1,820 Million	60-96 months

*Approximately 3 of the anticipated number of awards will be made to small utilities. Thirty percent (30%) of the total funding available will be set aside for small utilities, which are defined as entities that sell no more than 4,000,000 MWh of electricity per year.⁴¹

**DOE may not award a grant to an eligible entity in an amount that is greater than "the total amount that the eligible entity has spent in the previous 3 years on efforts to reduce the likelihood and consequences of disruptive events".⁴² DOE is including an additional discretionary limit of \$100 million in federal funds per award. DOE will interpret "efforts to reduce the likelihood and consequences of disruptive events" as those activities, technologies, equipment, and hardening measures that are eligible for grants under this provision.⁴³

DOE may establish more than one budget period for each award and fund only the initial budget period(s). Funding for all budget periods, including the initial budget period, is not guaranteed.

⁴¹ 42 USC §18711(c)(5)

⁴² 42 USC §18711(c)(3)

⁴³ 42 USC §18711(e)1

ii. Period of Performance

DOE anticipates making awards that will run from 60 months to 96 months in length (see table below), comprised of one or more budget periods. Project continuation will be contingent upon several elements, including satisfactory performance and DOE's Go/No-Go decision. For a complete list and more information on the Go/No-Go review, see Section VI.B.xv.

Topic Area	Period of Performance
1	60 months
2	60 months
3	60 - 96 months

iii. New Applications Only

DOE will accept only new applications under this FOA. DOE will not consider applications for renewals of existing DOE-funded awards through this FOA.

B. DOE Funding Agreements

Through cooperative agreements and other similar agreements, DOE provides financial and other support to projects that have the potential to realize the FOA objectives. DOE does not use such agreements to acquire property or services for the direct benefit or use of the United States government.

i. Cooperative Agreements (applies to Topic Area 3 ONLY)

DOE anticipates funding projects selected under Topic Area 3 through cooperative agreements. In the event funding is awarded to another federal agency, the funding may be provided directly to the agency through an interagency agreement.

Through cooperative agreements, DOE provides financial or other support to accomplish a public purpose of support or stimulation authorized by federal statute. Under cooperative agreements, the government and prime recipients share responsibility for the direction of projects.

DOE has substantial involvement in all projects funded via cooperative agreement. See Section VI.B.x of the FOA for more information on what substantial involvement may involve.

ii. Grants (applies to Topic Area 1 and 2 ONLY)

DOE anticipates funding projects selected under Topic Areas 1 and 2 through grants. In the event funding is awarded to another federal agency, the funding may be provided directly to the agency through an interagency agreement.

III. Eligibility Information

To be considered for substantive evaluation, an applicant's submission must meet the criteria set forth below. If the application does not meet these eligibility requirements, it will be considered ineligible and removed from further evaluation.

A. Eligible Applicants

i. Topic Area 1 (Section 40101(c))

The following domestic entities are eligible to apply:

- electric grid operator;
- electricity storage operator;
- electricity generator;
- transmission owner or operator;
- distribution provider; and
- fuel supplier.

ii. Topic Area 2 (Section 40107)

The following domestic entities are eligible to apply:

- Institutions of higher education;
- For-profit entities;
- Non-profit entities; and
- State and local governmental entities, and tribal nations.

iii. Topic Area 3 (40103(b))

The following domestic entities are eligible to apply:

- a State;
- a combination of 2 or more States;
- an Indian Tribe;
- a unit of local government; and
- a public utility commission.

iv. General Requirements for Eligible Applicants **For Topic Areas 1, 2, and 3**

a. Domestic Entities

Under this FOA, to qualify as a domestic entity, an entity other than a State or Indian Tribe must be organized, chartered or incorporated (or otherwise formed) under the laws of the United States or of a particular state or territory of the United States and have a physical place of business in the United States. Both

recipients and subrecipients must be domestic entities absent an approved waiver.

b. Foreign Entities

In limited circumstances, DOE may approve a waiver to allow a foreign entity to participate as a prime recipient or subrecipient. A foreign entity may submit a Full Application to this FOA, but the Full Application must be accompanied by an explicit written waiver request. Likewise, if the applicant seeks to include a foreign entity as a subrecipient, the applicant must submit a separate explicit written waiver request in the Full Application for each proposed foreign subrecipient.

Appendix B lists the information that must be included in a foreign entity waiver request. The applicant does not have the right to appeal DOE's decision concerning a waiver request.

c. National Laboratories/FFRDCs

National Laboratories and Federal Funded Research and Development Centers (FFRDCs) are not eligible to apply for funding as a prime recipient and may not be proposed as a subrecipient on another entity's application. This restriction is applicable to both DOE/NNSA and non-DOE/NNSA National Laboratories and FFRDCs.

The National Energy Technology Laboratory (NETL) is not eligible for award under this announcement and may not be proposed as a subrecipient on another entity's application. An application that includes NETL as a prime recipient or subrecipient will be considered non-responsive.

d. Federal agencies

Federal agencies, instrumentalities, and corporations (other than DOE) are eligible to participate as a subrecipient if the agency, instrumentality, or corporation satisfies the statutory requirements, but are not eligible to apply as a prime recipient; except for the Tennessee Valley Authority (under Topic Area 1), who is eligible to participate as a prime recipient and as a subrecipient.

e. Teaming Arrangements

The project team must designate one team member to serve as the prime recipient and that team member must qualify as an eligible entity. If the project team will operate as an incorporated or unincorporated consortium, DOE may request the applicant to provide additional information, such as any collaboration agreement, that describes management structure and the rights and responsibilities of each consortium member.

f. Additional Restrictions

Entities banned from doing business with the U.S. government such as entities debarred, suspended, or otherwise excluded from or ineligible for participating in Federal programs are not eligible.

Nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995 are not eligible to apply for funding. Nonprofit organizations described in section 501(c)5 of the Internal Revenue Code are eligible to apply for funding.

v. Restricted Eligibility (applies to Topic Area 1 and Topic Area 3 ONLY)

In accordance with 2 CFR 910.126, DOE restricted eligibility for Topic Area 1 and Topic Area 3 to incorporate the eligibility requirements set forth in sections 40101(c) and 40103(b) of the BIL, as codified at 42 USC 18711 and 42 USC 18712(c), respectively.

B. Cost Sharing

Applicants are bound by the cost share proposed in their Full Applications if selected for award negotiations.

Topic Area	Topic Area Title	Cost Match/Share Requirement
1	Section 40101(c) – “Grants to Eligible Entities on Preventing Outages and Enhancing the Resilience of the Electric Grid (Grid Resilience Grants)”	An eligible entity that receives a grant under this section shall be required to match 100% of the amount of the grant (at least 50% of the Federal funds only, rather than the Total Project Cost). Exception for small utilities: An eligible entity that sells not more than 4,000,000 megawatt hours of electricity per year shall be required to match 1/3 of the grant.*
2	Section 40107 – “Deployment of Technologies to Enhance Grid Flexibility (Smart Grid Grants)”	The cost share must be at least 50% of the total project costs. The cost share must come from non-federal sources unless otherwise allowed by law.
3	Section 40103 (b) – “Program Upgrading Our Electric Grid and Ensuring Reliability and	Section 988 of the Energy Policy Act of 2005 (42 U.S.C. 16352) shall apply. The cost share must be at least 50% of the total project costs. ^{44,45} The

⁴⁴ Total project costs is the sum of the government share, , and the recipient share of project costs.

⁴⁵ Energy Policy Act of 2005, Pub.L. 109-58, sec. 988. Also see 2 CFR 200.306 and 2 CFR 910.130 for additional cost sharing requirements.

	Resiliency (Grid Innovation Program)”	cost share must come from non-federal sources unless otherwise allowed by law.
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***Cost matching:** “Cost matching” for the non-federal share is calculated as a percentage of the Federal funds only, rather than the Total Project Cost.

To assist applicants in calculating proper cost match/share amounts, DOE has included a cost share information sheet and sample cost share calculation as Appendix A to this FOA.

i. Legal Responsibility

Although the cost share requirement applies to the project as a whole, including work performed by members of the project team other than the prime recipient, the prime recipient is legally responsible for paying the entire cost share. If the funding agreement is terminated prior to the end of the project period, the prime recipient is required to contribute at least the cost share percentage of total expenditures incurred through the date of termination.

The prime recipient is solely responsible for managing cost share contributions by the project team and enforcing cost share obligation assumed by project team members in subawards or related agreements.

ii. Cost Share Allocation

Each project team is free to determine how best to allocate the cost share requirement among the team members. The amount contributed by individual project team members may vary, as long as the cost share requirement for the project as a whole is met.

iii. Cost Share Types and Allowability

Every cost share contribution must be allowable under the applicable federal cost principles, as described in Section IV.I.i. of the FOA. In addition, cost share must be verifiable upon submission of the Full Application.

Project teams may provide cost share in the form of cash or in-kind contributions. Cost share may be provided by the prime recipient, subrecipients, or third parties (entities that do not have a role in performing the scope of work). Vendors/contractors may not provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

Cash contributions include, but are not limited to: personnel costs, fringe costs, supply and equipment costs, indirect costs and other direct costs.

In-kind contributions are those where a value of the contribution can be readily determined, verified and justified but where no actual cash is transacted in

securing the good or service comprising the contribution. Allowable in-kind contributions include, but are not limited to: the donation of volunteer time or the donation of space or use of equipment.

Project teams may use funding or property received from state or local governments to meet the cost share requirement, so long as the funding was not provided to the state or local government by the Federal government.

The prime recipient may not use the following sources to meet its cost share obligations including, but not limited to:

- Revenues or royalties from the prospective operation of an activity beyond the project period;
- Proceeds from the prospective sale of an asset of an activity;
- Federal funding or property (e.g., federal grants, equipment owned by the federal government); or
- Expenditures that were reimbursed under a separate federal program.

Project teams may not use the same cash or in-kind contributions to meet cost share requirements for more than one project or program.

Cost share contributions must be specified in the project budget, verifiable from the prime recipient's records, and necessary and reasonable for proper and efficient accomplishment of the project. As all sources of cost share are considered part of total project cost, the cost share dollars will be scrutinized under the same federal regulations as federal dollars to the project. Every cost share contribution must be reviewed and approved in advance by the Contracting Officer and incorporated into the project budget before the expenditures are incurred.

Applicants are encouraged to refer to 2 CFR 200.306 and 2 CFR 910.130 for additional cost sharing requirements.

iv. Cost Share Verification

Applicants are required to provide written assurance of their proposed cost share contributions in their Full Applications.

Upon selection for award negotiations, applicants are required to provide additional information and documentation regarding their cost share contributions. Please refer to Appendix A of the FOA.

v. Cost Share Payment

DOE requires prime recipients to contribute the cost share amount incrementally over the life of the award. Specifically, the prime recipient's cost share for each billing period must always reflect the overall cost share ratio negotiated by the parties (i.e., the total amount of cost sharing on each invoice when considered cumulatively with previous invoices must reflect, at a minimum, the cost sharing percentage negotiated).

In limited circumstances, and where it is in the government's interest, the DOE Contracting Officer may approve a request by the prime recipient to meet its cost share requirements on a less frequent basis, such as monthly or quarterly. Regardless of the interval requested, the prime recipient must be up-to-date on cost share at each interval. Such requests must be sent to the Contracting Officer during award negotiations and include the following information: (1) a detailed justification for the request; (2) a proposed schedule of payments, including amounts and dates; (3) a written commitment to meet that schedule; and (4) such evidence as necessary to demonstrate that the prime recipient has complied with its cost share obligations to date. The Contracting Officer must approve all such requests before they go into effect.

C. Compliance Criteria

Concept Papers and Full Applications must meet all compliance criteria listed below or they will be considered noncompliant. DOE will not review or consider noncompliant submissions, including Concept Papers and Full Applications that were: submitted through means other than specifically stated in the FOA; submitted after the applicable deadline; and/or submitted incomplete. DOE will not extend the submission deadline for applicants that fail to submit required information by the applicable deadline due to server/connection congestion.

i. Concept Papers

Concept Papers are deemed compliant if:

- The Concept Paper complies with the content and form requirements in Section IV.C. of the FOA; and
- The applicant successfully emailed all required documents to FOA2740@netl.doe.gov by the deadline stated in this FOA.

ii. Full Applications

Full Applications are deemed compliant if:

- The Full Application complies with the content and form requirements in Section IV.D. of the FOA; and

- The applicant successfully uploaded all required documents and clicked the “Submit” button in Grants.gov by the deadline stated in the FOA.

D. Responsiveness Criteria

All “Applications Specifically Not of Interest,” as described in Section I.C. of the FOA, are deemed nonresponsive and are not reviewed or considered.

E. Other Eligibility Requirements (Reserved)

F. Limitation on Number of Concept Papers and Full Applications Eligible for Review

An entity may submit more than one Concept Paper and Full Application to this FOA, provided that each application describes a unique, scientifically distinct project and provided that an eligible Concept Paper was submitted for each Full Application.

G. Questions Regarding Eligibility

DOE will not make eligibility determinations for potential applicants prior to the date on which applications to this FOA must be submitted. The decision whether to submit an application in response to this FOA lies solely with the applicant.

IV. Application and Submission Information

A. Application Process

The application process will include two phases: a Concept Paper phase and a Full Application phase. **Only applicants who have submitted an eligible Concept Paper will be eligible to submit a Full Application.**

At each phase, DOE performs an initial eligibility review of the applicant submissions to determine whether they meet the eligibility requirements of Section III of the FOA. DOE will not review or consider submissions that do not meet the eligibility requirements of Section III. All submissions must conform to the following form and content requirements, including maximum page lengths (described below). **Concept papers must be emailed to FOA2740@netl.doe.gov, and full applications must be submitted via Grants.gov at <https://www.grants.gov/>. DOE will not review or consider submissions submitted through means other than specifically stated in the FOA, submissions submitted after the applicable deadline, or incomplete**

submissions. DOE will not extend deadlines for applicants who fail to submit required information and documents due to server/connection congestion.

The Concept Paper and Full Application must conform to the following requirements:

- Each must be submitted in Adobe PDF format unless stated otherwise;
- Each must be written in English;
- All pages must be formatted to fit on 8.5 x 11-inch paper with margins not less than one inch on every side. Use Calibri typeface, a black font color, and a font size of 12 point or larger (except in figures or tables, which may be 10-point font). A symbol font may be used to insert Greek letters or special characters, but the font size requirement still applies. References must be included as footnotes or endnotes in a font size of 10 or larger. Footnotes and endnotes are counted toward the maximum page requirement; and
- Each submission must not exceed the specified maximum page limit, including cover page, charts, graphs, maps, and photographs when printed using the formatting requirements set forth above and single spaced. If applicants exceed the maximum page lengths indicated below, DOE will review only the authorized number of pages and disregard any additional pages.

Applicants are responsible for meeting each submission deadline. **Applicants are strongly encouraged to submit their Concept Papers and Full Applications at least 48 hours in advance of the submission deadline.** Under normal conditions (i.e., at least 48 hours in advance of the submission deadline), applicants should allow at least 1 hour to submit a Concept Paper and Full Application. Once the Concept Paper and Full Application is submitted as specifically stated in the FOA, applicants may revise or update that submission until the expiration of the applicable deadline. If changes are made to any of these documents, the applicant must resubmit the Concept Paper and Full Application before the applicable deadline.

DOE urges applicants to carefully review their Concept Paper and Full Application to allow sufficient time for the submission of required information and documents. Full Applications that pass the initial eligibility review will undergo comprehensive technical merit review according to the criteria identified in Section V of the FOA.

B. Application Forms

The application forms and instructions are available on Grants.gov at <https://www.grants.gov/>.

Note: The maximum file size that can be uploaded to the Grants.gov website is 10MB. Files in excess of 10MB cannot be uploaded, and hence cannot be submitted for review. If a file exceeds 10MB but is still within the maximum page limit specified in the FOA, it must be broken into parts and denoted to that effect. For example:

TechnicalVolume_Part_1

TechnicalVolume_Part_2

DOE will not accept late submissions that resulted from technical difficulties due to uploading files that exceed 10MB.

C. Content and Form of the Concept Paper

Each Concept Paper must be limited to a single Topic Area. Do not consolidate multiple Topic Areas into a single Concept Paper.

The Concept Paper must conform to the following content and form requirements and must not exceed the stated page limits. If applicants exceed the maximum page lengths indicated below, DOE will review only the authorized number of pages and disregard any additional pages.

Applicants are encouraged to include the following information in the subject line of the email that includes the concept paper submission: Applicant Name – Topic Area X (insert topic area number to which you are applying for the X) – Concept Paper.

Section	Page Limit*	Description
Cover Page	1 page maximum	The cover page should include the project title, the specific announcement Topic Area being addressed, entity type of the applicant organization (e.g., electric grid operator, State, etc.), both the technical and business points of contact, names of all team member organizations, the project location(s), and any statements regarding confidentiality.
Project and/or Technology Description	12 pages maximum	Applicants are required to describe succinctly: <ul style="list-style-type: none"> How the project addresses the topic area's eligible uses and technical approaches. How the project supports State, local, Tribal, community and regional resilience, in reducing the likelihood and consequences of disruptive events, decarbonization, or other energy strategies and plans. The grid-benefitting outcomes to be delivered by the project.

		<ul style="list-style-type: none"> • The impact of the project to reduce innovative technology risk; achieve further deployment at-scale; and lead to additional private sector investments. • The impact that DOE funding would have on the proposed project. • The readiness, viability, and expected timing of the project.
Community Benefits Plan	5 Pages maximum	<p>Applicants are required to describe succinctly the approach to be taken with the Community Benefits Plan, addressing the four core elements:</p> <ul style="list-style-type: none"> • community and labor engagement leading to negotiated agreements; • investing in job quality and workforce continuity; • advancing diversity, equity, inclusion, and accessibility; and • contributing to the Justice40 Initiative goal that 40% of the overall benefits of certain climate and clean energy investments flow to disadvantaged communities.
Addendum A	5 pages maximum	<p>Applicants are required to describe succinctly the qualifications, experience, and capabilities of the proposed Project Team, including:</p> <ul style="list-style-type: none"> • Whether the Project Manager and Project Team have the skill and expertise needed to successfully execute the project plan; • Whether the applicant has prior experience that demonstrates an ability to perform tasks of similar risk and complexity; • Whether the applicant has worked together with its teaming partners on prior projects or programs; and • Whether the applicant has adequate access to equipment and facilities necessary to accomplish the effort and/or clearly explain how it intends to obtain access to the necessary equipment and facilities. • Applicants may provide graphs, charts, or other data to supplement their Project and/or Technology Description.
Addendum B Topic Area 1 ONLY, if applicable**	N/A	Applicants who are small utilities applying to Topic Area 1 must submit the EIA Form 861 for the last reporting year showing the total retail electricity sales to ultimate customers to ensure status as a small utility.
*Applicants are encouraged to include page numbers in the footer of every page.		
**Small utilities ONLY: 30% of the total funding available will be set aside for small utilities, which are defined as entities that sell no more than 4,000,000 MWh of electricity per year. ⁴⁶		

⁴⁶ 42 USC §18711(c)(5)

DOE makes an independent assessment of each Concept Paper based on the criteria in Section V of the FOA. DOE will encourage a subset of applicants to submit Full Applications. Other applicants will be discouraged from submitting a Full Application. An applicant who receives a “discouraged” notification may still submit a Full Application. DOE will review all eligible Full Applications. However, by discouraging the submission of a Full Application, DOE intends to convey its lack of programmatic interest in the proposed project in an effort to save the applicant the time and expense of preparing an application that is unlikely to be selected for award negotiations.

DOE may include general comments provided from reviewers on an applicant’s Concept Paper in the encourage/discourage notification sent via email at the close of that phase.

D. Content and Form of the Full Application

Applicants must submit a Full Application by the specified due date and time to be considered for funding under this FOA. Applicants must complete the following application forms found on the Grants.gov website at <https://www.grants.gov/> in accordance with the instructions.

Applicants should reference the date and time stated on the FOA cover page to plan for the number of days from receipt of the Concept Paper Encourage/Discourage notification to preparing and submitting a Full Application. Regardless of the date the applicant receives the Encourage/Discourage notification, the submission deadline for the Full Application remains the date and time stated on the FOA cover page.

i. Full Application Content Requirements

Each Full Application must be limited to a single concept or technology. Do not consolidate unrelated concepts and technologies in a single Full Application. Full Applications must conform to the following content and form requirements and must not exceed the stated page limits. **If applicants exceed the maximum page lengths indicated below, DOE will review only the authorized number of pages and disregard any additional pages.**

Component	File Format	Page Limit	File Name
SF-424	Form	N/A	N/A
Project/Performance Site Location(s)	Form	N/A	N/A
Technical Volume	PDF	25	TechnicalVolume.pdf

Resumes	PDF	2 pages each	Resumes.pdf
Letters of Commitment	PDF	1 page each	LOC.pdf
Community Partnership Documentation	PDF	1 page each	LeadOrganization_Partner.pdf
Statement of Project Objectives	MS Word	5	SOPO.doc or docx
Budget Justification Workbook	MS Excel	N/A	Budget_Justification.xls or.xlsx
Summary/Abstract for Public Release	PDF	1	Summary.pdf
Summary Slide	MS PowerPoint	Up to 3	Slide.ppt or pptx
Subrecipient Budget Justification	MS Excel	N/A	Subrecipient_Budget_Justification.xls or.xlsx
Environmental Questionnaire	PDF	N/A	Env.pdf
SF-LLL Disclosure of Lobbying Activities	Form	N/A	N/A
Foreign Entity Waiver Requests and Foreign Work Waiver Requests	PDF	N/A	FN_Waiver.pdf
Buy America Requirements for Infrastructure Projects Waiver Requests	PDF	N/A	BAWaiver.pdf
Community Benefits Plan: Job Quality and Equity	PDF	12	CBenefits.pdf
Potentially Duplicative Funding Notice (if applicable)	PDF	N/A	PDFN.pdf
Report on Resilience Investments Topic Area 1 ONLY	PDF	10	ResilienceInvestments.pdf
EIA 861 Topic Area 1 ONLY, if applicable*	PDF	N/A	EIA861.pdf
Locations of Work	MS Excel	N/A	LOW.xls or.xlsx
Project Description and Assurances Document (PDAD)	PDF	N/A	PDAD.pdf
*Small utilities ONLY: 30% of the total funding available will be set aside for small utilities, which are defined as entities that sell no more than 4,000,000 MWh of electricity per year. ⁴⁷			

DOE provides detailed guidance on the content and form of each component below.

ii. SF-424: Application for Federal Assistance

Complete the SF 424 form first to populate data in other forms. Complete all required fields in accordance with the instructions on the form. The list of certifications and assurances in Field 21 can be found at <https://www.energy.gov/management/financial-assistance-forms-and->

⁴⁷ 42 USC §18711(c)(5)

[information-applicants-and-recipients](#), under Certifications and Assurances.

Note: The dates and dollar amounts on the SF-424 are for the complete project period of performance and not just the first project year, first phase or other subset of the project period of performance.

iii. Project/Performance Site Location(s)

Indicate the primary site where the work will be performed. If a portion of the project will be performed at any other site(s), identify the site location(s) in the blocks provided.

Note that the Project/Performance Site Congressional District is entered in the format of the 2-digit state code followed by a dash and a 3-digit Congressional district code, for example VA-001. Hover over this field for additional instructions.

Use the Next Site button to expand the form to add additional Project/Performance Site Locations.

iv. Technical Volume

The Technical Volume must be submitted in PDF format. The Technical Volume must conform to the following content and form requirements, including maximum page lengths. This volume must address the technical review criteria as discussed in Section V of the FOA. Save the Technical Volume in a single PDF file using the following convention for the title "TechnicalVolume.pdf" and click on "Add Mandatory Other Attachment" to attach. Note: If a file exceeds 10 MB but is still within the maximum page limit specified in the FOA, it must be broken into parts and denoted to that effect. For example:

TechnicalVolume_Part_1
TechnicalVolume_Part_2

Applicants must provide sufficient citations and references to the primary research literature to justify the claims and approaches made in the Technical Volume. However, DOE and reviewers are under no obligation to review cited sources.

The Technical Volume to the Full Application may not be more than 25 pages, including the cover page, table of contents, and all citations, charts, graphs, maps, photos, or other graphics, and must include all of the information in the table below. The applicant should consider the weighting of each of the technical review criterion (see Section V of the FOA) when preparing the Technical Volume.

The Technical Volume should clearly describe and expand upon information provided in the Concept Paper. The Technical Volume must conform to the following content requirements:

Technical Volume Content Requirements	
SECTION/PAGE LIMIT	DESCRIPTION
Cover Page	The cover page should include the project title, the specific FOA Topic Area being addressed, both the technical and business points of contact, names of all team member organizations, names of the senior/key personnel and their organizations, the project location(s), and any statements regarding confidentiality.
Project Overview (Approximately 10% of the Technical Volume)	<p>The Project Overview should contain the following information:</p> <ul style="list-style-type: none"> • Background: The applicant should discuss the background of their organization, including the history, successes, and current project development status (i.e., the development baseline) relevant to the technical topic being addressed in the Full Application. • Project Goal: The applicant should explicitly identify the targeted improvements to the baseline infrastructure, practices and regulatory framework, and/or technology and the critical success factors in achieving that goal, including the ways in which the proposed project location and related infrastructure, skilled workforce, community benefits, etc. will contribute to the success of the overall project. • DOE Impact: The applicant should discuss the impact that DOE funding would have on the proposed project. Applicants should specifically explain how DOE funding, relative to prior, current, or anticipated funding from other public and private sources, is necessary to enable the project to progress, and to achieve its intended objectives. • Community Benefits Plan: Job Quality and Equity – The applicant should summarize the overall anticipated benefits that will accrue to the local community and DACs (including, but not limited to, decreased duration, frequency, or impact of power disruption; increased access to clean power; and the support of minority business enterprises). The applicant should summarize a plan to attract, train, and retain a skilled labor force with strong labor standards, ensure workers' free and fair chance to join a union, and identify potential partners they are working with to support these objectives. • The applicant should articulate a strategy for sharing and maximizing the project's benefits across disadvantaged communities and include a discussion of how resident and community leadership will be engaged throughout the project's duration. DOE encourages efforts to reach historically underserved populations, racial minorities, and women. These strategies should create the connectivity and conditions for growth where they may not exist, such as in rural, underserved, and disadvantaged communities.

	<ul style="list-style-type: none"> Identify any potential long-term constraints the project will have on the community's access to natural resources (e.g., water) and Tribal cultural resources. If applicable, describe a long-term cleanup strategy that ensures communities and neighborhoods remain healthy and safe and not burdened with cleanup costs and waste. The applicant should outline a climate resilience strategy that accounts for climate impacts and extreme weather patterns such as high winds (tornadoes and hurricanes), heat and freezing temperatures, drought, wildfire, and floods.
Technical Description, Innovation, and Impact (Approximately 30% of the Technical Volume)	<p>The Technical Description should contain the following information:</p> <ul style="list-style-type: none"> Relevance and Outcomes: The applicant should provide a detailed description of the project, including grid outcomes, the technology used, and other principles and objectives that will be pursued during the project. This section should describe the relevance of the proposed project to the goals and objectives of the FOA, including the potential for the deployment of the project to meet specific desired grid outcomes and other relevant performance targets. The applicant should clearly specify the expected outcomes of the project. Feasibility: The applicant should demonstrate the technical feasibility of the proposed technology and capability of achieving the anticipated performance targets, including a description of previous work done and prior results. This section should also address the project's access to necessary infrastructure (e.g., transportation, water, electric transmission), including any use of existing infrastructure, as well as to a skilled workforce. Innovation and Impacts: The applicant should describe the current standard practice and/or state-of-the-art technology in the applicable field, the specific innovation (which can include advanced technologies; innovative partnerships; new financial arrangements; deployment of projects identified by innovative planning, modeling, or cost allocation approaches; and/or innovative environmental siting, permitting strategies, or community engagement practices) of the proposed technology, the advantages of proposed technology over current and emerging technologies, and the overall impact on advancing the state-of-the-art/technical baseline if the project is successful. The applicant should describe how the project supports State, local, Tribal, regional and national resilience, decarbonization, or other energy goals, strategies and plans. The applicant should address the potential impact of the project to reduce perceived risk for project deployment; achieve further deployment at-scale to; and lead to additional private sector investments. Topic Area 1 (Grid Resilience Grants) applications must: <ul style="list-style-type: none"> Address how the proposed project will generate the greatest community, regional, or interregional resilience benefit in reducing the likelihood and consequences of disruptive events.

	<ul style="list-style-type: none"> ○ Address how the project (1) comprehensively mitigates one or more hazards faced by community or region; (2) comprehensively mitigates the potential for equipment to cause a wildfire in a community or region; (3) fully addresses the consequences of an outage caused by a natural hazard; or (4) mitigates economic risk as derived from outage duration or outage frequency. ○ Address how the grant funding provided by this program would result in proposed activities that go beyond and are additional to efforts that would have been undertaken but-for the funding and will generate the greatest community or regional resilience benefit in reducing the likelihood and consequences of disruptive events. The narrative should reference the <i>Report on Resilience Investments</i> to demonstrate how the proposed activities would be additional to existing planned investments. <ul style="list-style-type: none"> • <u>Topic Area 2 (Smart Grid Grants) applications must:</u> <ul style="list-style-type: none"> ○ Describe how the project will have a significant effect in encouraging and facilitating the development of smart grid functions identified as priority focus areas in 1.B.Topic Area 2 ○ Describe how the project would enhance the system flexibility to meet program objectives. • <u>Topic Area 3 (Grid Innovation Program) applications must:</u> <ul style="list-style-type: none"> ○ Describe how the project will address innovative approaches and deployment goals across transmission systems, distribution, or both as identified as priority focus areas in 1.B.Topic Area 3. ○ Describe how federal funding to address the risks identified in the application will increase the likelihood of securing additional public and/or private investment or otherwise enable the project to proceed. ○ Include how the concept will provide economic benefit to communities or regions that mitigate impacts from extreme events and disruptions. ○ Describe how the project has the potential to deliver near-term impact, with appropriate quantitative metrics ○ Describe project's readiness, viability, and expected timing.
Workplan (Approximately 40% of the Technical Volume)	<p>The Workplan should include a summary of the Project Objectives, Technical Scope, Work Breakdown Structure (WBS), Milestones, Go/No-Go Decision Points, and Project Schedule. A detailed SOPO is separately requested. The Workplan should contain the following information:</p> <ul style="list-style-type: none"> • Project Objectives: The applicant should provide a clear and concise (high-level) statement of the goals and objectives of the project as well as the expected outcomes.

	<ul style="list-style-type: none"> • Technical Scope Summary: The applicant should provide a summary description of the overall work scope and approach to achieve the objective(s). The overall work scope is to be divided by performance periods that are separated by discrete, approximately annual decision points (see below for more information on Go/No-Go decision points). The applicant should describe the specific expected end result of each performance period, including milestones detailed in the Community Benefits Plan. • WBS and Task Description Summary: The Workplan should describe the work to be accomplished and how the applicant will achieve the milestones, will accomplish the final project goal(s), and will produce all deliverables. The Workplan is to be structured with a hierarchy of performance period (approximately annual), task and subtasks, which is typical of a standard WBS for any project. The Workplan shall contain a concise description of the specific activities to be conducted over the life of the project. The description shall be a full explanation and disclosure of the project being proposed (i.e., a statement such as “we will then complete a proprietary process” is unacceptable). It is the applicant’s responsibility to prepare an adequately detailed task plan to describe the proposed project and the plan for addressing the objectives of this FOA. The summary provided should be consistent with the SOPO. The SOPO will contain a more detailed description of the WBS and tasks. • Milestone Summary: The applicant should provide a summary of appropriate milestones throughout the project to demonstrate success. A milestone may be either a progress measure (which can be activity based) or a SMART technical milestone. SMART milestones should be Specific, Measurable, Achievable, Relevant, and Timely, and must demonstrate a technical achievement rather than simply completing a task. Unless otherwise specified in the FOA, the minimum requirement is that each project must have at least one milestone per quarter for the duration of the project with at least one SMART technical milestone per year (depending on the project, more milestones may be necessary to comprehensively demonstrate progress). The applicant should also provide the means by which the milestone will be verified. • Go/No-Go Decision Points (See Section VI.B.xv for more information on the Go/No-Go Review): provide a summary of project-wide Go/No-Go decision points at appropriate points in the Workplan. At a minimum, each project must have at least one project-wide Go/No-Go decision point for each budget period (12 to 18-month period) of the project. The applicant should also provide the specific objective criteria to be used to evaluate the project at the Go/No-Go decision point. The summary provided should be consistent with the SOPO. Go/No-Go decision points are considered “SMART” and can fulfill the requirement for an annual SMART milestone. • End of Project Goal: The applicant should provide a summary of the end of project goal(s). At a minimum, each project must have one SMART end
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	<p>of project goal. The summary provided should be consistent with the SOPO.</p> <ul style="list-style-type: none"> • Project Schedule (Gantt Chart or similar): The applicant should provide a schedule for the entire project, including task and subtask durations, milestones, and Go/No-Go decision points. • Buy America Requirements for Infrastructure Projects: Within the first 2 pages of the Workplan or project description, include a short statement on whether the project will involve the construction, alteration, maintenance and/or repair of public infrastructure in the United States. See Appendix C for applicable definitions and other information regarding Infrastructure Projects and the Buy America Requirement. • Project Management: The applicant should discuss the team's proposed management plan, including the following: <ul style="list-style-type: none"> ○ The overall approach to and organization for managing the work ○ The roles of each project team member ○ Any critical handoffs/interdependencies among project team members ○ The technical and management aspects of the management plan, including systems and practices, such as financial and project management practices ○ The approach to project risk management, including a plan for securing a qualified workforce and mitigating risks to project performance including but not limited to community or labor disputes. ○ A description of how project changes will be handled ○ If applicable, the approach to Quality Assurance/Control ○ How communications will be maintained among project team members
Technical Qualifications and Resources (Approximately 20% of the Technical Volume)	<p>The Technical Qualifications and Resources should contain the following information:</p> <ul style="list-style-type: none"> • Describe the project team's unique qualifications and expertise, including those of key subrecipients. • Describe the project team's existing equipment and facilities, or equipment or facilities already in place on the proposed project site, that will facilitate the successful completion of the proposed project; include a justification of any new equipment or facilities requested as part of the project. • This section should also include relevant, previous work efforts, demonstrated innovations, and how these enable the applicant to achieve the project objectives. • Describe the time commitment of the key team members to support the project.

	<ul style="list-style-type: none"> Describe the technical services to be provided by DOE/NNSA FFRDCs, if applicable.
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v. Resumes

A resume provides information that can be used by reviewers to evaluate the individual's skills and experience of the key project personnel. Applicants are required to submit two-page resumes for each project manager and key personnel that include the following:

1. Contact Information;
2. Education: Include all academic institutions attended, major/area, degree;
3. Training: (e.g.,) certification or credential from a Registered Apprenticeship or Labor Management Partnership
4. Professional Experience: Beginning with the current position, list professional/academic positions in chronological order with a brief description;
5. List all current academic, professional, or institutional appointments, foreign or domestic, at the applicant institution or elsewhere, whether or not remuneration is received, and, whether full-time, part-time, or voluntary; and
6. There should be no lapses in time over the past ten years or since age 18, which ever time period is shorter.

Save the resumes in a single PDF file using the following convention for the title "Resumes.pdf" and click on "Add Optional Other Attachment" to attach.

vi. Letters of Commitment

Submit letters of commitment from all subrecipient and third-party cost share providers. If applicable, also include any letters of commitment from suppliers/partners/end users/future customers/labor unions/community-based organizations (one-page maximum per letter). Save the letters of commitment in a single PDF file using the following convention for the title "LOC.pdf" and click on "Add Optional Other Attachment" to attach.

Letters of support or endorsement for the project from entities that do not have a substantive role in the project are not required nor desired.

vii. Community Partnership Documentation

In support of the Community Benefits Plan, applicants may submit documentation to demonstrate existing or planned partnerships with community entities, such as, organizations that work with local stakeholders most vulnerable to or affected by the project, such as organizations that carry out workforce development programs, labor unions, Tribal organizations, and

community-based organizations that work with disadvantaged communities. The partnership documentation could be in the form of a letter on the partner's letterhead outlining the planned partnership signed by an officer of the entity, a Memorandum of Understanding, or other similar agreement. Such letters must state the specific nature of the partnership and must not be general letters of support. If the applicant intends to enter into Workforce and Community Agreements as part of the Community Benefits Plan, please include letters from proposed partners as appropriate. Each letter must not exceed 1 page. In total, the partnership documentation must not exceed 10 pages. Save the partnership documentation in a single PDF file using the following convention for the title "LeadOrganization_Partner.pdf".

viii. Statement of Project Objectives (SOPO)

Applicants are required to complete a SOPO. A SOPO template is available as Appendix D of the FOA. The SOPO, including the Milestone Table, must not exceed 5 pages when printed using standard 8.5 x 11 paper with 1" margins (top, bottom, left, and right) with font not smaller than 12-point (except in figures or tables, which may be 10-point font). Save the SOPO in a single Microsoft Word file using the following convention for the title "SOPO.doc or docx" and click on "Add Optional Other Attachment" to attach.

ix. Budget Justification Workbook

Applicants are required to complete the Budget Justification Workbook. This workbook is included as an attachment to this announcement for use and to describe the level of detail required in the budget justification. Although the data requested is mandatory, the use of the budget justification workbook is not. Prime recipients must complete each tab of the Budget Justification Workbook for the project as a whole, including all work to be performed by the prime recipient and its subrecipients and contractors. Applicants should include costs associated with required annual audits and incurred cost proposals in their proposed budget documents. The "Instructions and Summary" included with the Budget Justification Workbook will auto-populate as the applicant enters information into the Workbook. Applicants must carefully read the "Instructions and Summary" tab provided within the Budget Justification Workbook. Save the Budget Justification Workbook in a single Microsoft Excel file using the following convention for the title "Recipient_Budget_Justification.xls or.xlsx" and click on "Add Optional Other Attachment" to attach.

x. Summary/Abstract for Public Release

Applicants are required to submit a one-page summary/abstract of their project. The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the project manager, the project title,

the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (e.g., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as DOE may make it available to the public after selections are made. The project summary must not exceed 1 page when printed using standard 8.5 x 11 paper with 1" margins (top, bottom, left, and right) with font not smaller than 12-point. Save the Summary for Public Release in a single PDF file using the following convention for the title "Summary.pdf" and click on "Add Optional Other Attachment" to attach.

xi. Summary Slide

Applicants are required to provide up to 3 slides summarizing the proposed project. This slide is used during the evaluation process.

The Summary Slide template requires the following information:

- A technology summary;
- A description of the technology's impact;
- Proposed project goals;
- Any key graphics (illustrations, charts and/or tables);
- The project's key idea/takeaway;
- Project title, prime recipient, project manager and key personnel information; and
- Requested DOE funds and proposed applicant cost share.

Save the Summary Slide in a single Microsoft PowerPoint file using the following convention for the title "Slide.ppt or pptx" and click on "Add Optional Other Attachment" to attach.

xii. Subrecipient Budget Justification (if applicable)

Applicants must provide a separate budget justification for each subrecipient that is expected to perform work estimated to be more than \$250,000 or 25 percent of the total work effort (whichever is less). The budget justification must include the same justification information described in the "Budget Justification" section above. Save each subrecipient budget justification in a Microsoft Excel file using the following convention for the title "Subrecipient_Budget_Justification.xls or.xlsx" and click on "Add Optional Other Attachment" to attach.

xiii. Environmental Questionnaire

The Applicant must submit an environmental questionnaire providing for the work of the entire project. The Applicant is also responsible for submitting a separate environmental questionnaire for each proposed subrecipient performing at a different location. The environmental questionnaire is available

at http://www.netl.doe.gov/File%20Library/Business/forms/451_1-1-3.pdf. Save the questionnaire in a single file named "Env.pdf" (or "Env-FILL IN TEAM MEMBER.pdf" if more than questionnaire is submitted) and click on "Add Optional Other Attachment" to attach.

NOTE: If selected for award and if a subrecipient's location is not known at the time of application, a subsequent environmental questionnaire will be needed prior to them beginning work at an alternate location.

xiv. SF-LLL: Disclosure of Lobbying Activities (required)

Prime recipients and subrecipients may not use any federal funds to influence or attempt to influence, directly or indirectly, congressional action on any legislative or appropriation matters.

Prime recipients and subrecipients are required to complete and submit SF-LLL, "Disclosure of Lobbying Activities" to ensure that non-federal funds have not been paid and will not be paid to any person for influencing or attempting to influence any of the following in connection with the application:

- An officer or employee of any federal agency;
- A Member of Congress;

xv. Waiver Requests (if applicable)

i. Foreign Entity Participation

For projects selected under this FOA, as set forth in Section III, all prime recipients and subrecipients must qualify as domestic entities. To request a waiver of this requirement, the applicant must submit an explicit waiver request in the Full Application. Appendix B lists the information that must be included in a waiver request.

ii. Performance of Work in the United States (Foreign Work Waiver)

As set forth in Section IV.I.iii., all work for projects selected under this FOA must be performed in the United States. To request a waiver of this requirement, the applicant must submit an explicit waiver request in the Full Application. Appendix B lists the information that must be included in a foreign work waiver request.

Save the Waivers in a single PDF file using the following convention for the title "FN_Waiver.pdf" and click on "Add Optional Other Attachment" to attach.

iii. Waiver of the Buy America Requirement for Infrastructure Projects

As set forth in Section IV.I.vii., federally assisted projects which involve infrastructure work, undertaken by applicable recipient types, require that:

- all iron, steel, and manufactured products used in the infrastructure work are produced in the United States; and
- all construction materials used in the infrastructure work are manufactured in the United States.

The award agreement for funding between DOE and the awardee will require each recipient: (1) to fulfill the commitments made in its application regarding the procurement of U.S.-produced products, subject to a waiver process by DOE assessing the availability and cost (increasing the cost of the overall project by >25%), and (2) to fulfill the commitments made in its application regarding the procurement of other key component metals and manufactured products domestically that are deemed available in sufficient and reasonably available quantities or of a satisfactory quality at the time of award negotiation, again subject to a DOE waiver process.

In limited circumstances, DOE may grant a waiver of this requirement. Appendix C to this FOA provides guidance on how “infrastructure work” is defined, explains the applicable justifications under which a waiver may be granted, and lists the information that must be included in the waiver request.

Save the Waivers in a single PDF file using the following convention for the title “BAWaiver.pdf” and click on “Add Optional Other Attachment” to attach.

xvi. Community Benefits Plan: Job Quality and Equity (Community Benefits Plan)

When Community Benefits Plan: Job Quality and Equity (Community Benefits Plan or Plan) must set forth the applicant’s framework to ensure that federal investments in the power sector advance the following four priorities: (1) community and labor engagement; (2) investing in the American workforce; (3) advancing diversity, equity, inclusion, and accessibility (DEIA); and (4) the Justice40 Initiative. The below sections set forth the Plan requirements in each of the foregoing areas. At this stage of the application process, the Community Benefits Plan should indicate the applicant’s intention to engage meaningfully with labor and community stakeholders on these goals, including the potential of entering into formal Workforce and Community Agreements. Given project complexity and sensitivities, applicants should consider pursuing multiple agreements.

Applicants should complete each portion of the initial Community Benefits Plan to the greatest extent possible. In cases where information is incomplete, applicants should clearly explain the reason for missing information and provide plans to address those gaps during the project. If the applicant has prior or ongoing efforts to advance energy and environmental justice, DEIA, community and labor engagement, or quality jobs, the application should discuss how they are incorporating lessons learned and building on these prior/ongoing efforts. At this stage of the application process, the Community Benefits Plan should indicate the applicant's intention to engage meaningfully with community and labor stakeholders on these goals, including the potential of entering into a formal Workforce and Community Agreement. DOE expects the information contained in the Community Benefits Plan to deepen and evolve during each phase.

The applicant's Community Benefits Plan must include at least one SMART (Specific, Measurable, Assignable, Realistic and Time-Related) milestone per budget period supported by metrics to measure the success of the proposed actions. Each of the four sections should also include information about the resources intended to implement the Community Benefits Plan, including staff time and budget to convene public meetings to engage and negotiate agreements with relevant labor unions, communities, and other stakeholders. The initial Community Benefits Plan should provide the most details regarding actions the applicant would take during the initial stages of project development but should also describe in a higher-level summary what goals, deliverables, outcomes, and implementation strategies the applicant would pursue as the project moves through the development, construction, and operational stages.

The Community Benefits Plan will be evaluated as part of the technical review process. If the project is selected, DOE will incorporate relevant elements of the Community Benefits Plan, including any proposed Workforce and Community Agreement(s), into the award as part of the project requirements. During the life of the DOE award, DOE will evaluate the recipient's progress in formatting and implementing this Plan.

For additional information, see [Community Benefits Plan Frequently Asked Questions \(FAQs\) | Department of Energy](#).

1. Community and Labor Engagement: The Community Benefits Plan must set forth the applicant's prior actions and future plans to engage with labor unions, local governments and Tribal entities, and an inclusive collection of local stakeholders, including community-based organizations that support or work with disadvantaged communities. By facilitating community input and social buy-in and strengthening accountability, such agreements substantially reduce

or eliminate certain risks associated with the project. These agreements ideally lay the groundwork for the eventual negotiation of Workforce and Community Agreements, which could take the form of one or more kinds of negotiated agreements with communities, labor unions, or, ideally, both. Registered apprenticeship programs, labor-management training partnerships, quality pre-apprenticeship programs, card check neutrality, and local and targeted hiring goals are all examples of provisions that Workforce and Community Agreements could cover that would increase the success of a DOE-funded project.

Applicants should also provide Community and Labor Partnership Documentation from representative organizations reflecting substantive engagement and feedback on applicant's approach to community benefits including job quality and workforce continuity; diversity, equity, inclusion, and accessibility; and the Justice40 Initiative detailed below.

If selected for funding, applicants will be expected to execute on any proposed Workforce and Community Agreements that identify how community and labor concerns, vulnerabilities, and benefits will be addressed.

2. Investing in the American Workforce: A well-qualified, skilled, and trained workforce is necessary to ensure project stability, continuity, and success, and to meet program goals. High-quality jobs are critical to attracting and retaining the qualified workforce required. The Community Benefits Plan must provide an approach to the creation and retention of quality jobs.⁴⁸ The Plan is an opportunity for the applicant to detail their approach to investing in the American workforce. Successful applicants will be required to provide more detail and identify SMART milestones to ensure accountability with plan implementation. Letters of support may bolster, but not replace, the descriptions requested below.

Specific components of the plan must include:

- 1) Summarize the applicant's plan to attract, train, and retain a skilled and well qualified workforce for both (a) construction and (b) ongoing operations/production activities. An available workforce is necessary to ensure project stability, continuity, and success. A collective bargaining

⁴⁸ A "quality job" is defined as a job that (1) exceeds the local prevailing wage for an industry in the region, includes basic benefits (e.g., paid leave, health insurance, retirement/savings plan), and/or is unionized, and (2) helps the employee develop the skills and experiences necessary to advance along a career path. See Economic Development Administration, ARPA Good Jobs Challenge NOFO, EDAHDQ-ARPGJ-2021-2006964, at n. 1, available at <https://www.grants.gov/web/grants/viewopportunity.html?oppld=334720>.

agreement, labor-management partnership, or other such agreement would provide evidence of such a plan. Alternatively, applicants may describe:

- i. Wages, benefits, and other worker supports provided
- ii. Commitments to support workforce education and training, including which reduces employee turnover costs for employers, increases productivity from a committed and engaged workforce, and promotes a nimble, resilient, and stable workforce for the project.
- iii. Efforts to engage employees in the design and execution of a workplace safety and health plan to safeguard worker health and well-being.

NOTE: Because Project Labor Agreements (PLAs) have been shown to reduce project costs, avoid work delays, and improve efficiency, they are preferred on construction projects of all sizes and may be required for large construction projects (above \$35M or possibly lower, on a case-by-case basis). Assessment of applicability will be conducted on a case-by-case basis and in consultation with recipients to ensure project feasibility.

2) Please disclose any violations found within the past two years under the National Labor Relations Act, Fair Labor Standards Act, Occupational Safety and Health Act, Service Contract Act, Davis-Bacon Act, or Title VII of the Civil Rights Act and any steps taken to improve your workforce practices following this violation. Describe whether workers can form and join unions of their choosing, exercising collective voice. Employees' ability to organize, bargain collectively, and participate through labor organizations of their choosing in decisions which affect them, helps build meaningful economic power, safeguard the public interest, contribute to the effective conduct of business, and facilitate amicable settlements of disputes between employees and their employers, thus providing assurances of project efficiency, continuity, and multiple public benefits.

3) Describe the job retention and/or transition and other workforce development opportunities associated with the project noting efforts to create or retain jobs.

3. DEIA: The Community Benefits Plan must include a section describing how DEIA objectives will be incorporated into the project. The section should detail how the applicant will partner with underrepresented businesses, training organizations serving workers facing system barriers to access quality jobs, and other project partners to help address DEIA. The plan should include at least one SMART milestone per Budget Period supported by metrics to measure the success of the proposed actions and will be incorporated into the award if selected.

The following is a non-exhaustive list of potential DEIA actions that can serve as examples of ways the proposed project could incorporate DEIA elements. These examples should not be considered either comprehensive or prescriptive. Applicants may include appropriate actions not covered by these examples and should include a comprehensive set of specific DEIA actions anticipated in connection with the project.

- a. Commit to supplier diversity and identify Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses to solicit as vendors and sub-contractors for bids on supplies, services and equipment;
- b. Identify and partner with workforce training organizations serving under-represented individuals and those facing barriers to quality employment such as those with disabilities, returning citizens, opportunity youth, and veterans;
- c. Offer anti-bias training and education to ensure hiring professionals can recognize unconscious bias and can learn how to reduce discriminatory barriers;
- d. Support for quality apprenticeship-readiness and/or pre-apprenticeship programs in the local community that are integrated with registered apprenticeship, including cyber apprenticeship-readiness programs and cyber-registered apprenticeship programs;
- e. Provide funding for or partner with organization that can provide comprehensive support services such as training stipends, mental health supports, transportation assistance, and access to child care to improve access to career-track training and quality jobs for underrepresented and disadvantaged workers;
- f. Describe Local and/or Economic Hire efforts (e.g., recruitment preferences for economically disadvantaged populations

4. Justice40 Initiative: Applicants must provide an overview of benefits that can be supported by measurable metrics and describe the benefits to DACs. Such benefits framework shall include appropriate milestones for benefit delivery and will be incorporated into the award.

Specifically, the Justice40 Initiative section must include:

1. Identification of applicable disadvantaged communities to which the anticipated project benefits will flow.
2. Identification of applicable benefits that are quantifiable, measurable, and trackable.
 - a. Benefits include (but are not limited to) measurable direct or indirect investments or positive project outcomes that achieve or contribute to the following in disadvantaged communities: (1) a decrease in

energy burden; (2) a decrease in environmental exposure and burdens; (3) an increase in access to low-cost capital; (4) an increase in high-quality job creation, the clean energy job pipeline, and job training for individuals; (5) increases in clean energy enterprise creation and contracting (e.g., minority-owned or disadvantaged business enterprises); (6) increases in energy democracy, including community ownership; (7) increased parity in clean energy technology access and adoption; and (8) an increase in energy resilience including reduced outage frequency and/or duration. In addition, applicants, should also discuss how the project will maximize all of the benefits listed herein.

3. A Discussion of Anticipated Negative and Cumulative Environmental Impacts on disadvantaged communities. For example, what are the anticipated environmental impacts associated with the project, and how will the applicant mitigate such impacts? Within the context of cumulative impacts created by the project, applicants should use Environmental Protection Agency EJSCREEN⁴⁹ tool to quantitatively discuss existing environmental impacts in the project area.
4. A Description of How and when Anticipated Benefits Are Expected to Flow to disadvantaged communities. For example, will the benefits be provided directly within the disadvantaged communities identified in the Justice40 Initiative Plan, or are the benefits expected to flow in another way? Further, will the benefits flow during project development or after project completion, and how will applicant track benefits delivered?

For projects funded under this FOA, DOE will provide specific reporting guidance for a subset of the eight policy priorities described above; however, recipients must also report how project benefits flow to applicable disadvantaged communities, in furtherance of the advancement of the policy priorities outlined above. For example, a recipient can describe how a project will increase access to clean energy and decrease harmful emissions in disadvantaged communities and provide methods for tracking the progress of these outcomes.

Save the Community Benefits Plan in a single PDF file using the following convention for the title "CBenefits.pdf" and click on "Add Optional Other Attachment" to attach.

xvii. Requirement to Report Potentially Duplicative Funding

If the applicant or project team member has other active awards of federal funds, the applicant must determine whether the activities of those awards potentially overlap with the activities set forth in its application to this FOA. If

⁴⁹ Environmental Justice (EJ) Screening and Mapping Tool from the Environmental Protection Agency
<https://www.epa.gov/ejscreen>

there is a potential overlap, the applicant must notify DOE in writing of the potential overlap and state how it will ensure any project funds (i.e., recipient cost share and federal funds) will not be used for identical cost items under multiple awards. Likewise, for projects that receive funding under this FOA, if a recipient or project team member receives any other award of federal funds for activities that potentially overlap with the activities funded under the DOE award, the recipient must promptly notify DOE in writing of the potential overlap and state whether project funds from any of those other federal awards have been, are being, or are to be used (in whole or in part) for one or more of the identical cost items under the DOE award. If there are identical cost items, the recipient must promptly notify the DOE Contracting Officer in writing of the potential duplication and eliminate any inappropriate duplication of funding.

Save the Potential Duplicative Funding Notice in a single PDF file using the following convention for the title “PDFN.pdf” and click on “Add Optional Other Attachment” to attach.

xviii. Report on Resilience Investments (Topic Area 1 ONLY)

Applicants must submit a report detailing past, current, and future efforts by the eligible entity to reduce the likelihood and consequences of disruptive events. The report must summarize any programs and related approved funding that your organization has implemented over the past 3 years to reduce the likelihood of events in which operations of the electric grid are disrupted, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster. The report must also summarize current and future efforts planned over at least the next 3 years to reduce the likelihood and consequences of disruptive events. Save the Report on Resilience Investments in a single PDF file using the following convention for the title “ResilienceInvestments.pdf”.

xix. EIA 861 Report (Topic Area 1, small utilities ONLY)

Applicants who are small utilities applying to Topic Area 1 must submit the EIA Form 861 for the last reporting year showing the total retail electricity sales to ultimate customers to ensure status as a small utility. Save the EIA 861 Report in a single PDF file using the following convention for the title “EIA861.pdf”.

xx. Locations of Work

The applicant must complete the supplied template by listing the city, state, and zip code + 4 for each location where project work will be performed by the prime recipient or subrecipient(s). This template is included as an attachment to this announcement for use. Save the Location of Work in a single Microsoft Excel file

using the following naming convention for the title “LOW.xls or.xlsx” and click on “Add Optional Other Attachment” to attach

xxi. Project Description and Assurances Document (PDAD)

Applicants for all three topic areas must complete and submit the PDAD. Note that there are requirements specific to Topic Area 1 and Topic Area 3, for which the applicant will respond and certify responses via the PDAD, as described in Section I.B. Applicants shall prepare the PDAD in the format provided in Appendix F of the FOA. The PDAD must be signed by the Authorized Organizational Representative (AOR) on behalf of the organization and be submitted in PDF format. Save the PDAD in a single PDF file using the following convention for the title “PDAD.pdf”.

E. Post Selection Information Requests

If selected for award, DOE reserves the right to request additional or clarifying information regarding the following (non-exhaustive list):

- Personnel proposed to work on the project and collaborating organizations (See Section VI.B.xix. Participants and Collaborating Organizations);
- An Intellectual Property Management Plan (if applicable) describing how the project team/consortia members will handle intellectual property rights and issues between themselves while ensuring compliance with federal intellectual property laws, regulations, and policies in accordance with VI.B.xi Intellectual Property Management Plan;
- Indirect cost information;
- Other budget information;
- Commitment Letters from Third Parties Contributing to Cost Share, if applicable;
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5);
- Representation of Limited Rights Data and Restricted Software, if applicable;
- Information related to Davis-Bacon Act Requirements;
- Information related to Community Benefits Agreements, as defined above in “Community Benefits Plan: Jobs Quality and Equity,” that applicants may have made with the relevant community;
- Updated Environmental Questionnaire(s).

F. Unique Entity Identifier (UEI) and System for Award Management (SAM)

Each applicant (unless the applicant is an individual or federal awarding agency that is excepted from those requirements under 2 CFR 25.110(b) or (c), or has an

exception approved by the federal awarding agency under 2 CFR 25.110(d)) is required to: (1) Be registered in the SAM at <https://www.sam.gov> before submitting its application; (2) provide a valid UEI number in its application; and (3) continue to maintain an active SAM registration with current information at all times during which it has an active federal award or an application or plan under consideration by a federal awarding agency. DOE may not make a federal award to an applicant until the applicant has complied with all applicable UEI and SAM requirements and, if an applicant has not fully complied with the requirements by the time DOE is ready to make a federal award, the DOE will determine that the applicant is not qualified to receive a federal award and use that determination as a basis for making a federal award to another applicant.

G. Submission Dates and Times

All required submissions must be submitted as specifically stated in the announcement no later than 5 p.m. ET on the dates provided on the cover page of this FOA.

H. Intergovernmental Review

This FOA is not subject to Executive Order 12372 – Intergovernmental Review of Federal Programs.

I. Funding Restrictions

i. Allowable Costs

All expenditures must be allowable, allocable, and reasonable in accordance with the applicable federal cost principles. Pursuant to 2 CFR 910.352, the cost principles in the Federal Acquisition Regulations (48 CFR Part 31.2) apply to for-profit entities. The cost principles contained in 2 CFR Part 200, Subpart E apply to all entities other than for-profits. Costs to support or oppose union organizing, whether directly or as an offset for other funds, are unallowable.

ii. Pre-Award Costs

Applicants selected for award negotiations (selectee) must request prior written approval to charge pre-award costs. Pre-award costs are those incurred prior to the effective date of the federal award directly pursuant to the negotiation and in anticipation of the federal award where such costs are necessary for efficient and timely performance of the scope of work. Such costs are allowable only to the extent that they would have been allowable if incurred after the date of the federal award and **only** with the written approval of the federal awarding agency, through the DOE Contracting Officer.

Pre-award costs cannot be incurred prior to the Selection Official signing the Selection Statement and Analysis.

Pre-award expenditures are made at the selectee's risk. DOE is not obligated to reimburse costs: (1) in the absence of appropriations; (2) if an award is not made; or (3) if an award is made for a lesser amount than the selectee anticipated.

1. National Environmental Policy Act (NEPA) Requirements Related to Pre-Award Costs

DOE's decision whether and how to distribute federal funds under this FOA is subject to NEPA. Applicants should carefully consider and should seek legal counsel or other expert advice before taking any action related to the proposed project that would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to DOE completing the NEPA review process.

DOE does not guarantee or assume any obligation to reimburse pre-award costs incurred prior to receiving written authorization from the Contracting Officer. If the applicant elects to undertake activities that DOE determines may have an adverse effect on the environment or limit the choice of reasonable alternatives prior to receiving such written authorization from the Contracting Officer, the applicant is doing so at risk of not receiving federal funding for their project and such costs may not be recognized as allowable cost share. Nothing contained in the pre-award cost reimbursement regulations or any pre-award costs approval letter from the Contracting Officer override the requirement to obtain the written authorization from the Contracting Officer prior to taking any action that may have an adverse effect on the environment or limit the choice of reasonable alternatives. Likewise, if an application is selected for negotiation of award, and the prime recipient elects to undertake activities that are not authorized for federal funding by the Contracting Officer in advance of DOE completing a NEPA review, the prime recipient is doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

iii. Performance of Work in the United States (Foreign Work Waiver)

1. Requirement

All work performed under DOE awards issued under this FOA must be performed in the United States. The prime recipient must flow down this requirement to its subrecipients.

2. Failure to Comply

If the prime recipient fails to comply with the Performance of Work in the United States requirement, DOE may deny reimbursement for the work conducted outside the United States and such costs may not be recognized as allowable recipient cost share. The prime recipient is responsible should any work under this award be performed outside the United States, absent a waiver, regardless of whether the work is performed by the prime recipient, subrecipients, contractors or other project partners.

3. Waiver

To seek a foreign work waiver, the applicant must submit a written waiver request to DOE. Appendix B lists the information that must be included in a request for a foreign work waiver.

Save the waiver request(s) in a single PDF file. The applicant does not have the right to appeal DOE's decision concerning a waiver request.

iv. Construction

Recipients are required to obtain written authorization from the Contracting Officer before incurring any major construction costs.

v. Foreign Travel

Foreign travel costs are not allowable under this FOA.

vi. Equipment and Supplies

Property disposition may be required at the end of a project if the current fair market value of property exceeds \$5,000. For-profit entity disposition requirements are set forth at 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310 – 200.316.

vii. Buy America Requirements for Infrastructure Projects

Awards funded through this FOA that are for, or contain, construction, alteration, maintenance or repair of public infrastructure in the United States, undertaken by applicable recipient types, require that:

- All iron, steel, and manufactured products used in the infrastructure project are produced in the United States; and
- All construction materials used in the infrastructure project are manufactured in the United States.

In general, whether a given project must apply this requirement is dependent on several factors, such as the recipient's entity type, whether the work involves "infrastructure," as that term is defined in Section 70914 of the BIL (discussed in more detail in Appendix C), based in part on whether the infrastructure in question is publicly owned or serves a public function. For this FOA specifically,

all projects subject to this FOA are considered “infrastructure” within the Buy America provision of BIL, based on implementation guidance from Office of Management and Budget (OMB) Memorandum M-22-11 issued on April 18, 2022.

Moreover, based on M-22-11, the Buy America requirements of the BIL do not apply to DOE projects in which the prime recipient is a for-profit entity; the requirements only apply to projects whose prime recipient is a “non-Federal entity,” e.g., a State, local government, Indian Tribe, Institution of Higher Education, or nonprofit organization. Subawards should conform to the terms of the prime award from which they flow; in other words, for-profit prime recipients are not required to flow down these Buy America requirements to subrecipients, even if those subrecipients are non-Federal entities as defined above. Conversely, prime recipients which are non-Federal entities must flow the Buy America requirements down to all subrecipients, even if those subrecipients are for-profit entities. Finally, for all applicants—both non-Federal entities and for-profit entities—DOE is including a Program Policy Factor that the Selection Official may consider in determining which Full Applications to select for award negotiations that considers whether the applicant has made a commitment to procure U.S. iron, steel, manufactured products, and construction materials in its project.

The Cooperative Agreement between DOE and the awardee will require each recipient: (1) to fulfill the commitments made in its application regarding the procurement of U.S.-produced products, and (2) to fulfill the commitments made in its application regarding the procurement of other key component metals and manufactured products domestically that are deemed available in sufficient and reasonably available quantities or of a satisfactory quality at the time of award negotiation. Applicants may seek waivers of these requirements in very limited circumstances and for good cause shown. Further details on requesting a waiver can be found in Appendix C and the terms and conditions of the applicant’s award.

Applicants are strongly encouraged to consult Appendix C for more information.

viii. Davis-Bacon Act Requirements

Projects awarded under this FOA will be funded under Division D of the Bipartisan Infrastructure Law. Accordingly, per section 41101 of that law, all laborers and mechanics employed by the applicant, subrecipients, contractors or subcontractors in the performance of construction, alteration, or repair work funded in whole or in part under this FOA shall be paid wages at rates not less than those prevailing on similar projects in the locality, as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code commonly referred to as the “Davis-Bacon Act” (DBA).

Applicants shall provide written assurance acknowledging the DBA requirements above, and confirming that the laborers and mechanics performing construction, alteration, or repair work on projects funded in whole or in part by awards made as a result of this FOA are paid or will be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by subchapter IV of Chapter 31 of Title 40, United States Code (Davis-Bacon Act).

Applicants acknowledge that they will comply with all of the Davis-Bacon Act requirements, including but not limited to:

- (1) ensuring that the wage determination(s) and appropriate Davis-Bacon clauses and requirements are flowed down to and incorporated into any applicable subcontracts or subrecipient awards.
- (2) ensuring that if wage determination(s) and appropriate Davis-Bacon clauses and requirements are improperly omitted from contracts and subrecipient awards, the applicable wage determination(s) and clauses are retroactively incorporated to the start of performance.
- (3) being responsible for compliance by any subcontractor or subrecipient with the Davis-Bacon labor standards.
- (4) receiving and reviewing certified weekly payrolls submitted by all subcontractors and subrecipients for accuracy and to identify potential compliance issues.
- (5) maintaining original certified weekly payrolls for 3 years after the completion of the project and must make those payrolls available to the DOE or the Department of Labor upon request, as required by 29 CFR 5.6(a)(2).
- (6) conducting payroll and job-site reviews for construction work, including interviews with employees, with such frequency as may be necessary to assure compliance by its subcontractors and subrecipients and as requested or directed by the DOE.
- (7) cooperating with any authorized representative of the Department of Labor in their inspection of records, interviews with employees, and other actions undertaken as part of a Department of Labor investigation.
- (8) posting in a prominent and accessible place the wage determination(s) and Department of Labor Publication: WH-1321, Notice to Employees Working on Federal or Federally Assisted Construction Projects.

(9) notifying the Contracting Officer of all labor standards issues, including all complaints regarding incorrect payment of prevailing wages and/or fringe benefits, received from the recipient, subrecipient, contractor, or subcontractor employees; significant labor standards violations, as defined in 29 CFR 5.7; disputes concerning labor standards pursuant to 29 CFR parts 4, 6, and 8 and as defined in FAR 52.222-14; disputed labor standards determinations; Department of Labor investigations; or legal or judicial proceedings related to the labor standards under this Contract, a subcontract, or subrecipient award.

(10) preparing and submitting to the Contracting Officer, the Office of Management and Budget Control Number 1910-5165, Davis Bacon Semi-Annual Labor Compliance Report, by April 21 and October 21 of each year. Form submittal will be administered through the iBenefits system (<https://doeibenefits2.energy.gov>) or its successor system.

Recipients of funding under this FOA will also be required to undergo Davis-Bacon Act compliance training and to maintain competency in Davis-Bacon Act compliance. The Contracting Officer will notify the recipient of any DOE sponsored Davis-Bacon Act compliance trainings. The U.S. Department of Labor ("DOL") offers free Prevailing Wage Seminars several times a year that meet this requirement, at <https://www.dol.gov/agencies/whd/government-contracts/construction/seminars/events>.

For additional guidance on how to comply with the Davis-Bacon provisions and clauses, see <https://www.dol.gov/agencies/whd/government-contracts/construction> and <https://www.dol.gov/agencies/whd/government-contracts/protections-for-workers-in-construction>.

DOE anticipates contracting with a third party for a Davis-Bacon Act electronic payroll compliance software application. Recipients of funding under this FOA must ensure the timely electronic submission of weekly certified payrolls through this software as part of its compliance with the Davis-Bacon Act unless a waiver is granted to a particular contractor or subcontractor because they are unable or limited in their ability to use or access. Applicants should indicate if a waiver will be sought.

ix. Lobbying

Recipients and subrecipients may not use any federal funds to influence or attempt to influence, directly or indirectly, congressional action on any legislative or appropriation matters.

Recipients and subrecipients are required to complete and submit SF-LLL, "Disclosure of Lobbying Activities"

(<https://www.grants.gov/web/grants/forms/sf-424-individual-family.html>) to ensure that non-federal funds have not been paid and will not be paid to any person for influencing or attempting to influence any of the following in connection with the application:

- An officer or employee of any federal agency;
- A Member of Congress;
- An officer or employee of Congress; or
- An employee of a Member of Congress.

x. Risk Assessment

Pursuant to 2 CFR 200.206, DOE will conduct an additional review of the risk posed by applicants submitted under this FOA. Such risk assessment will consider:

1. Financial stability;
2. Quality of management systems and ability to meet the management standards prescribed in 2 CFR 200 as amended and adopted by 2 CFR 910;
3. History of performance;
4. Audit reports and findings; and
5. The applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-federal entities.

DOE may make use of other publicly available information and the history of an applicant's performance under DOE or other federal agency awards.

Depending on the severity of the findings and whether the findings were resolved, DOE may elect not to fund the applicant.

In addition to this review, DOE must comply with the guidelines on government-wide suspension and debarment in 2 CFR 180 and must require non-federal entities to comply with these provisions. These provisions restrict federal awards, subawards and contracts with certain parties that are debarred, suspended or otherwise excluded from or ineligible for participation in federal programs or activities.

Further, as DOE funds critical and emerging technology areas, DOE also considers possible vectors of undue foreign influence in evaluating risk. If high risks are identified and cannot be sufficiently mitigated, DOE may elect to not fund the applicant.

xi. Invoice Review and Approval

DOE employs a risk-based approach to determine the level of supporting documentation required for approving invoice payments. Recipients may be required to provide some or all of the following items with their requests for reimbursement:

- Summary of costs by cost categories;
- Timesheets or personnel hours report;
- Proof of compliance with Davis-Bacon and electronic submittals of certified payroll reports;
- Disclosure of any citations related to NLRA, FLSA, OSH, SCA, or DBA, or Title VII;
- Invoices/receipts for all travel, equipment, supplies, contractual, and other costs;
- UCC filing proof for equipment acquired with project funds by for-profit recipients and subrecipients;
- Explanation of cost share for invoicing period;
- Analogous information for some subrecipients; and
- Other items as required by DOE.

xii. Prohibition related to Foreign Government-Sponsored Talent Recruitment Programs

a. Prohibition

Persons participating in a Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk are prohibited from participating in projects selected for federal funding under this FOA. Should an award result from this FOA, the recipient must exercise ongoing due diligence to reasonably ensure that no individuals participating on the DOE-funded project are participating in a Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk. Consequences for violations of this prohibition will be determined according to applicable law, regulations, and policy. Further, the recipient must notify DOE within five (5) business days upon learning that an individual on the project team is or is believed to be participating in a foreign government talent recruitment program of a foreign country of risk. DOE may modify and add requirements related to this prohibition to the extent required by law.

b. Definitions

- 1. Foreign Government-Sponsored Talent Recruitment Program.** An effort directly or indirectly organized, managed, or funded by a foreign government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time

position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to the foreign state for the above purpose. Some programs allow for or encourage continued employment at U.S. research facilities or receipt of Federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to U.S. entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.

2. **Foreign Country of Risk**. DOE has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.

xiii. Affirmative Action and Pay Transparency Requirements

All f federally assisted construction contracts exceeding \$10,000 annually will be subject to the requirements of Executive Order 11246:

- (1) Recipients, subrecipients, contractors and subcontractors are prohibited from discriminating in employment decisions on the basis of race, color, religion, sex, sexual orientation, gender identity or national origin.
- (2) Recipients and Contractors are required to take affirmative action to ensure that equal opportunity is provided in all aspects of their employment. This includes flowing down the appropriate language to all subrecipients, contractors and subcontractors.
- (3) Recipients, subrecipients, contractors and subcontractors are prohibited from taking adverse employment actions against applicants and employees for asking about, discussing, or sharing information about their pay or, under certain circumstances, the pay of their co-workers.

The Department of Labor's (DOL) Office of Federal Contractor Compliance Programs (OFCCP) uses a neutral process to schedule contractors for

compliance evaluations. OFCCP's Technical Assistance Guide⁵⁰ should be consulted to gain an understanding of the requirements and possible actions the recipients, subrecipients, contractors and subcontractors must take.

Additionally, for construction projects valued at \$35 million or more and lasting more than one year, the recipients, subrecipients, contractors and subcontractors may be assigned by OFCCP as a mega construction project and may be neutrally selected for a compliance evaluation by OFCCP.⁵¹

V. Application Review Information

A. Technical Review Criteria

i. Concept Papers

Concept Papers are evaluated based on consideration the following factors. All sub-criteria are of equal weight.

Applicable to All Topic Areas

Concept Paper Criterion: Overall FOA Responsiveness and Viability of the Project (Weight: 100%)

This criterion involves consideration of the following factors:

- The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA for the specific topic area.
- The proposed work aligns with and supports State, local, Tribal, regional resilience, decarbonization, or other energy strategies and plans.
- The applicant has identified risks and challenges, including possible mitigation strategies, and has shown the impact that DOE funding and the proposed project would have on the relevant field and application.
- The applicant has proposed strategies to ensure meaningful community and labor engagement; quality jobs and workforce development; EEJ and the Justice40 Initiative; and diversity, inclusion, accessibility—including methods to ensure accountability.
- The applicant has the qualifications, experience, capabilities and other resources necessary to complete the proposed project.

⁵⁰ See OFCCP's Technical Assistance Guide at:

<https://www.dol.gov/sites/dolgov/files/ofccp/Construction/files/ConstructionTAG.pdf?msclkid=9e397d68c4b111ec9d8e6fecb6c710ec> Also see the National Policy Assurances <http://www.nsf.gov/awards/managing/rtc.jsp>

⁵¹ For more information regarding this program, see <https://www.dol.gov/agencies/ofccp/construction/mega-program>.

ii. Full Applications

Applications will be evaluated against the technical review criteria shown below.
All sub-criteria are of equal weight.

Criterion 1 for **Topic Area 1: Impact, Transformation, and Technical Merit** (50%):

This criterion involves consideration of the following factors:

- Extent to which the project supports the Topic Area 1 objectives and desired outcomes.
- The magnitude of the community or regional resilience benefit that the project will generate by reducing the likelihood and consequences of disruptive events.
- The extent to which the has application specifically and convincingly demonstrates the applicant's technical ability to:
 - comprehensively mitigate one or more hazards faced by community or region
 - fully mitigate the potential for equipment to cause a wildfire in a community or region
 - minimize the consequences of an outage caused by a natural hazard
 - minimize economic impact resulting from outage duration or outage frequency.
- Extent to which project supports and works in tandem with State, local, Tribal, regional resilience, decarbonization, or other energy strategies and plans.
- Extent to which the project aligns with and is additive to the current resilience investments described by the applicant outlined in the Report on Resilience Investments.
- Sufficiency of technical detail to demonstrate that the proposed project is technically feasible and would likely result in the described community or regional resilience benefits.
- The potential impact of the project to lead to catalyze additional private sector investments and/or non-federal public or regulated capital.

Criterion 2 for **Topic Area 1: Project Plan and Project Financial Feasibility** (20%)

This criterion involves consideration of the following factors:

Project Approach, Workplan, and Statement of Project Objectives (SOPQ)

- Degree to which the approach and critical path have been clearly described and thoughtfully considered.

- Degree to which the task descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan and SOPO will succeed in meeting the project goals.

Identification of Risks

- Discussion and demonstrated understanding of the key anticipated risks (e.g. technical, financial, market, environmental, regulatory) involved in the proposed work and the quality of the mitigation strategies to address them.

Baseline, Metrics, and Deliverables

- The level of clarity in the definition of the baseline, metrics, and milestones.
- Relative to a clearly defined baseline, the strength of the quantifiable metrics, milestones, and mid-point deliverables defined in the application, such that meaningful interim progress will be made.

Project Financial Feasibility

- The reasonableness of the budget and spend plan for the proposed project and objectives.
- Soundness of proposed cost share; level of dedication as demonstrated by letter(s) of commitment that clearly identify type and amount of proposed cost share. Proposed cost share meets requirements outlined in the FOA.
- The degree to which the proposed project yields additive benefit(s) from the federal funding to undertake additional efforts that would not be taken but-for the funding or to accelerate or expand planned activities that would not be accelerated or expanded but-for the funding.
- The degree to which the applicant justifies the project's economic viability.
- The degree to which the project provides enhanced system value and/or provides improved current and future system cost-effectiveness and delivers economic benefit.

Criterion 3 for Topic Area 1: Management Team and Project Partners (10%)

This criterion involves consideration of the following factors:

Project Management

- Clarity and appropriateness of the roles and responsibilities of the project management organization and the project team, including relevant and critical subrecipients and vendors.

- The capability of the Project Manager(s) and the proposed team to manage and address all aspects of the proposed work with a high probability of success.
- The qualifications, relevant expertise, and time commitment of the individuals on the team.
- The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Project Plan/Workplan.
- The degree to which the applicant has defined and described a project management structure that addresses interfaces with DOE.

Partners

- Degree to which the applicant includes partnerships with critical entities that will help ensure project success, as well as any partnerships with entities (including other states) outside of the applicant's jurisdiction, who will commit to encourage asset operators (e.g., utilities, merchant developers) to replicate the proposed approaches, technologies or solutions, as applicable.

Criterion 4 for Topic Area 1: Community Benefits Plan (20%)

Every BIL-funded project is expected to contribute to the country's energy infrastructure modernization goals, energy technology demonstration and deployment goals, and climate goals, and also to (1) support meaningful community and labor engagement; (2) support quality jobs and ensure workforce continuity; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the Justice40 Initiative's goal that 40% of the overall project benefits flow to disadvantaged communities.

To ensure these goals are met, applications must include a Community Benefits Plan that illustrates how the proposed project plans to incorporate the four goals stated above and are encouraged to submit Community Partnership Documentation from established labor unions, Tribal entities, and community-based organizations that demonstrate the applicant's ability to achieve the above goals as outlined in the Community Benefits Plan.

This criterion involves consideration of the following factors:

Community and Labor Engagement

- Extent to which the applicant demonstrates community and labor engagement to date that results in support for the proposed project.
- Extent to which the applicant has a clear and appropriately robust plan to engage—ideally through a clear commitment to negotiate an enforceable Workforce & Community Agreements—with labor unions, Tribal entities,

and community-based organizations that support or work with disadvantaged communities and other affected stakeholders.

- Extent to which the applicant has considered accountability to affected workers and community stakeholders, including those most vulnerable to project activities with a plan to publicly share SMART community benefits plan commitments.
- Extent to which the applicant demonstrates that community and labor engagement will lead to the delivery of high-quality jobs, minimal environmental impact, and allocation of project benefits to disadvantaged communities.

Quality Jobs

- Quality and manner in which the proposed project will create and/or retain high quality, good-paying jobs with employer-sponsored benefits for all classifications and phases of work.
- Extent to which the project provides employees with the ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them and that contribute to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple public benefits.
- Extent to which applicant demonstrates that they are a responsible employer, with ready access to a sufficient supply of appropriately skilled labor, and an effective plan to minimize the risk of labor disputes or disruptions.

Diversity, Equity, Inclusion, and Accessibility (DEIA)

- The quality and manner in which the proposed project incorporates and measures diversity, equity, inclusion and accessibility goals in the project, as reflected in the applicant's Community Benefits Plan.
- Extent to which the project supports the development or demonstration in disadvantaged communities, supports existing minority business enterprises (MBEs) or promotes the creation of MBEs and underrepresented businesses in disadvantaged communities.
- Quality of any partnerships and agreements with apprenticeship readiness programs, or community-based workforce training and support organizations serving workers facing systematic barriers to employment to facilitate participation in the project's construction and operations.
- Extent of engagement of organizations that represent underserved communities as core element of their mission to include Minority Serving Institutions (MSIs), MBEs, associations, and non-profit organizations.

- Extent to which the project illustrates the ability to meet or exceed the objectives of the Justice40 initiative, including the extent to which the project benefits disadvantaged, underserved communities or partners with Tribal Nations.

Justice40 Initiative

- Extent to which the Community Benefits Plan identifies: specific, measurable benefits for disadvantaged communities, how the benefits will flow to disadvantaged communities, and how negative environmental impacts affecting disadvantaged communities would be mitigated.
- Extent to which the project would contribute to meeting the objective that 40% of the benefits of climate and clean energy investments flow to disadvantaged communities.

Criterion 1 Topic Area 2: Impact, Transformation, and Technical Merit (50%):

This criterion involves consideration of the following factors:

- Extent to which the project supports the Topic Area 2 objectives and desired outcomes.
- Extent to which the project deploys technology solutions that address Topic Area 2 priority investments.
- Extent to which the project deploys technology solutions that increase the flexibility, efficiency, reliability and resilience of the electric power system.
- Extent to which the project supports State, local, Tribal, regional resilience, decarbonization, or other energy strategies and plans.
- Extent to which the application provides sufficient technical detail to demonstrate that the proposed project is technically feasible and would likely result in the described smart grid benefits.
- The potential impact of the project to reduce risk for deployment of innovative technologies or solutions and lead to further deployment at-scale.
- The potential impact of the project to catalyze additional private sector investments and/or non-federal public or regulated capital.

Criterion 2 for Topic Area 2: Project Plan and Project Financial Feasibility (20%)

This criterion involves consideration of the following factors:

Project Approach, Workplan, and Statement of Project Objectives (SOPO)

- Degree to which the approach and critical path have been clearly described and thoughtfully considered.
- Degree to which the task descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan and SOPO will succeed in meeting the project goals.

Identification of Risks

- Discussion and demonstrated understanding of the key anticipated risks (e.g., technical, financial, market, environmental, regulatory) involved in the proposed work and the quality of the mitigation strategies to address them.

Baseline, Metrics, and Deliverables

- The level of clarity in the definition of the baseline, metrics, and milestones.
- Relative to a clearly defined baseline, the strength of the quantifiable metrics, milestones, and mid-point deliverables defined in the application, such that meaningful interim progress will be made.

Project Financial Feasibility

- The reasonableness of the budget and spend plan for the proposed project and objectives.
- Soundness of proposed cost share; level of dedication as demonstrated by letter(s) of commitment that clearly identify type and amount of proposed cost share. Proposed cost share meets requirements outlined in the FOA.
- The degree to which the proposed project yields additive benefit(s) from the federal funding to undertake additional efforts that would not be taken but-for the funding or to accelerate or expand planned activities that would not be accelerated or expanded but-for the funding.
- The degree to which the applicant justifies the project's economic viability.
- The degree to which the project provides enhanced system value and/or provides improved current and future system cost-effectiveness and delivers economic benefit.

Criterion 3 for Topic Area 2: Management Team and Project Partners (10%)

This criterion involves consideration of the following factors:

Project Management

- Clarity and appropriateness of the roles and responsibilities of the project management organization and the project team, including relevant and critical subrecipients and vendors.

- The capability of the Project Manager(s) and the proposed team to manage and address all aspects of the proposed work with a high probability of success.
- The qualifications, relevant expertise, and time commitment of the key individuals on the team.
- The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Project Plan/Workplan.
- The degree to which the applicant has defined and described a project management structure that addresses interfaces with DOE.

Partners

- Degree to which the applicant includes partnerships with critical entities that will help ensure project success, as well as any partnerships with entities (including other states) outside of the applicant's jurisdiction, who will commit to encourage asset operators (e.g., utilities, merchant developers) to replicate the proposed approaches, technologies or solutions, as applicable.

Criterion 4 for Topic Area 2: Community Benefits Plan (20%)

Every BIL-funded project is expected to contribute to the country's energy infrastructure modernization goals, energy technology demonstration and deployment goals, and climate goals, and also to (1) support meaningful community and labor engagement; (2) support quality jobs and ensure workforce continuity; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the Justice40 Initiative's goal that 40% of the overall project benefits flow to disadvantaged communities.

To ensure these goals are met, applications must include a Community Benefits Plan that illustrates how the proposed project plans to incorporate the four goals stated above and are encouraged to submit Community Partnership Documentation from established labor unions, Tribal entities, and community-based organizations that demonstrate the applicant's ability to achieve the above goals as outlined in the Community Benefits Plan.

This criterion involves consideration of the following factors:

Community and Labor Engagement

- Extent to which the applicant demonstrates community and labor engagement to date that results in support for the proposed project.
- Extent to which the applicant has a clear and appropriately robust plan to engage—ideally through a clear commitment to negotiate an enforceable Workforce & Community Agreements—with labor unions, Tribal entities,

and community-based organizations that support or work with disadvantaged communities and other affected stakeholders.

- Extent to which the applicant has considered accountability to affected workers and community stakeholders, including those most vulnerable to project activities with a plan to publicly share SMART community benefits plan commitments.
- Extent to which the applicant demonstrates that community and labor engagement will lead to the delivery of high-quality jobs, minimal environmental impact, and allocation of project benefits to disadvantaged communities.

Quality Jobs

- Quality and manner in which the proposed project will create and/or retain high quality, good-paying jobs with employer-sponsored benefits for all classifications and phases of work.
- Extent to which the project provides employees with the ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them and that contribute to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple public benefits.
- Extent to which applicant demonstrates that they are a responsible employer, with ready access to a sufficient supply of appropriately skilled labor, and an effective plan to minimize the risk of labor disputes or disruptions.

Diversity, Equity, Inclusion, and Accessibility (DEIA)

- The quality and manner in which the proposed project incorporates and measures diversity, equity, inclusion and accessibility goals in the project, as reflected in the applicant's Community Benefits Plan.
- Extent to which the project supports the development or demonstration in disadvantaged communities, supports existing minority business enterprises (MBEs) or promotes the creation of MBEs and underrepresented businesses in disadvantaged communities.
- Quality of any partnerships and agreements with apprenticeship readiness programs, or community-based workforce training and support organizations serving workers facing systematic barriers to employment to facilitate participation in the project's construction and operations.
- Extent of engagement of organizations that represent underserved communities as core element of their mission to include Minority Serving Institutions (MSIs), MBEs, associations, and non-profit organizations.

- Extent to which the project illustrates the ability to meet or exceed the objectives of the Justice40 initiative, including the extent to which the project benefits disadvantaged, underserved communities or partners with Tribal Nations.

Justice40 Initiative

- Extent to which the Community Benefits Plan identifies: specific, measurable benefits for disadvantaged communities, how the benefits will flow to disadvantaged communities, and how negative environmental impacts affecting disadvantaged communities would be mitigated.
- Extent to which the project would contribute to meeting the objective that 40% of the benefits of climate and clean energy investments flow to disadvantaged communities.

Criterion 1 for Topic Area 3: Impact and Market Viability (50%)

This criterion involves consideration of the following factors:

- Extent to which the project supports Topic Area 3 objectives and will deliver the desired Topic Area 3 outcomes.
- Extent to which the project demonstrates innovative approaches to support deployment goals across transmission system, distribution system, storage or a combination to achieve Topic Area 3 primary objectives.
- Extent to which the project clearly enhances collaboration between eligible entities and owners/operators to meet Topic Area 3 objectives.
- Extent to which the project offers the greatest public benefit with a clear path to replication, scale and ability to ensure electricity system reliability and/or resilience, provide enhanced system value and economic benefit, and contribute to the decarbonization of the electricity and broader energy systems.
- Extent that the project has the potential to deliver near-term impact.
- Extent to which project supports State, local, Tribal, and regional resilience, decarbonization, or other energy strategies and plans.
- The potential impact of the project to increase adoption of innovative approach(es), for example to lead to more widespread deployment of advanced technologies; innovative partnerships; new financial arrangements; increased non-Federal investment; deployment of projects identified by innovative planning, modeling, or cost allocation approaches; and/or innovative environmental siting, permitting strategies, or community engagement practices.

**Criterion 2 for Topic Area 3: Project Plan and Project Financial Feasibility
(20%)**

This criterion involves consideration of the following factors.

Project Approach, Workplan, and Statement of Project Objectives (SOPO)

- Degree to which the approach and critical path have been clearly described and thoughtfully considered.
- Degree to which the task descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan and SOPO will succeed in meeting the project goals.

Identification of Risks

- Discussion and demonstrated understanding of the key anticipated risks (e.g., technical, financial, market, environmental, regulatory) involved in the proposed work and the quality of the mitigation strategies to address them.

Baseline, Metrics, and Deliverables

- The level of clarity in the definition of the baseline, metrics, and milestones.
- Relative to a clearly defined baseline, the strength of the quantifiable metrics, milestones, and mid-point deliverables defined in the application, such that meaningful interim progress will be made.

Project Financial Feasibility

- The reasonableness of the budget and spend plan for the proposed project and objectives.
- Soundness of proposed cost share; level of dedication as demonstrated by letter(s) of commitment that clearly identify type and amount of proposed cost share. Proposed cost share meets requirements outlined in the FOA.
- The degree to which the proposed project yields additive benefit(s) from the federal funding to undertake additional efforts that would not be taken but-for the funding or to accelerate or expand planned activities that would not be accelerated or expanded but-for the funding.
- The degree to which the applicant justifies the project's economic viability.
- The degree to which the project provides enhanced system value and/or provides improved current and future system cost-effectiveness and delivers economic benefit.

Project Viability, Readiness, and Timing

- Evidence to support the state of project planning, development, including depth, stage and degree of completeness of engineering design; status of critical agreements and permits; customer expressions of interest; and financial commitments beyond the support sought under this FOA.

Criterion 3 for Topic Area 3: Management Team and Project Partners (10%)

This criterion involves consideration of the following factors:

Project Management

- Clarity and appropriateness of the roles and responsibilities of the project management organization and the project team, including relevant and critical subrecipients and vendors.
- The capability of the Project Manager(s) and the proposed team to manage and address all aspects of the proposed work with a high probability of success.
- The qualifications, relevant expertise, and time commitment of the key individuals on project team.
- The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Project Plan/Workplan.
- The degree to which the applicant has defined and described a project management structure that addresses interfaces with DOE.

Partners

- Degree to which the applicant includes partnerships with critical entities that will help ensure project success, as well as any partnerships with entities (including other states) outside of the applicant's jurisdiction, who will commit to encourage asset operators (e.g., utilities, merchant developers) to replicate the proposed approaches, technologies or solutions, as applicable.

Criterion 4 for Topic Area 3: Community Benefits Plan (20%)

Every BIL-funded project is expected to contribute to the country's energy infrastructure modernization goals, energy technology demonstration and deployment goals, and climate goals, and also to (1) support meaningful community and labor engagement; (2) support quality jobs and ensure workforce continuity; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the Justice40 Initiative's goal that 40% of the overall project benefits flow to disadvantaged communities.

To ensure these goals are met, applications must include a Community Benefits Plan that illustrates how the proposed project plans to incorporate the four goals stated above and are encouraged to submit Community Partnership Documentation from established labor unions, Tribal entities, and community-based organizations that demonstrate the applicant's ability to achieve the above goals as outlined in the Community Benefits Plan.

This criterion involves consideration of the following factors:

Community and Labor Engagement

- Extent to which the applicant demonstrates community and labor engagement to date that results in support for the proposed project.
- Extent to which the applicant has a clear and appropriately robust plan to engage—ideally through a clear commitment to negotiate an enforceable Workforce & Community Agreements—with labor unions, Tribal entities, and community-based organizations that support or work with disadvantaged communities and other affected stakeholders.
- Extent to which the applicant has considered accountability to affected workers and community stakeholders, including those most vulnerable to project activities with a plan to publicly share SMART community benefits plan commitments.
- Extent to which the applicant demonstrates that community and labor engagement will lead to the delivery of high-quality jobs, minimal environmental impact, and allocation of project benefits to disadvantaged communities.

Quality Jobs

- Quality and manner in which the proposed project will create and/or retain high quality, good-paying jobs with employer-sponsored benefits for all classifications and phases of work.
- Extent to which the project provides employees with the ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them and that contribute to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple public benefits.
- Extent to which applicant demonstrates that they are a responsible employer, with ready access to a sufficient supply of appropriately skilled labor, and an effective plan to minimize the risk of labor disputes or disruptions.

Diversity, Equity, Inclusion, and Accessibility (DEIA)

- The quality and manner in which the proposed project incorporates and measures diversity, equity, inclusion and accessibility goals in the project, as reflected in the applicant's Community Benefits Plan.
- Extent to which the project supports the development or demonstration in disadvantaged communities, supports existing minority business enterprises (MBEs) or promotes the creation of MBEs and underrepresented businesses in disadvantaged communities.
- Quality of any partnerships and agreements with apprenticeship readiness programs, or community-based workforce training and support organizations serving workers facing systematic barriers to employment to facilitate participation in the project's construction and operations.
- Extent of engagement of organizations that represent underserved communities as core element of their mission to include Minority Serving Institutions (MSIs), MBEs, associations, and non-profit organizations.
- Extent to which the project illustrates the ability to meet or exceed the objectives of the Justice40 initiative, including the extent to which the project benefits disadvantaged, underserved communities or partners with Tribal Nations.

Justice40 Initiative

- Extent to which the Community Benefits Plan identifies: specific, measurable benefits for disadvantaged communities, how the benefits will flow to disadvantaged communities, and how negative environmental impacts affecting disadvantaged communities would be mitigated.
- Extent to which the project would contribute to meeting the objective that 40% of the benefits of climate and clean energy investments flow to disadvantaged communities.

B. Standards for Application Evaluation

Applications that are determined to be eligible will be evaluated in accordance with this FOA and the guidance provided in the "DOE Merit Review Guide for Financial Assistance," effective September 2020, which is available at: <https://energy.gov/management/downloads/merit-review-guide-financial-assistance-and-unsolicited-proposals-current>.

C. Other Selection Factors

i. Program Policy Factors

In addition to the above criteria, the Selection Official may consider the following program policy factors in determining which Full Applications to select for award negotiations:

- The degree to which the proposed project exhibits technological diversity when compared to the existing DOE project portfolio and other projects selected from the subject FOA;
- The degree to which the proposed project, including proposed cost share, optimizes the use of available DOE funding to achieve programmatic objectives;
- The degree to which the proposed project will deliver the greatest benefits for less Federal cost share;
- The level of industry involvement and demonstrated ability to accelerate commercialization and overcome key market barriers;
- For Topic Area 1, the degree to which the applicant supports the availability of information before during and after resilience events through participation in the Outage Data Initiative Nationwide (ODIN),⁵² a voluntary program to promote increasing standardization of outage data, accessible and achievable by any size utility;
- The degree to which the proposed project is likely to lead to increased high-quality employment and manufacturing in the United States;
- The degree to which the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty;
- The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications), including whether the project is in a community facing job loss in the energy transition;
- The degree to which the proposed project incorporates diversity, equity, and inclusion elements, including, but not limited to, applicant or team members from Minority Serving Institutions (e.g. Historically Black Colleges and Universities (HBCUs)/Other Minority Institutions), Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, Veteran Owned Businesses, Tribal Nations, or members within underserved communities;
- The degree to which the proposed project maximizes benefits to disadvantaged communities;
- The degree to which the proposed project minimizes environmental impacts to disadvantaged communities;
- The degree to which the project's solution or strategy will maximize deployment or replication;
- The degree to which the proposed project leverages existing infrastructure, facilities, and/or workforce skills;
- The degree to which the proposed project will employ procurement of U.S. iron, steel, manufactured products, and construction materials;

⁵² More information is available at odin.ornl.gov

- The degree to which the proposed project, when compared to the existing DOE project portfolio and other projects to be selected from the subject FOA, contributes to the total portfolio meeting the goals reflected in the Community Benefits Plan criteria;
- The degree to which the proposed project avoids duplication/overlap with other publicly or privately funded work.

D. Evaluation and Selection Process

i. Overview

The evaluation process consists of multiple phases; each includes an initial eligibility review and a thorough technical merit review. Rigorous technical merit reviews of eligible submissions are conducted by reviewers that are experts in the subject matter of the FOA. Ultimately, the Selection Official considers the recommendations of the reviewers, along with other considerations such as program policy factors, in determining which applications to select.

ii. Pre-Selection Interviews

As part of the evaluation and selection process, DOE may invite one or more applicants to participate in Pre-Selection Interviews. Pre-Selection Interviews are distinct from and more formal than pre-selection clarifications (See Section V.D.ii. of the FOA). The invited applicant(s) will meet with DOE representatives to provide clarification on the contents of the Full Applications and to provide DOE an opportunity to ask questions regarding the proposed project. The information provided by applicants to DOE through Pre-Selection Interviews contributes to DOE's selection decisions.

DOE will arrange to meet with the invited applicants in person at DOE's offices or a mutually agreed upon location. DOE may also arrange site visits at certain applicants' facilities. In the alternative, DOE may invite certain applicants to participate in a one-on-one conference with DOE via webinar, videoconference, or conference call.

DOE will not reimburse applicants for travel and other expenses relating to the Pre-Selection Interviews, nor will these costs be eligible for reimbursement as pre-award costs.

DOE may obtain additional information through Pre-Selection Interviews that will be used to make a final selection determination. DOE may select applications for funding and make awards without Pre-Selection Interviews. Participation in Pre-Selection Interviews with DOE does not signify that applicants have been selected for award negotiations.

iii. Pre-Selection Clarification

DOE may determine that pre-selection clarifications are necessary from one or more applicants. Pre-selection clarifications are distinct from and less formal than pre-selection interviews. These pre-selection clarifications will solely be for the purposes of clarifying the application. The pre-selection clarifications may occur before, during or after the merit review evaluation process. Information provided by an applicant that is not necessary to address the pre-selection clarification question will not be reviewed or considered. Typically, a pre-selection clarification will be carried out through either written responses to DOE's written clarification questions or video or conference calls with DOE representatives.

The information provided by applicants to DOE through pre-selection clarifications is incorporated in their applications and contributes to the merit review evaluation and DOE's selection decisions. If DOE contacts an applicant for pre-selection clarification purposes, it does not signify that the applicant has been selected for negotiation of award or that the applicant is among the top ranked applications.

DOE will not reimburse applicants for expenses relating to the pre-selection clarifications, nor will these costs be eligible for reimbursement as pre-award costs.

iv. Recipient Integrity and Performance Matters

DOE, prior to making a federal award with a total amount of federal share greater than the simplified acquisition threshold, is required to review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently FAPIIS) (see 41 U.S.C. 2313).

The applicant, at its option, may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM.

DOE will consider any written comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.206.

v. Selection

The Selection Official may consider the technical merit, the Federal Consensus Board's recommendations, program policy factors, and the amount of funds available in arriving at selections for this FOA.

E. Anticipated Notice of Selection and Award Negotiation

Dates

DOE anticipates notifying applicants selected for negotiation of award and negotiating awards by the dates provided on the cover page of this FOA.

VI. Award Administration Information

A. Award Notices

i. Ineligible Submissions

Ineligible Concept Papers and Full Applications will not be further reviewed or considered for award. The Contracting Officer will send a notification letter by email to the technical and administrative points of contact designated by the applicant. The notification letter will state the basis upon which the Concept Paper or the Full Application is ineligible and not considered for further review.

ii. Concept Paper Notifications

DOE will notify applicants of its determination to encourage or discourage the submission of a Full Application. DOE will send a notification letter by email to the technical and administrative points of contact designated by the applicant in on the Concept Paper cover page.

Applicants may submit a Full Application even if they receive a notification discouraging them from doing so. By discouraging the submission of a Full Application, DOE intends to convey its lack of programmatic interest in the proposed project. Such assessments do not necessarily reflect judgments on the merits of the proposed project. The purpose of the Concept Paper phase is to save applicants the considerable time and expense of preparing a Full Application that is unlikely to be selected for award negotiations.

A notification encouraging the submission of a Full Application does not authorize the applicant to commence performance of the project. Please refer to Section IV.I.ii. of the FOA for guidance on pre-award costs.

iii. Full Application Notifications

DOE will notify applicants of its determination via a notification letter by email to the technical and administrative points of contact designated by the applicant in Grants.gov. The notification letter will inform the applicant whether or not its Full Application was selected for award negotiations. Alternatively, DOE may notify one or more applicants that a final selection determination on particular Full Applications will be made at a later date, subject to the availability of funds or other factors.

iv. Successful Applicants

Receipt of a notification letter selecting a Full Application for award negotiations does not authorize the applicant to commence performance of the project. If an application is selected for award negotiations, it is not a commitment by DOE to issue an award. Applicants do not receive an award until award negotiations are complete and the Contracting Officer executes the funding agreement, accessible by the prime recipient in FedConnect.

The award negotiation process will take approximately 60 days. Applicants must designate a primary and a backup point-of-contact in Grants.gov with whom DOE will communicate to conduct award negotiations. The applicant must be responsive during award negotiations (i.e., provide requested documentation) and meet the negotiation deadlines. If the applicant fails to do so or if award negotiations are otherwise unsuccessful, DOE will cancel the award negotiations and rescind the Selection. DOE reserves the right to terminate award negotiations at any time for any reason.

Please refer to Section IV.I.ii. of the FOA for guidance on pre-award costs.

v. Alternate Selection Determinations

In some instances, an applicant may receive a notification that its application was not selected for award and DOE designated the application to be an alternate. As an alternate, DOE may consider the Full Application for federal funding in the future. A notification letter stating the Full Application is designated as an alternate does not authorize the applicant to commence performance of the project. DOE may ultimately determine to select or not select the Full Application for award negotiations.

vi. Unsuccessful Applicants

DOE shall promptly notify in writing each applicant whose application has not been selected for award or whose application cannot be funded because of the unavailability of appropriated funds.

B. Administrative and National Policy Requirements

i. Registration Requirements

There are several one-time actions before submitting an application in response to this FOA, and it is vital that applicants address these items as soon as possible. Some may take several weeks, and failure to complete them could interfere with an applicant's ability to apply to this FOA, or to meet the negotiation deadlines and receive an award if the application is selected. These requirements are as follows:

1. System for Award Management

Register with the SAM at <https://www.sam.gov>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called a Marketing Partner ID Number (MPIN) are important steps in SAM registration. Please update your SAM registration annually.

2. FedConnect

Register in FedConnect at <https://www.fedconnect.net>. To create an organization account, your organization's SAM MPIN is required. For more information about the SAM MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect_Ready_Set_Go.pdf.

3. Grants.gov

Register in Grants.gov (<https://www.grants.gov/>) to receive automatic updates when Amendments to this FOA are posted. However, please note that Concept Papers will not be accepted through Grants.gov.

4. Electronic Authorization of Applications and Award Documents

Submission of an application and supplemental information under this FOA through electronic systems used by the DOE, including Grants.gov and FedConnect.net, constitutes the authorized representative's approval and electronic signature.

ii. Award Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR Part 200 as amended by 2 CFR Part 910.

iii. Foreign National Participation (September 2021)

All applicants selected for an award under this FOA and project participants (including subrecipients and contractors) who anticipate involving foreign nationals in the performance of an award, will be required to provide DOE with

specific information about each foreign national to satisfy requirements for foreign national participation. A “foreign national” is defined as any person who is not a United States citizen by birth or naturalization. The volume and type of information collected may depend on various factors associated with the award. DOE concurrence may be required before a foreign national can participate in the performance of any work under an award.

Approval for foreign nationals from countries identified on the U.S. Department of State’s list of State Sponsors of Terrorism must be obtained from DOE before they can participate in the performance of any work under an award.

iv. Subaward and Executive Reporting

Additional administrative requirements necessary for DOE grants and cooperative agreements to comply with the Federal Funding and Transparency Act of 2006 (FFATA) are contained in 2 CFR Part 170. Prime recipients must register with the new FFATA Subaward Reporting System database and report the required data on their first tier subrecipients. Prime recipients must report the executive compensation for their own executives as part of their registration profile in SAM.

v. National Policy Requirements

The National Policy Assurances that are incorporated as a term and condition of award are located at: <http://www.nsf.gov/awards/managing/rtc.jsp>.

vi. Environmental Review in Accordance with National Environmental Policy Act (NEPA)

DOE’s decision whether and how to distribute federal funds under this FOA is subject to NEPA (42 U.S.C. 4321, *et seq.*). NEPA requires federal agencies to integrate environmental values into their decision-making processes by considering the potential environmental impacts of their proposed actions. For additional background on NEPA, please see DOE’s NEPA website, at <https://www.energy.gov/nepa>.

While NEPA compliance is a federal agency responsibility and the ultimate decisions remain with the federal agency, all recipients selected for an award will be required to assist in the timely and effective completion of the NEPA process in the manner most pertinent to their proposed project. If DOE determines certain records must be prepared to complete the NEPA review process (e.g., biological evaluations or environmental assessments), the recipient may be required to prepare the records and the costs to prepare the necessary records may be included as part of the project costs.

vii. Flood Resilience

Applications should indicate whether the proposed project location(s) is within a floodplain, how the floodplain was defined, and how future flooding will factor into the project's design. The base floodplain long used for planning has been the 100-year floodplain, that is, a floodplain with a 1.0 percent chance of flooding in any given year. As directed by Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input (2015), Federal agencies, including DOE, continue to avoid development in a floodplain to the extent possible. When doing so is not possible, Federal agencies are directed to "expand management from the current base flood level to a higher vertical elevation and corresponding horizontal floodplain to address current and future flood risk and ensure that projects funded with taxpayer dollars last as long as intended." The higher flood elevation is based on one of three approaches: climate-informed science (preferred), freeboard value, or 0.2 percent annual flood change (500-year floodplain). EO 13690 and related information is available at <https://www.energy.gov/nepa/articles/eo-13690-establishing-federal-flood-risk-management-standard-and-process-further>.

viii. Applicant Representations and Certifications

1. Lobbying Restrictions

By accepting funds under this award, the prime recipient agrees that none of the funds obligated on the award shall be expended, directly or indirectly, to influence Congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. § 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

2. Corporate Felony Conviction and Federal Tax Liability Representations

In submitting an application in response to this FOA, the applicant represents that:

- a. It is **not** a corporation that has been convicted of a felony criminal violation under any federal law within the preceding 24 months; and
- b. It is **not** a corporation that has any unpaid federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

For purposes of these representations the following definitions apply:

A Corporation includes any entity that has filed articles of incorporation in any of the 50 states, the District of Columbia, or the various territories of the United States [but not foreign corporations]. It includes both for-profit and non-profit organizations.

3. Nondisclosure and Confidentiality Agreements Representations

In submitting an application in response to this FOA the applicant represents that:

- a. It **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contractors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.
- b. It **does not and will not** use any federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:
 - (1) *“These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive Order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive Orders and statutory provisions are incorporated into this agreement and are controlling.”*
 - (2) The limitation above shall not contravene requirements applicable to Standard Form 312 Classified Information Nondisclosure Agreement (<https://fas.org/sgp/othergov/sf312.pdf>), Form 4414 Sensitive Compartmented Information Disclosure Agreement (<https://fas.org/sgp/othergov/intel/sf4414.pdf>), or any other form issued by a federal department or agency governing the nondisclosure of classified information.
 - (3) Notwithstanding the provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by

a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States government, may contain provisions appropriate to the particular activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so by the United States government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

ix. Statement of Federal Stewardship

DOE will exercise normal federal stewardship in overseeing the project activities performed under DOE awards. Stewardship Activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing assistance and/or temporary intervention in unusual circumstances to correct deficiencies that develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the project objectives have been accomplished.

x. Statement of Substantial Involvement (Applies to Topic Area 3 ONLY)

DOE has substantial involvement in work performed under awards made as a result of this FOA. DOE does not limit its involvement to the administrative requirements of the award. Instead, DOE has substantial involvement in the direction and redirection of the technical aspects of the project as a whole. Substantial involvement includes, but is not limited to, the following:

1. DOE shares responsibility with the recipient for the management, control, direction, and performance of the project.
2. DOE may intervene in the conduct or performance of work under this award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.
3. DOE may redirect or discontinue funding the project based on the outcome of DOE's evaluation of the project at the Go/No-Go decision point(s) as identified in the Project Management Plan.
4. Reviewing and concurring with ongoing technical performance to ensure that adequate progress has been obtained within the current Budget Period authorized by DOE before work can commence on subsequent Budget Periods.

5. DOE participates in major project decision-making processes.

xi. Intellectual Property Management Plan (IPMP)

As a quarter 1 milestone if selected for award, applicants must submit an executed IPMP between the members of the consortia or team.

The award will set forth the treatment of and obligations related to intellectual property rights between DOE and the individual members. The IPMP should describe how the members will handle intellectual property rights and issues between themselves while ensuring compliance with federal intellectual property laws, regulations, and policies (see Sections VIII.J.-VIII.N. of this FOA for more details on applicable federal intellectual property laws and regulations). Guidance regarding the contents of IPMP is available from DOE upon request.

The following is a non-exhaustive list of examples of items that the IPMP may cover:

- The treatment of confidential information between members (e.g., the use of NDAs);
- The treatment of background intellectual property (e.g., any requirements for identifying it or making it available);
- The treatment of inventions made under the award (e.g., any requirements for disclosing to the other members on an application, filing patent applications, paying for patent prosecution, and cross-licensing or other licensing arrangements between the members);
- The treatment of data produced, including software, under the award (e.g., any publication process or other dissemination strategies, copyrighting strategy or arrangement between members);
- Any technology transfer and commercialization requirements or arrangements between the members;
- The treatment of any intellectual property issues that may arise due to a change in membership of the consortia or team; and
- The handling of disputes related to intellectual property between the members.

xii. Intellectual Property Provisions

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at <http://energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards>.

xiii. Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist and Instructions, DOE F 4600.2, attached to the award agreement. A

sample checklist is available at: [BIL-GRIP Application Forms and Templates | netl.doe.gov](https://netl.doe.gov).

Additional reporting requirements apply to projects funded by BIL. As part of tracking progress toward key departmental goals – ensuring justice and equity, investing in the American workforce, boosting domestic manufacturing, reducing greenhouse gas emissions, and advancing a pathway to private sector deployment – DOE may require specific data collection. Examples of data that may be collected include:

- New manufacturing production, and recycling capacity
- Jobs data including
- Number and types of training jobs provided, wages and benefits paid
- Demographics of workforce including local hires
- Efforts to minimize risks of labor disputes and disruptions
- Contributions to training; certificates and training credentials received by employees; ratio of apprentice-to-journey level workers employed
- Justice and Equity data, including
 - Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses and Veteran Owned Businesses acting as vendors and sub-contractors for bids on supplies, services and equipment.
 - Value, number, and type of partnerships with MSIs
 - Stakeholder engagement events, consent-based siting activities
 - Other relevant indicators from the Community Benefits Plan
- Number and type of energy efficient and clean energy equipment installed
- Funding leveraged, follow-on-funding, Intellectual Property (IP) Generation and IP Utilization
- Biennial Report to Congress - (Applies to Topic Area 1 ONLY), See Section I.B. for more information.

xiv. Go/No-Go Review

Each project selected under this FOA will be subject to a periodic project evaluation referred to as a Go/No-Go Review. A Go/No-Go Review is a risk management tool and a project management best practice to ensure that, for the current phase or period of performance, technical success is definitively achieved and potential for success in future phases or periods of performance is evaluated, prior to actually beginning the execution of future phases. At the Go/No-Go decision points, DOE will evaluate project performance, project schedule adherence, the extent milestone objectives are met, compliance with

reporting requirements, and overall contribution to the program goals and objectives. Federal funding beyond the Go/No-Go decision point (continuation funding) is contingent upon (1) availability of federal funds appropriated by Congress for the purpose of this program; (2) the availability of future-year budget authority; (3) recipient's technical progress as compared to the technical milestones, success criteria, and go/no-go decision point as described in the Project Management Plan; (4) recipient's submittal of required reports; (5) recipient's compliance with the terms and conditions of the award; (6) the recipient's submission of a continuation application⁵³; and (7) written approval of the continuation application by the Contracting Officer.

As a result of the Go/No-Go Review, DOE may, at its discretion, authorize the following actions: (1) continue to fund the project, contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority; (2) recommend redirection of work under the project; (3) place a hold on federal funding for the project, pending further supporting data or funding; or (4) discontinue funding the project because of insufficient progress, change in strategic direction, or lack of funding.

The Go/No-Go decision is distinct from a non-compliance determination. In the event a recipient fails to comply with the requirements of an award, DOE may take appropriate action, including but not limited to, redirecting, suspending or terminating the award.

xv. Conference Spending

The recipient shall not expend any funds on a conference not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded that would defray the cost to the United States government of a conference held by any Executive branch department, agency, board, commission, or office for which the cost to the United States government would otherwise exceed \$20,000, thereby circumventing the required

⁵³ A continuation application is a non-competitive application for an additional budget period within a previously approved project period. At least ninety (90) days before the end of each budget period, the recipient must submit its continuation application, which includes the following information:

- i. A progress report on the project objectives, including significant findings, conclusions, or developments, and an estimate of any unobligated balances remaining at the end of the budget period. If the remaining unobligated balance is estimated to exceed 20 percent of the funds available for the budget period, explain why the excess funds have not been obligated and how they will be used in the next budget period.
- ii. A detailed budget and supporting justification if there are changes to the negotiated budget, or a budget for the upcoming budget period was not approved at the time of award.
- iii. A description of any planned changes from the SOPO and/or Milestone Summary Table.

notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General (or senior ethics official for any entity without an Inspector General), of the date, location, and number of employees attending such conference.

xvi. Uniform Commercial Code (UCC) Financing Statements

Per 2 CFR 910.360 (Real Property and Equipment) when a piece of equipment is purchased by a for-profit recipient or subrecipient with federal funds, and when the federal share of the financial assistance agreement is more than \$1,000,000, the recipient or subrecipient must:

Properly record, and consent to the Department's ability to properly record if the recipient fails to do so, UCC financing statement(s) for all equipment in excess of \$5,000 purchased with project funds. These financing statement(s) must be approved in writing by the Contracting Officer prior to the recording, and they shall provide notice that the recipient's title to all equipment (not real property) purchased with federal funds under the financial assistance agreement is conditional pursuant to the terms of this section, and that the government retains an undivided reversionary interest in the equipment. The UCC financing statement(s) must be filed before the Contracting Officer may reimburse the recipient for the federal share of the equipment unless otherwise provided for in the relevant financial assistance agreement. The recipient shall further make any amendments to the financing statements or additional recordings, including appropriate continuation statements, as necessary or as the Contracting Officer may direct.

xvii. Implementation of Executive Order 13798, Promoting Free Speech and Religious Liberty

States, local governments, or other public entities may not condition sub-awards in a manner that would discriminate, or disadvantage sub-recipients based on their religious character.

xviii. Participants and Collaborating Organizations

If selected for award negotiations, the selected applicant must submit a list of personnel who are proposed to work on the project, both at the recipient and subrecipient level and a list of collaborating organizations within 30 days after the applicant is notified of the selection. Recipients will have an ongoing responsibility to notify DOE of changes to the personnel and collaborating organizations and submit updated information during the life of the award.

xix. Requirement to Report Potentially Duplicative Funding

If a recipient or project team member receives any other award of federal funds for activities that potentially overlap with the activities funded under the DOE

award, the recipient must promptly notify DOE in writing of the potential overlap and state whether project funds from any of those other federal awards have been, are being, or are to be used (in whole or in part) for one or more of the identical cost items under the DOE award. If there are identical cost items, the recipient must promptly notify the DOE Contracting Officer in writing of the potential duplication and eliminate any inappropriate duplication of funding. Also See Section IV.D.xvi.

xx. Interim Conflict of Interest Policy for Financial Assistance

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy)⁵⁴ is applicable to all non-Federal entities applying for, or that receive, DOE funding by means of a financial assistance award (e.g., a grant, cooperative agreement, or technology investment agreement) and, through the implementation of this policy by the entity, to each senior/key personnel⁵⁵ who is planning to participate in, or is participating in, the project funded wholly or in part under the DOE financial assistance award. The term “senior/key personnel” means the Program/Project Manager and any other person, regardless of title or position, who is responsible for the purpose, design, conduct, or reporting of a project funded by DOE or proposed for funding by DOE. Recipients must flow down the requirements of the interim COI Policy to any subrecipient non-Federal entities. Further, for DOE funded projects, the recipient must include all financial conflicts of interest (FCOI) (i.e., managed and unmanaged/ unmanageable) in their initial and ongoing FCOI reports.

It is understood that non-Federal entities and individuals receiving DOE financial assistance awards will need sufficient time to come into full compliance with DOE’s interim COI Policy. To provide some flexibility, DOE allows for a staggered implementation. **Specifically, prior to award, applicants selected for award negotiations must: ensure all senior/key personnel complete their significant financial disclosures; review the disclosures; determine whether a FCOI exists; develop and implement a management plan for FCOIs; and provide DOE with an initial FCOI report that includes all FCOIs (i.e., managed and unmanaged/ unmanageable).** Recipients will have 180 days from the date of the award to come into full compliance with the other requirements set forth in DOE’s interim COI Policy. **Prior to award, the applicant must certify that it is, or will be within 180 days of the award, compliant with all requirements in the COI Policy.**

⁵⁴ DOE’s interim COI Policy can be found at [PF 2022-17 FAL 2022-02 Department of Energy Interim Conflict of Interest Policy Requirements for Financial Assistance](#).

⁵⁵ For purposes of this subsection of the FOA, the term “senior/key personnel” has the same meaning as “Investigator” as defined in the DOE interim COI Policy.

xxi. Fraud, Waste and Abuse

The mission of the DOE Office of Inspector General (OIG) is to strengthen the integrity, economy and efficiency of the Department's programs and operations including deterring and detecting fraud, waste, abuse and mismanagement. The OIG accomplishes this mission primarily through investigations, audits, and inspections of DOE activities to include grants, cooperative agreements, loans, and contracts.

The OIG maintains a Hotline for reporting allegations of fraud, waste, abuse, or mismanagement. To report such allegations, please visit <https://www.energy.gov/ig/ig-hotline>.

Additionally, recipients of DOE awards must be cognizant of the requirements of [2 CFR 200.113 Mandatory disclosures](#), which states:

The non-Federal entity or applicant for a Federal award must disclose, in a timely manner, in writing to the Federal awarding agency or pass-through entity all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. Non-Federal entities that have received a Federal award including the term and condition outlined in appendix XII of 2 CFR Part 200 are required to report certain civil, criminal, or administrative proceedings to SAM (currently FAPIIS). Failure to make required disclosures can result in any of the remedies described in [2 CFR 200.339](#). (See also [2 CFR part 180, 31 U.S.C. 3321](#), and [41 U.S.C. 2313](#).) [[85 FR 49539](#), Aug. 13, 2020]

xxii. Human Subjects Research

Research involving human subjects, biospecimens, or identifiable private information conducted with DOE funding is subject to the requirements of DOE Order 443.1C, Protection of Human Research Subjects, 45 CFR Part 46, Protection of Human Subjects (subpart A which is referred to as the "Common Rule"), and 10 CFR Part 745, Protection of Human Subjects.

Federal regulation and the DOE Order require review by an Institutional Review Board (IRB) of all proposed human subjects research projects. The IRB is an interdisciplinary ethics board responsible for ensuring that the proposed research is sound and justifies the use of human subjects or their data; the potential risks to human subjects have been minimized; participation is voluntary; and clear and accurate information about the study, the benefits and risks of participating, and how individuals' data/specimens will be protected/used, is provided to potential participants for their use in determining whether or not to participate.

The recipient shall provide the Federal Wide Assurance number identified in item 1) below and the certification identified in item 2) below to DOE prior to initiation of any project that will involve interactions with humans in some way (e.g., through surveys); analysis of their identifiable data (e.g., demographic data and energy use over time); asking individuals to test devices, products, or materials developed through research; and/or testing of commercially available devices in buildings/homes in which humans will be present. Note: This list of examples is illustrative and not all inclusive.

No DOE funded research activity involving human subjects, biospecimens, or identifiable private information shall be conducted without:

- 1) A registration and a Federal Wide Assurance of compliance accepted by the Office of Human Research Protection (OHRP) in the Department of Health and Human Services; and
- 2) Certification that the research has been reviewed and approved by an Institutional Review Board (IRB) provided for in the assurance. IRB review may be accomplished by the awardee's institutional IRB; by the Central DOE IRB; or if collaborating with one of the DOE national laboratories, by the DOE national laboratory IRB.

The recipient is responsible for ensuring all subrecipients comply and for reporting information on the project annually to the DOE Human Subjects Research Database (HSRD) at <https://science.osti.gov/HumanSubjects/Human-Subjects-Database/home>. Note: If a DOE IRB is used, no end of year reporting will be needed.

Additional information on the DOE Human Subjects Research Program can be found at: [HUMAN SUBJECTS Human Subjects Pr... | U.S. DOE Office of Science \(SC\) \(osti.gov\)](#).

xxiii. Cybersecurity Plan (Applies to Topic Areas 2 & 3 ONLY)

Be advised that under Section 40126 of the BIL, the Secretary of Energy has determined that this FOA requires an applicant to submit a Cybersecurity Plan to the DOE prior to the issuance of an award.

Each applicant whose Full Application is selected for award negotiations must submit a Cybersecurity Plan during the award negotiations phase. A Cybersecurity Plan explains how basic cybersecurity practices throughout the life of the proposed the project will be maintained. See Appendix E.

xxiv. Domestic Content Commitments

Be advised that the grant agreement or cooperative agreement for funding between DOE and the awardee will require each recipient: (1) to fulfill the commitments made in its application regarding the procurement of U.S.-produced products, subject to a waiver process by DOE and (2) to fulfill the commitments made in its application regarding the procurement of other key component metals and manufactured products domestically that are deemed available in sufficient and reasonably available quantities or of a satisfactory quality at the time of award negotiation, again subject to a DOE waiver process.

xxv. Real Property and Equipment

Property disposition will be required at the end of a project if the current fair market value of property exceeds \$5,000. For-profit entity disposition requirements are set forth at 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310 – 200.316.

Real property and equipment purchased with project funds (federal share and recipient cost share) are subject to the requirements at 2 CFR 200.310, 200.311, 200.313, and 200.316 (non-Federal entities, except for-profit entities) and 2 CFR 910.360 (for-profit entities). For projects selected for award under this FOA, the recipient may take disposition action on the real property and equipment or continue to use the real property and equipment after the conclusion of the award period of performance. Recipients may continue to use the real property and equipment so long as the recipient:

- a. continues to use the property for the authorized project purposes;
- b. complies with the applicable reporting requirements and regulatory property standards; and
- c. requests continued use of the property with its final SF-428 Tangible Personal Property Report and/or SF-429 Real Property Status Report submission during award closeout.

The recipient's written Request for Continued Use must identify the real property and equipment and include: a summary of how the property will be used (must align with the authorized project purposes); a proposed use period, (e.g., perpetuity, until fully depreciated, or a calendar date where the recipient expects to submit disposition instructions); acknowledgement that the recipient shall not sell or encumber the property or permit any encumbrance without prior written DOE approval; current fair market value of the property; and an Estimated Useful Life or depreciation schedule for equipment.

When the property is no longer needed for authorized project purposes, the recipient must request disposition instructions from DOE. For-profit entity

disposition requirements are set forth at 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310 – 200.316.

VII. Questions/Agency Contacts

Upon the issuance of a FOA, DOE personnel are prohibited from communicating (in writing or otherwise) with applicants regarding the FOA except through the established question and answer process as described below. Specifically, questions regarding this FOA must be submitted through the FedConnect portal. You must register with FedConnect to respond as an interested party to submit questions. It is recommended that you register as soon after release of the FOA as possible to have the benefit of all responses. Applicants are encouraged to review previously issued Questions and Answers prior to the submission of questions.

Questions and comments concerning this FOA shall be submitted not later than 5 business days prior to the application due date. Please note, feedback on individual concepts will not be provided through Q&A.

All questions and answers related to this FOA will be posted on the FedConnect portal at: <https://www.FedConnect.net> and on the Grid Resilience and Innovation Partnerships (GRIP) Program web page at: [Grid Resilience Innovation Partnership Programs | Department of Energy](#).

DOE will attempt to respond to a question within 3 business days unless a similar question and answer has already been posted on the website.

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. DOE/NNSA cannot answer these questions.

VIII. Other Information

A. FOA Modifications

Amendments to this FOA will be posted on the Grants.gov system and the FedConnect portal. However, you will only receive an email when an amendment or a FOA is posted on these sites by registering with FedConnect as an interested party for this FOA. DOE recommends that you register as soon

after the release of the FOA as possible to ensure you receive timely notice of any amendments or other FOAs.

B. Government Right to Reject or Negotiate

DOE reserves the right, without qualification, to reject any or all applications received in response to this FOA and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. Commitment of Public Funds

The Contracting Officer is the only individual who can make awards or commit the government to the expenditure of public funds. A commitment by anyone other than the Contracting Officer, either express or implied, is invalid.

D. Treatment of Application Information

Applicants should not include business sensitive (e.g., commercial or financial information that is privileged or confidential), trade secrets, proprietary, or otherwise confidential in their application unless such information is necessary to convey an understanding of the proposed project or to comply with a requirement in the FOA. Applicants are advised to not include any critically sensitive proprietary detail.

If an application includes business sensitive, trade secrets, proprietary, or otherwise confidential information, it is furnished to the Federal Government (Government) in confidence with the understanding that the information shall be used or disclosed only for evaluation of the application. Such information will be withheld from public disclosure to the extent permitted by law, including the Freedom of Information Act. Without assuming any liability for inadvertent disclosure, DOE will seek to limit disclosure of such information to its employees and to outside reviewers when necessary for merit review of the application or as otherwise authorized by law. This restriction does not limit the Government's right to use the information if it is obtained from another source.

If an applicant chooses to submit business sensitive, trade secrets, proprietary, or otherwise confidential information, the applicant must provide **two copies** of the submission (e.g., Concept Paper, Full Application). The first copy should be marked, "non-confidential" with the information believed to be confidential deleted. The second copy should be marked "confidential" and must clearly and conspicuously identify the business sensitive, trade secrets, proprietary, or otherwise confidential information and must be marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The Government is not liable for the disclosure or use of unmarked information and may use or disclose such information for any purpose.

The cover sheet of the Full Application, and other submission must be marked as follows and identify the specific pages business sensitive, trade secrets, proprietary, or otherwise confidential information:

Notice of Restriction on Disclosure and Use of Data:

Pages [list applicable pages] of this document may contain business sensitive, trade secrets, proprietary, or otherwise confidential information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance agreement between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source. [End of Notice]

In addition, (1) the header and footer of every page that contains business sensitive, trade secrets, proprietary, or otherwise confidential information must be marked as follows: "Contains Business Sensitive, Trade Secrets, Proprietary, or Otherwise Confidential Information Exempt from Public Disclosure," and (2) every line or paragraph containing such information must be clearly marked with double brackets or highlighting. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

E. Evaluation and Administration by Non-Federal Personnel

In conducting the technical merit review evaluation, the Go/No-Go Reviews and Peer Reviews, the government may seek the advice of qualified non-federal personnel as reviewers. The government may also use non-federal personnel to conduct routine, nondiscretionary administrative activities, including DOE contractors. The applicant, by submitting its application, consents to the use of non-federal reviewers/administrators. Non-federal reviewers must sign conflict of interest (COI) and non-disclosure acknowledgements (NDA) prior to reviewing an application. Non-federal personnel conducting administrative activities must sign an NDA.-federal personnel conducting administrative activities must sign an NDA.

F. Notice Regarding Eligible/Ineligible Activities

Eligible activities under this FOA include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.

G. Notice of Right to Conduct a Review of Financial Capability

DOE reserves the right to conduct an independent third-party review of financial capability for applicants that are selected for negotiation of award (including personal credit information of principal(s) of a small business if there is insufficient information to determine financial capability of the organization).).

H. Requirement for Full and Complete Disclosure

Applicants are required to make a full and complete disclosure of all information requested. Any failure to make a full and complete disclosure of the requested information may result in:

- The termination of award negotiations;
- The modification, suspension, and/or termination of a funding agreement;
- The initiation of debarment proceedings, debarment, and/or a declaration of ineligibility for receipt of federal contracts, subcontracts, and financial assistance and benefits; and
- Civil and/or criminal penalties.

I. Retention of Submissions

DOE expects to retain copies of all Full Applications and other submissions. No submissions will be returned. By applying to DOE for funding, applicants consent to DOE's retention of their submissions.

J. Rights in Technical Data

Data rights differ based on whether data is first produced under an award or instead was developed at private expense outside the award.

“Limited Rights Data”: The U.S. government will not normally require delivery of confidential or trade secret-type technical data developed solely at private expense prior to issuance of an award, except as necessary to monitor technical progress and evaluate the potential of proposed technologies to reach specific technical and cost metrics.

Government Rights in Technical Data Produced Under Awards: The U.S. government normally retains unlimited rights in technical data produced under government financial assistance awards, including the right to distribute to the public. However, pursuant to special statutory authority, certain categories of data generated under DOE awards may be protected from public disclosure for up to five years after the data is generated (“Protected Data”). For awards permitting Protected Data, the protected data must be marked as set forth in the award's intellectual property terms and conditions and a listing of unlimited rights data (i.e., non-protected data) must be inserted into the data clause in the

award. In addition, invention disclosures may be protected from public disclosure for a reasonable time in order to allow for filing a patent application.

For this FOA, selectees and recipients may request an extended period of protection (more than five years and not to exceed thirty years) if reasonably required for commercialization for specific categories of data for all Topic Areas first produced under the resulting awards in accordance with 15 U.S.C. § 3710a(c)(7)(B)(ii) and the Energy Policy Acts of 1992 and 2005. Further direction will be provided during the negotiation process upon request.

K. Copyright

The prime recipient and subrecipients may assert copyright in copyrightable works, such as software, first produced under the award without DOE approval. When copyright is asserted, the government retains a paid-up nonexclusive, irrevocable worldwide license to reproduce, prepare derivative works, distribute copies to the public, and to perform publicly and display publicly the copyrighted work. This license extends to contractors and others doing work on behalf of the government.

L. Export Control

The U.S. government regulates the transfer of information, commodities, technology, and software considered to be strategically important to the U.S. to protect national security, foreign policy, and economic interests without imposing undue regulatory burdens on legitimate international trade. There is a network of federal agencies and regulations that govern exports that are collectively referred to as "Export Controls". All recipients and subrecipients are responsible for ensuring compliance with all applicable U.S. Export Control laws and regulations relating to any work performed under a resulting award.

The recipient must immediately report to DOE any export control violations related to the project funded under the DOE award, at the recipient or subrecipient level, and provide the corrective action(s) to prevent future violations.

M. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

As set forth in 2 CFR 200.216, recipients and subrecipients are prohibited from obligating or expending project funds (federal funds and recipient cost share) to:

- (1) Procure or obtain;
- (2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). See Public Law 115-232, section 889, and 2 CFR 200.471 for additional information.

N. Personally Identifiable Information (PII)

All information provided by the applicant must to the greatest extent possible exclude PII. The term "PII" refers to information which can be used to distinguish or trace an individual's identity, such as their name, social security number, biometric records, alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother's maiden name. (See OMB Memorandum M-07-16 dated May 22, 2007, found at: [M-07-16 \(whitehouse.gov\)](#)).

By way of example, applicants must screen resumes to ensure that they do not contain PII such as personal addresses, personal landline/cell phone numbers, and personal emails. **Under no circumstances should Social Security Numbers (SSNs) be included in the application.** Federal agencies are prohibited from the collecting, using, and displaying unnecessary SSNs. (See, the Federal Information Security Modernization Act of 2014 (Pub. L. No. 113-283, Dec 18, 2014; 44 U.S.C. § 3551).

O. Annual Independent Audits

If a for-profit entity is a prime recipient and has expended \$750,000 or more of DOE awards during the entity's fiscal year, an annual compliance audit performed by an independent auditor is required. For additional information, please refer to 2 CFR 910.501 and Subpart F.

If an educational institution, non-profit organization, or state/local government is a prime recipient or subrecipient and has expended \$750,000 or more of federal awards during the non-federal entity's fiscal year, then a Single or Program-Specific Audit is required. For additional information, please refer to 2 CFR 200.501 and Subpart F.

Applicants and subrecipients (if applicable) should propose sufficient costs in the project budget to cover the costs associated with the audit. DOE will share in the cost of the audit at its applicable cost share ratio.

P. Informational Webinars

Initial Webinar

DOE will conduct one informational webinar at the date and time listed in the table on the FOA cover page **prior to concept paper submission due dates**. The purpose of this webinar is to give applicants a chance to ask questions about the FOA process generally. As the webinar will be open to all Applicants who wish to participate, Applicants should refrain from asking questions or communicating information that would reveal confidential and/or proprietary information specific to their project.

Additional Webinars

Additional webinars are scheduled. See below for schedule and agenda information. Webinar registration information will be provided on the Grid Resilience and Innovation Partnerships (GRIP) Program web page at: [Grid Resilience Innovation Partnership Programs | Department of Energy](#). Questions will not be taken as part of these webinars.

February 27 | 1-2 PM EST

Agenda

This webinar will cover information such as community and labor engagement, advancing Diversity Equity Inclusion and Accessibility, and the Justice40 initiative. As a prospective applicant to the FY 2022/2023 GRIP program, applicants will learn best practices for proposing meaningful Community Benefits Plans with tangible objectives to ensure the best community outcomes as part of these applications.

February 28 | 1-3 PM EST

Agenda

This webinar will provide industry stakeholders with cybersecurity planning to help prospective applicants enhance current efforts to improve the reliability, resiliency, and security of the U.S. power grid. Topics covered will include security risk evaluation, mitigation measures, and other security best practices from early development stages to implementation. The session will be conducted by our expert security team from DOE National Labs and provide training on cybersecurity planning and security best practices.

Attendance is not mandatory **for the webinars** and will not positively or negatively impact the overall review of any applicant submissions. Recordings of the webinars will be made available on the GRIP Program web page at: [Grid Resilience Innovation Partnership Programs | Department of Energy](#).

APPENDIX A – COST SHARE INFORMATION

Cost Sharing or Cost Matching

The terms “cost sharing” and “cost matching” are often used synonymously. Even the DOE Financial Assistance Regulations, 2 CFR 200.306, use both of the terms in the titles specific to regulations applicable to cost sharing. The difference between the two terms is the calculation used to determine the non-federal amount. “Cost sharing” for the non-federal share is calculated as a percentage of the Total Project Cost. “Cost matching” for the non-federal share is calculated as a percentage of the federal funds only, rather than the Total Project Cost.

How Cost Sharing Is Calculated

As stated above, cost sharing is calculated as a percentage of the Total Project Cost. The following is an example of how to calculate cost sharing amounts for a project with \$1,000,000 in federal funds with a minimum 20% non-federal cost sharing requirement:

- Formula A: Federal share (\$) divided by federal share (%) = Total Project Cost (\$)
Example: \$1,000,000 divided by 80% = \$1,250,000
- Formula B: Total Project Cost (\$) minus federal share (\$) = Non-federal **share** (\$)
Example: \$1,250,000 minus \$1,000,000 = \$250,000
- Formula C: Non-federal share (\$) divided by Total Project Cost (\$) = Non-federal **share** (%)
Example: \$250,000 divided by \$1,250,000 = 20%

How Cost Matching Is Calculated

“Cost matching” for the non-federal share is calculated as a percentage of the Federal funds only, rather than the Total Project Cost. The following are examples of how to calculate cost matching amounts for a project with \$1,000,000 in federal funds with a minimum 20% non-federal cost matching requirement:

- Formula D: Federal share (\$) multiplied by non-federal share (%) = Non-federal **match** (\$)
Example: \$1,000,000 multiplied by 20% = \$200,000
- Formula E: Federal Share (\$) plus Non-Federal Match (\$) = Total Project Cost (\$)
Example: \$1,000,000 plus \$200,000 = \$1,200,000
- Formula F: Total Project Cost (\$) minus federal share (\$) = Non-federal **match** (\$)
Example: \$1,200,000 minus \$1,000,000 = \$200,000

- Formula G: Federal share (\$) divided by Total Project Cost (\$) = Calculated Federal Share of Total Project Cost (%)

Example: \$1,000,000 divided by \$1,200,000 = 83.33%

- Formula C: Non-Federal share (\$) divided by Total Project Cost (\$) = Calculated Non-Federal Share of Total Project Cost (%)

Example: \$200,000 divided by \$1,200,000 = 16.67%

The tables below provide additional examples of calculation results for the cost match (Topic Area 1) and cost share (Topic Areas 2 and 3) for the three BIL Topic Areas:

Topic Area 1: Section 40101 (c) Grid Resilience Grants (\$100M Maximum Grant (Federal Share \$)). An eligible entity shall be required to match 100% of the amount of the grant (except for Small Utilities must match 1/3 of the grant).						
Maximum Federal Share (\$)	Entity Type	Non-Federal Minimum Match Required (%)	Calculated Non-Federal Minimum Match (\$) ^D	Total Project Cost (\$) ^E	Calculated Federal Share of Total Project Costs (%) ^G	Calculated Non-Federal Share of Total Project Costs (%) ^C
\$100,000,000	Eligible Entity (except for Small Utilities)	100	\$100,000,000	\$200,000,000	50	50
\$100,000,000	Small Utility	33.33	\$33,330,000	\$133,330,000	75	25

Topic Area 2: Section 40107 Smart Grid Grants (\$50M Maximum Grant (Federal Share \$)). The non-federal cost share must be at least 50% of the Total Project Costs.					
Maximum Federal Share (\$)	Entity Type	Non-Federal Cost Share Minimum % of Total Project Costs (%)	Calculated Non-Federal Minimum Share (\$) ^B	Total Project Cost (\$) ^A	Calculated Non-Federal Minimum Share (%) ^C
\$50,000,000	Eligible Entity	50	\$50,000,000	\$100,000,000	50

Topic Area 3: SECTION 40103 (b) Innovative Grid Resilience Program Example breakdown for \$250M and \$1B maximum Grant (Federal Share \$) The non-federal cost share must be at least 50% of the Total Project Costs.					
Federal Share (\$)	Entity Type	Non-Federal Cost Share Minimum % of Total Project Costs (%)	Calculated Non-Federal Minimum Share (\$)^B	Total Project Cost (\$)^A	Calculated Non-Federal Minimum Share (%)^C
\$250,000,000	Eligible Entity	50	\$250,000,000	\$500,000,000	50
\$1,000,000,000	Eligible Entity	50	\$1,000,000,000	\$2,000,000,000	50

What Qualifies For Cost Sharing?

While it is not possible to explain what specifically qualifies for cost sharing in one or even a couple of sentences, in general, if a cost is allowable under the cost principles applicable to the organization incurring the cost and is eligible for reimbursement under a DOE grant or cooperative agreement, then it is allowable as cost share. Conversely, if the cost is not allowable under the cost principles and not eligible for reimbursement, then it is not allowable as cost share. In addition, costs may not be counted as cost share if they are paid by the federal government under another award unless authorized by federal statute to be used for cost sharing.

The rules associated with what is allowable as cost share are specific to the type of organization that is receiving funds under the grant or cooperative agreement, though are generally the same for all types of entities. The specific rules applicable to:

- FAR Part 31 for For-Profit entities, (48 CFR Part 31); and
- 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

In addition to the regulations referenced above, other factors may also come into play such as timing of donations and length of the project period. For example, the value of ten years of donated maintenance on a project that has a project period of five years would not be fully allowable as cost share. Only the value for the five years of donated maintenance that corresponds to the project period is allowable and may be counted as cost share.

Additionally, DOE generally does not allow pre-award costs for either cost share or reimbursement when these costs precede the signing of the appropriation bill that funds the award. In the case of a competitive award, DOE generally does not allow pre-award costs prior to the signing of the Selection Statement by the DOE Selection Official.

General Cost Sharing Rules on a DOE Award

1. Cash Cost Share – encompasses all contributions to the project made by the recipient or subrecipient(s), for costs incurred and paid for during the project. This includes when an organization pays for personnel, supplies, equipment for their own company with organizational resources. If the item or service is reimbursed for, it is cash cost share. All cost share items must be necessary to the performance of the project.
2. In-Kind Cost Share – encompasses all contributions to the project made by the recipient or subrecipient(s) that do not involve a payment or reimbursement and represent donated items or services. In-Kind cost share items include volunteer personnel hours, donated existing equipment, donated existing supplies. The cash value and calculations thereof for all In-Kind cost share items must be justified and explained in the Cost Share section of the project Budget Justification. All cost share items must be necessary to the performance of the project. If questions exist, consult your DOE contact before filling out the In-Kind cost share section of the Budget Justification.
3. Funds from other federal sources MAY NOT be counted as cost share. Non-federal sources include any source not originally derived from federal funds. Cost sharing commitment letters from subrecipients must be provided with the original application.
4. Fee or profit, including foregone fee or profit, are not allowable as project costs (including cost share) under any resulting award. The project may only incur those costs that are allowable and allocable to the project (including cost share) as determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

DOE Financial Assistance Rules 2 CFR Part 200 as amended by 2 CFR Part 910

As stated above, the rules associated with what is allowable cost share are generally the same for all types of organizations. Following are the rules found to be common, but again, the specifics are contained in the regulations and cost principles specific to the type of entity:

- (A) Acceptable contributions. All contributions, including cash contributions and third-party in-kind contributions, must be accepted as part of the prime recipient's cost sharing if such contributions meet all of the following criteria:
 - (1) They are verifiable from the recipient's records.
 - (2) They are not included as contributions for any other federally-assisted project or program.
 - (3) They are necessary and reasonable for the proper and efficient accomplishment of project or program objectives.

- (4)** They are allowable under the cost principles applicable to the type of entity incurring the cost as follows:
 - a.** For-profit organizations. Allowability of costs incurred by for-profit organizations and those nonprofit organizations listed in Attachment C to OMB Circular A-122 is determined in accordance with the for-profit cost principles in 48 CFR Part 31 in the FAR, except that patent prosecution costs are not allowable unless specifically authorized in the award document. (v) Commercial Organizations. FAR Subpart 31.2—Contracts with Commercial Organizations; and
 - b.** Other types of organizations. For all other non-federal entities, allowability of costs is determined in accordance with 2 CFR Part 200 Subpart E.
- (5)** They are not paid by the federal government under another award unless authorized by federal statute to be used for cost sharing or matching.
- (6)** They are provided for in the approved budget.

(B) Valuing and documenting contributions

- (1)** Valuing recipient's property or services of recipient's employees. Values are established in accordance with the applicable cost principles, which mean that amounts chargeable to the project are determined on the basis of costs incurred. For real property or equipment used on the project, the cost principles authorize depreciation or use charges. The full value of the item may be applied when the item will be consumed in the performance of the award or fully depreciated by the end of the award. In cases where the full value of a donated capital asset is to be applied as cost sharing or matching, that full value must be the lesser or the following:
 - a.** The certified value of the remaining life of the property recorded in the recipient's accounting records at the time of donation; or
 - b.** The current fair market value. If there is sufficient justification, the Contracting Officer may approve the use of the current fair market value of the donated property, even if it exceeds the certified value at the time of donation to the project. The Contracting Officer may accept the use of any reasonable basis for determining the fair market value of the property.
- (2)** Valuing services of others' employees. If an employer other than the recipient furnishes the services of an employee, those services are valued at the employee's regular rate of pay, provided these services are for the same skill level for which the employee is normally paid.
- (3)** Valuing volunteer services. Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be

counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for volunteer services must be consistent with those paid for similar work in the recipient's organization. In those markets in which the required skills are not found in the recipient organization, rates must be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.

(4) Valuing property donated by third parties.

- a.** Donated supplies may include such items as office supplies or laboratory supplies. Value assessed to donated supplies included in the cost sharing or matching share must be reasonable and must not exceed the fair market value of the property at the time of the donation.
- b.** Normally only depreciation or use charges for equipment and buildings may be applied. However, the fair rental charges for land and the full value of equipment or other capital assets may be allowed, when they will be consumed in the performance of the award or fully depreciated by the end of the award, provided that the Contracting Officer has approved the charges. When use charges are applied, values must be determined in accordance with the usual accounting policies of the recipient, with the following qualifications:
 - i.** The value of donated space must not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.
 - ii.** The value of loaned equipment must not exceed its fair rental value.

(5) Documentation. The following requirements pertain to the recipient's supporting records for in-kind contributions from third parties:

- a.** Volunteer services must be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.
- b.** The basis for determining the valuation for personal services and property must be documented.

APPENDIX B – WAIVER REQUESTS FOR: FOREIGN ENTITY PARTICIPATION; AND FOREIGN WORK

Waiver for Foreign Entity Participation

For projects selected under this FOA, all recipients and subrecipients must be organized, chartered or incorporated (or otherwise formed) under the laws of a state or territory of the United States and have a physical location for business operations in the United States. To request a waiver of this requirement, an applicant must submit an explicit waiver request in the Full Application.

WAIVER CRITERIA

Foreign entities seeking to participate in a project funded under this FOA must demonstrate to the satisfaction of DOE that:

- a. Its participation is in the best interest of the U.S. industry and U.S. economic development;
- b. The project team has appropriate measures in place to control sensitive information and protect against unauthorized transfer of scientific and technical information;
- c. Adequate protocols exist between the U.S. subsidiary and its foreign parent organization to comply with export control laws and any obligations to protect proprietary information from the foreign parent organization;
- d. The work is conducted within the U.S. and the entity acknowledges and demonstrates that it has the intent and ability to comply with the U.S. Competitiveness Provision; and
- e. The foreign entity will satisfy other conditions that may be deemed necessary by DOE to protect U.S. government interests.

Content for Waiver Request

A Foreign Entity waiver request must include the following:

- a. Information about the entity: name, point of contact, and proposed type of involvement with the Institute;
- b. Country of incorporation, the extent of the ownership/level control by foreign entities, whether the entity is state owned or controlled, a summary of the ownership breakdown of the foreign entity and the percentage of ownership/control by foreign entities, foreign shareholders, foreign state or foreign individuals;
- c. The rationale for proposing a foreign entity participate (must address criteria above);
- d. A description of the project's anticipated contributions to the U.S. economy;

- How the project will benefit the U.S., including manufacturing, contributions to employment in the U.S. and growth in new markets and jobs in the U.S.;
 - How the project will promote domestic American manufacturing of products and/or services;
- e. A description of how the foreign entity's participation is essential to the project;
- f. A description of the likelihood of Intellectual Property (IP) being created from the work and the treatment of any such IP; and
- g. Countries where the work will be performed (Note: if any work is proposed to be conducted outside the U.S., the applicant must also complete a separate request foreign work waiver).

DOE may also require:

- A risk assessment with respect to IP and data protection protocols that includes the export control risk based on the data protection protocols, the technology being developed and the foreign entity and country. These submissions could be prepared by the project lead, but the prime recipient must make a representation to DOE as to whether it believes the data protection protocols are adequate and make a representation of the risk assessment – high, medium or low risk of data leakage to a foreign entity.
- Additional language be added to any agreement or subagreement to protect IP, mitigate risk or other related purposes.

DOE may require additional information before considering the waiver request.

The applicant does not have the right to appeal DOE's decision concerning a waiver request.

Waiver for Performance of Work in the United States (Foreign Work Waiver)

As set forth in Section IV.I.iii., all work under funding under this FOA must be performed in the United States. To seek a waiver of the Performance of Work in the United States requirement, the applicant must submit an explicit waiver request in the Full Application. A separate waiver request must be submitted for each entity proposing performance of work outside of the United States.

Overall, a waiver request must demonstrate to the satisfaction of DOE that it would further the purposes of this FOA and is otherwise in the economic interests of the United States to perform work outside of the United States. A request for a foreign work waiver must include the following:

- The rationale for performing the work outside the U.S. ("foreign work");
- A description of the work proposed to be performed outside the U.S.;

- An explanation as to how the foreign work is essential to the project;
- A description of the anticipated benefits to be realized by the proposed foreign work and the anticipated contributions to the US economy;
- The associated benefits to be realized and the contribution to the project from the foreign work;
- How the foreign work will benefit the U.S., including manufacturing, contributions to employment in the U.S. and growth in new markets and jobs in the U.S.;
- How the foreign work will promote domestic American manufacturing of products and/or services;
- A description of the likelihood of Intellectual Property (IP) being created from the foreign work and the treatment of any such IP;
- The total estimated cost (DOE and recipient cost share) of the proposed foreign work;
- The countries in which the foreign work is proposed to be performed; and
- The name of the entity that would perform the foreign work.

DOE may require additional information before considering the waiver request.

The applicant does not have the right to appeal DOE's decision concerning a waiver request.

APPENDIX C – REQUIRED USE OF IRON, STEEL, MANUFACTURED PRODUCTS, AND CONSTRUCTION MATERIALS PRODUCED IN THE UNITED STATES BUY AMERICA REQUIREMENTS FOR INFRASTRUCTURE PROJECTS

A. Definitions

For purposes of the Buy America requirements, the following definitions apply:

Construction materials includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives⁵⁶—that is or consists primarily of:

- non-ferrous metals;
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- glass (including optic glass);
- lumber; or
- drywall.

Applicants may also seek a DOE waiver of domestic procurement requirements based on applicable public interest factors, such as relating to minor components, international trade obligations, or other considerations.

Infrastructure includes, at a minimum, the structures, facilities, and equipment for, in the United States, Roads, highways, and bridges; public transportation; Dams, ports, harbors, and other maritime facilities; InterCity passenger and freight railroads; Freight and intermodal facilities; airports; Water systems, including drinking water and wastewater systems; Electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property. Infrastructure includes facilities that generate, transport, and distribute energy.

In addition to the above, the infrastructure in question must be publicly-owned or must serve a public function; privately owned infrastructure that is solely utilized for private use is not considered “infrastructure” for purposes of Buy America applicability. The Agency, not the applicant, will have the final say as to whether a given project includes infrastructure, as defined herein.

⁵⁶ BIL, § 70917(c)(1).

For this FOA specifically, all projects subject to this FOA are considered “infrastructure” within the Buy America provision of BIL.

Project means the construction, alteration, maintenance, or repair of infrastructure in the United States.

B. Buy America Requirements for Infrastructure Projects (“Buy America” requirements)

In accordance with section 70914 of the BIL, none of the project funds (includes federal share and recipient cost share) may be used for a project for infrastructure unless:

- (1) all iron and steel used in the project are produced in the United States--This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;
- (2) all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation; and
- (3) all construction materials⁵⁷ are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

The Buy America requirements only apply to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does the Buy America requirements apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project, but are not an integral part of the structure or permanently affixed to the infrastructure project.

These requirements must flow down to all sub-awards, all contracts, subcontracts and purchase orders for work performed under the proposed project, except where the prime recipient is a for-profit entity. Based on guidance from Office of Management and Budget (OMB) Memorandum M-22-11, the Buy America requirements of the BIL do not apply to DOE projects in which the prime recipient is a for-profit entity; the requirements only apply to projects whose prime recipient is a State, local government, Indian tribe, Institution of Higher Education, or nonprofit organization.

⁵⁷ Excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

For additional information related to the application and implementation of these Buy America requirements, please see OMB Memorandum M-22-11, issued April 18, 2022:
<https://www.whitehouse.gov/wp-content/uploads/2022/04/M-22-11.pdf>

Note that for all applicants—both non-Federal entities and for-profit entities—DOE is including a Program Policy Factor that the Selection Official may consider in determining which Full Applications to select for award negotiations that considers whether the applicant has made a commitment to procure U.S. iron, steel, manufactured products, and construction materials in its project.

C. DOE Submission Requirements for Full Application

Within the first two pages of the workplan, applicants must provide a short statement on whether the project will involve the construction, alteration, and/or repair of infrastructure in the United States. The ultimate determination about whether a project includes infrastructure remains with DOE, but the applicant's statement will assist project planning and integration of domestic preference requirements, which may impact the project's proposed budget.

D. Waivers

In limited circumstances, DOE may waive the application of the Buy America requirements where DOE determines that:

- (1) applying the Buy America requirements would be inconsistent with the public interest;
- (2) the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or
- (3) the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

If an applicant is seeking a waiver of the Buy America requirements, it must include a written waiver request with the Full Application. A waiver request must include:

- A detailed justification for the use of "non-domestic" iron, steel, manufactured products, or construction materials to include an explanation as to how the non-domestic item(s) is essential to the project
- A certification that the applicant or recipient made a good faith effort to solicit bids for domestic products supported by terms included in requests for proposals, contracts, and nonproprietary communications with potential suppliers;
- Applicant /Recipient name and Unique Entity Identifier (UEI)
- Total estimated project cost, DOE and cost-share amounts

- Project description and location (to the extent known)
- List and description of iron or steel item(s), manufactured goods, and construction material(s) the applicant or recipient seeks to waive from Domestic Content Procurement Preference requirement, including name, cost, country(ies) of origin (if known), and relevant PSC and NAICS code for each.
- Waiver justification including due diligence performed (e.g., market research, industry outreach) by the applicant or recipient
- Anticipated impact if no waiver is issued

DOE may require additional information before considering the waiver request.

Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Made in America Office. There may be instances where an award qualifies, in whole or in part, for an existing waiver described at <https://www.madeinamerica.gov/financial-assistance/>.

The applicant does not have the right to appeal DOE's decision concerning a waiver request.

APPENDIX D – STATEMENT OF PROJECT OBJECTIVES

Background/Instructions: Prospective recipients of awards funded from Funding Opportunity Announcement DE-FOA-0002740 (FOA 2740) must prepare/submit a detailed statement of project objectives (SOPO) that addresses how the project objectives will be met. The SOPO must contain a clear, concise description of all activities that will be completed during project performance and follow the structure/format outlined below. Since the SOPO may be released (in whole or in part) to the public by the Department of Energy (DOE) after award, it shall not contain proprietary or confidential business information.

The SOPO generally consists of less than five (5) pages to describe the proposed work. Prospective recipients of FOA 2740 funding (FOA 2740 Recipient) shall prepare the SOPO according to the format provided in the SOPO template and in accordance with the application content and form requirements identified in Section IV Of the FOA.

This Background/Instructions section as well as italicized text in the SOPO template is intended to be instructional, is provided as guidance, and should be removed by the FOA 2740 recipient when preparing their SOPO. All other text (shown as normal font within the SOPO template) is to be included in the proposed SOPO.

In writing the Statement of Project Objectives (SOPO), **avoid:** 1) the use of proper nouns to minimize SOPO modifications in the event of changes to the project team, facilities, etc.; 2) figures and equations; 3) references to other documents and publications; and 4) details about past work and discussion of technical background (which should be covered elsewhere in the application narrative).

[***BEGINNING OF SOPO TEMPLATE*****]**

STATEMENT OF PROJECT OBJECTIVES (SOPO)

Title of Project

(Insert the title of the work to be performed. Be concise and descriptive)

A. OBJECTIVES

Clearly and concisely describe the objective(s) of the project. If the project includes multiple phases of work, describe the objective(s) for each phase. This section should not exceed one-half page.

B. SCOPE OF WORK

Summarize the planned effort and approach to achieve the proposed overall project objectives. For projects that involve multiple phases of work, specific scope statement(s) should be defined for each phase. This section should not exceed one-half page.

C. TASKS TO BE PERFORMED

Unless otherwise stated, all SOPOs will include tasks for Project Management Plan, National Environmental Policy Act (NEPA) Compliance, and Cybersecurity Plan (CSP) as instructed below. Further, the applicant should include clear and concise descriptions of their planned tasks (and subtasks if needed). Tasks are to be organized in a logical sequence and grouped into corresponding phases, if applicable.

Task 1.0: Project Management and Planning

Subtask 1.1 – Project Management Plan (PMP):

Within 30 days of award, the Recipient shall submit a Project Management Plan (PMP) to the designated Federal Project Officer (FPO). The Recipient shall not proceed beyond Task 1.0 until the PMP has been accepted by the FPO.

The PMP shall be revised and resubmitted as often as necessary, during the course of the project, to capture any major/significant changes to the planned approach, budget, key personnel, major resources, etc.

The Recipient shall manage and direct the project in accordance with the accepted PMP to meet all technical, schedule and budget objectives and requirements. The Recipient will coordinate activities to effectively accomplish the work. The Recipient will ensure that project plans, results, and decisions are appropriately documented, and that project reporting and briefing requirements are satisfied.

Subtask 1.2: National Environmental Policy Act (NEPA) Compliance

As required, the Recipient shall provide the documentation necessary for NEPA compliance.

Subtask 1.3: Cybersecurity Plan (CSP)*

The CSP shall be revised and resubmitted as often as necessary, during the course of the project, to capture any major/significant changes.

**Applicable to Topic Area 2 [Smart Grid Investments (40107)] and Topic Area 3 (Innovative Grid Resilience Program (40103(b)) only*

Subtask 1.4: Continuation Briefing(s):

The Recipient will brief DOE on roughly an annual basis to explain the plans, progress and results of the technical effort. The briefing shall also describe performance relative to project success criteria, milestones, and the Go/No-Go Decision point that are documented in the Project Management Plan (PMP).

Include additional tasks and subtasks as appropriate using the following format. For projects that involve multiple phases of work, label the start of each phase (such as "Phase 1", etc.), state the title, and provide a brief narrative describing the objective(s) and scope for the phase.

Task 2.0 - (State title of task and provide description)

Subtask 2.1 - (State title of subtask and provide description)

Task 3.0 - (State title of task and provide description)

Subtask 3.1 - (State title of subtask and provide description)

Task 4.0 - (State title of task and provide description)

Subtask 4.1 - (State title of subtask and provide description)

D. DELIVERABLES

The Recipient shall include a list of deliverables that will be submitted during the project.

Subtask 1.1: Project Management Plan

Subtask 1.3 – Cybersecurity Plan (*if applicable)

Subtask 1.4 – Pre-Continuation Briefing Document(s)

List additional deliverables as appropriate including any documents that will be delivered to DOE.

In addition to the deliverables listed above, the Recipient shall submit all periodic, topical, final, and other reports in accordance with the Federal Assistance Reporting Checklist and accompanying instructions.

E. BRIEFINGS/TECHNICAL PRESENTATIONS

The Recipient shall prepare, and present periodic briefings, technical presentations and demonstrations as requested by the Federal Project Officer, which may be held at a DOE or the Recipient's facility, other mutually agreeable location, or via webinar. Such meetings may include all or a combination of the following:

Kickoff Briefing - Not more than 30 days after submission of the Project Management Plan, the Recipient shall prepare and present a project summary briefing as part of a Project Kickoff Meeting.

Pre-Continuation Briefing - Not less than 90 days prior to the planned start of a budget period, the Recipient shall brief the DOE on the results to date, and their plans for the subsequent periods of work. The DOE will consider the information from this briefing, as well as the content of deliverables submitted to date, prior to authorizing continuing the project.

Final Project Briefing - Not less than 30 days prior to the end of the project, the Recipient shall prepare and present a Final Project Briefing on the results and accomplishments of the entire project.

Other Briefings – The Recipient shall prepare and present technical, financial, and/or administrative briefings as requested by the DOE. Additionally, the DOE may require Recipients to make technical presentations at national and/or industry conferences.

[***END OF SOPO TEMPLATE*****]**

APPENDIX E – CYBERSECURITY PLAN

In accordance with BIL Section 40126, DOE requires Topic Area 2 and Topic Area 3 awardees to submit a cybersecurity plan during award negotiations and prior to receiving funding.⁵⁸ These plans are intended to foster a cybersecurity-by-design approach⁵⁹ for BIL efforts. The Department will also use these plans to ensure effective integration and coordination across its research, development, and demonstration programs.

The Department recommends using open guidance and standards such as the National Institute of Standards and Technology's (NIST) Cybersecurity Framework (CSF), the DOE Cybersecurity Capability Maturity Model (C2M2), and the Cybersecurity and Infrastructure Security Agency (CISA) cybersecurity performance goals for critical infrastructure and control systems.⁶⁰ The cybersecurity plan created pursuant to Section 40126 should document any deviation from open standards, as well as the utilization of proprietary standards where the awardee determines that such deviation is necessary.

- Cybersecurity plans should be commensurate to the threats and vulnerabilities associated with the proposed efforts and demonstrate the cybersecurity maturity of the project.
- Cybersecurity plans may cover a range of topics relevant to the proposed project, e.g., software development lifecycle, third-party risks, and incident reporting.
- At a minimum, the Cybersecurity Plan should address questions noted in IJA section 40126 (b) 'Contents of Cybersecurity Plan'.⁶¹
 - (1) plans to maintain cybersecurity between networks, systems, devices, applications, or components-
 - (A) within the proposed solution of the project; and
 - (B) at the necessary external interfaces at the proposed solution boundaries;

⁵⁸ 42 USC §18725

⁵⁹ Security must be baked into the development process, not bolted on. Security risk evaluation and mitigation measures should be an active component in a project (or product) lifecycle – from early development stages to implementation.

⁶⁰ NERC critical infrastructure protection (CIP) standards for entities responsible for the availability and reliability of the bulk electric system. NIST IR 7628: 2 Smart grid cyber security strategy and requirements. NIST SP800-53, Recommended Security Controls for Federal Information Systems and Organizations: Catalog of security controls in 18 categories, along with profiles for low-, moderate-, and high-impact systems. NIST SP800-82, Guide to Industrial Control Systems (ICS) Security. NIST SP800-39, Integrated Enterprise-Wide Risk Management: Organization, mission, and information system view. AMI System Security Requirements: Security requirements for advanced metering infrastructure. ISO (International Organization for Standardization) 27001, Information Security Management Systems: Guidance on establishing governance and control over security activities (this document must be purchased). IEEE (Institute of Electrical and Electronics Engineers) 1686-2007, Standard for Substation Intelligent Electronic Devices (IEDs) Cyber Security Capabilities (this document must be purchased). DOE Cybersecurity Capability Maturity Model (C2M2). CISA cybersecurity performance goals for critical infrastructure and control systems directed by the National Security Presidential Memorandum on Improving Cybersecurity for Critical Infrastructure Control Systems, found at <https://www.cisa.gov/cpgs>

⁶¹ 42 USC §18725

- (2) will perform ongoing evaluation of cybersecurity risks to address issues as the issues arise throughout the life of the proposed solution;
 - (3) will report known or suspected network or system compromises of the project to DOE; and
 - (4) will leverage applicable cybersecurity programs of the Department, including cyber vulnerability testing and security engineering evaluations.
- Projects receiving funding under this program must utilize open protocols and standards (including Internet-based protocols and standards) if available and appropriate.⁶²

⁶² 42 USC §17386(e)(1)(B)

APPENDIX F – PROJECT DESCRIPTION AND ASSURANCES DOCUMENT TEMPLATE (PDAD)

Project title:

Applicant Name:

Applicant Address:

Names of all team member organizations (if applicable):

Principal Investigator (Name, Address if different than Applicant's, Phone Number, E-mail):

Business Point of Contact (Name, Address if different than Applicant's, Phone Number, E-mail):

Include any statements regarding confidentiality.

Federal Share:

Cost Share:

Total Estimated Project Cost:

Item 1: Specify (mark with "X") the FOA Topic Area and as applicable the Area of Interest (AOI):

_____ Topic Area 1: **Grid Resilience Grants** (BIL section 40101(c))

_____ Topic Area 2: **Smart Grid Grants** (BIL section 40107)

_____ Topic Area 3: **Grid Innovation Program** (BIL section 40103(b)) – Area of Interest 1
(**Transmission** System Applications)

_____ Topic Area 3: **Grid Innovation Program** (BIL section 40103(b)) – Area of Interest 2
(**Distribution** System Applications)

_____ Topic Area 3: **Grid Innovation Program** (BIL section 40103(b)) – Area of Interest 3
(**Combination** System Applications)

TOPIC AREA 1 Specific Items:

Item 2: Specify (mark with "X") the entity type of the applicant organization:

_____ electric grid operator

_____ electricity storage operator

_____ electricity generator

_____ transmission owner or operator

_____ distribution provider

_____ fuel supplier

If further description is needed for the specified entity type, please provide below:

--

Item 3: Please provide the total amount (USD) of qualifying resilience investments (as outlined in DE-FOA-00002740) that has been spent for the previous 3 years. Please also provide the time period utilized for calculation of this amount.

Total Amount:

Time Period for Resilience Investments:

Note: Topic Area 1 applicants must submit as part of their application, a report detailing past, current, and future efforts by the eligible entity to reduce the likelihood and consequences of disruptive events. This report should include efforts over at least the previous 3 years and at least the next 3 years and any broader resilience strategy used by the applicant.

Item 4: Is the eligible entity a Small Utility as defined in DE-FOA-0002740 (sells no more than 4,000,000 MWh of electricity per year)? If NO is selected, skip to Item 7.

_____ Yes

_____ No

Note: If YES, applicant must provide their Form 861 for the last reporting year submitted to the Energy Information Administration (EIA).

Item 5: Per BIL section 40101(e)(2) (C) APPLICATION LIMITATIONS.—An eligible entity may not submit an application for a grant provided by the Secretary under subsection (c) and a grant provided by a State or Indian Tribe pursuant to subsection (d) during the same application cycle.

Therefore, is the eligible entity a Subaward/Subcontract recipient for an application submitted under IJA Section 40101(d), ALRD 2736? If “YES”, please describe the differences between the GRIP FOA 2740 application [40101(c)] and the ALRD 2736 [40101(d)] applications in the box below:

_____ Yes

_____ No

TOPIC AREA 2 Specific

No items

TOPIC AREA 3 Specific

Item 6: Specify (mark with "X") the entity type of the applicant organization:

- _____ a State
- _____ a combination of 2 or more States
- _____ an Indian Tribe
- _____ a unit of local government
- _____ a public utility commission

If further description is needed for the specified entity type, please provide below:

Item 7:

Authorized Organizational Representative (AOR): please provide name, address, phone number and e-mail address for the authorized agent to bind the entity

Authorized Organizational Representative (AOR):

Name:

Address:

Phone:

E-mail:

Item 8: Signature of Authorized Organizational Representative (AOR)

PUC 2-14
IIJA

Request:

Ms. Castro refers to “eligible investments” on page 9 of her testimony. Please provide a definition (and listing, if applicable) of what types of Company investments are eligible.

Response:

Please see Attachment PUC 2-13 for the Funding Opportunity Announcement. The list of investments that are eligible under the grant begin on page 27 of 142.

Please see the Company's response to Division 1-61 in this docket for the definition of the eligible investments in the Company's current ISR Plan.

PUC 2-15
IIJA

Request:

Of the \$283 million in “OT and IT investments” referred to on page 10 of the Castro testimony, please provide a schedule itemizing those investments which the Company is now proposing to implement, indicating the timing of each investment (i.e., the ISR fiscal year or calendar year in which the investment would appear), and providing the estimated capital cost of each.

(NOTE: Please identify these investments, whether such investments are proceeding through the ISR or the Company anticipates that it will seek cost recovery for the investment through a general distribution rate case).

- a. Please identify the line item where any IIJA-related “OT and IT Investments” and associated spending appear in Attachment 3 in Section 2 of the capital spending plan (as such spending appears in the FY 2026 proposal and/or five-year forecast of the spending plan). If the investment is a subset of a line item, please state the subtotal that represents the applicable investment.

Response:

Please see the table below outlining the investments that make up the \$283 million in the Company's IIJA Proposal, the current forecast for these investments and where the Company intends to recover its portion of the cost-sharing.

The Narragansett Electric Company
d/b/a Rhode Island Energy
RIPUC Docket No. 24-54-EL

In Re: Proposed FY 2026 Electric Infrastructure, Safety, and Reliability Plan
Responses to the Commission's Second Set of Data Requests
Issued January 22, 2025

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IIJA

	(a)	(b)	(c)	(d)
	Investment	Spend in IIJA Proposal	Current Forecasted Spend	Recovery
1	Fiber	51,460,821	28,304,545	ISR
2	Reclosers	110,827,496	60,155,163	ISR and Base Rate Case
3	Relays	33,559,679	28,528,247	ISR
4	Capacitors	21,359,625	22,345,059	ISR
5	Regulators	7,288,309	1,725,435	ISR
6	Project Mgmt	1,034,565	1,034,565	ISR and Base Rate Case
7	IT	57,771,830	40,785,159	Base Rate Case
8	Total	283,302,325	182,878,173	

Please see Attachment PUC 2-15 outlining the investments and their associated costs in the FY 2026 Electric ISR Plan, with the line item they are associated with in Attachment 3 in Section 2. The costs in this table show the subset of the budget that relates to the IIJA eligible investments. For example, line 2 shows the portion of spend in the Load Relief blanket that the Company anticipates would be spent on reclosers.

As a note, there are some differences in the totals for the different investments between Attachment PUC 2-15 and the table above, primarily due to the timing of information. For example, the results of the fiber study are not included in Attachment 3 Section 2, as the study was not received until after the ISR Plan was filed.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Investment Type	Project/Program Name	Attachment 3 Reference	FY 2026 Proposed Budget (000s)	FY 2027 Forecast (000s)	FY 2028 Forecast (000s)	FY 2029 Forecast (000s)	FY 2030 Forecast (000s)
1	Reclosers	DARP - Distrib Automation Recloser Program	Bates Page 143 Line 15	168	12,609	13,510	14,970	13,620
2	Reclosers	Load Relief Blanket	Bates Page 143 Line 8	322	247	253	259	
3	Reclosers	Reliability Blanket	Bates Page 143 Line 8	242	247	253	259	
4	Reclosers	CEMI-4 Program	Bates Page 143 Line 10	484	412	506	432	
5	Reclosers	New Business Commercial	Bates Page 140 Line 2	242	247	253	259	
6	Reclosers	East Providence Substation D-Line	Bates Page 143 Line 2	725	742	675		
7	Reclosers	New Lafayette Substation D-Line	Bates Page 143 Line 4	161	247	169	173	
8	Reclosers	Other Area Study Projects - BSVS	Bates Page 143 Line 20	484		422		
9	Reclosers	Other Area Study Projects - CRIE	Bates Page 141 Line 14	81				
10	Reclosers	Other Area Study Projects - CRIW	Bates Page 141 Line 14	161	82	169		
11	Reclosers	Other Area Study Projects - East Bay	Bates Page 143 Line 22	322	247			
12	Reclosers	Other Area Study Projects - Newport	Bates Page 143 Line 23		165			
13	Reclosers	Other Area Study Projects - NWRI	Bates Page 143 Line 24	322	247			
14	Reclosers	Other Area Study Projects - SCE	Bates Page 143 Line 25	242	82			
15	Reclosers	Other Area Study Projects - SCW	Bates Page 143 Line 26	161	247			
16	Reclosers	Phillipsdale Substation D Line	Bates Page 141 Line 6	322	330	169		
17	Reclosers	Auburn Conversion & Line	Bates Page 141 Line 3	806	1,649	928	1,295	
18	Reclosers	Warren Substation	Bates Page 143 Line 3	484	412			
19	Reclosers	Weaver Hill Road Substation	Bates Page 143 Line 5	242	247	169		
20	Fiber	Fiber Network	Bates Page 143 Line 16	200	300			
21	Electromechanical Relays	Nasonville Substation	Bates Page 144 Line 12	184	73			
22	Electromechanical Relays	Kingston Substation Equipment Replacement	Bates Page 144 Line 9	441	881	441	220	
23	Electromechanical Relays	Other Area Study Projects - Newport	Bates Page 141 Line 17	514	147			
26	Electromechanical Relays	EMS	Bates Page 143 Line 14	379	171	73		
27	Electromechanical Relays	Tiverton Substation	Bates Page 141 Line 4	122	306	122		
28	Electromechanical Relays	Other Area Study Projects - CRIW	Bates Page 141 Line 15	122	306	122		
29	Electromechanical Relays	Apponaug Substation	Bates Page 144 Line 4	49	122	49		
30	Electromechanical Relays	Centredale Substation	Bates Page 144	49	122	49		
31	Electromechanical Relays	Hospital Substation	Bates Page 144 Line 8	321	804	321		
32	Electromechanical Relays	Electromechanical Relay Replacement Program	Bates Page 143 Line 11	652	2,393	6,215	4,396	3,225
33	Capacitors	Other Area Study Projects - NWRI	Bates Page 143 Line 24	124	64			
34	Capacitors	Load Relief Blanket	Bates Page 143 Line 8	62				
35	Capacitors	East Providence Substation D-Line	Bates Page 143 Line 2	186	191	130		
36	Capacitors	New Lafayette Substation D-Line	Bates Page 143 Line 4		32			
37	Capacitors	Other Area Study Projects - BSVS	Bates Page 141 Line 13			32		
38	Capacitors	Other Area Study Projects - CRIW	Bates Page 141 Line 15			65		
39	Capacitors	Other Area Study Projects - East Bay	Bates Page 143 Line 22	186	95	97		
40	Capacitors	Phillipsdale Substation D Line	Bates Page 141 Line 6	186	95	97	66	
41	Capacitors	Warren Substation	Bates Page 143 Line 3	217	254	97		
42	Capacitors	Weaver Hill Road Substation	Bates Page 143 Line 5			227		
43	Capacitors	VVO/CVR-Smart Capacitors and Regulators	Bates Page 143 Line 12	733	3,721	5,076	6,700	9,600
44	Regulators	VVO/CVR-Smart Capacitors and Regulators	Bates Page 143 Line 12	517	529	1,624		

PUC 2-16¹
IIFA

Request:

In Ms. Castro's testimony, she refers to the Company's understanding that if the total amount of spending varies from the initial proposed scope of IIFA investments, approval of the DOE is required. (page 10 of the Castro testimony) Is it the Company's intention deviate from the original award by more than ten percent? If yes,

- a. Is it the Company's intention to seek approval from the DOE?
- b. When does the Company expect to obtain the "approval" or learn of disapproval from DOE?
- c. If the DOE does not grant approval to deviate, is it the Company's intention to cancel or move forward with the grant approval?
- d. Is there a deadline by which the Company must either accept the grant or decline or be subject to losing the grant award?
- e. What is the Company's understanding regarding the potential impact of the change in presidential administration upon the likelihood of obtaining approval from DOE?
- f. If the Company is unable to obtain any requisite approval from DOE, is it the Company's intention to move forward with all or any subset of investments? If yes, please identify the investments and spending, and identify the line items in Attachment 3 in Section 2 of the spending plan where they appear.
- g. If the Company moves forward with an eligible investment during FY 2026 prior to obtaining approval from DOE, is the applicable investment still eligible for matching funds under the program?
- h. If the Company implements an investment, places it into service, and commences revenue requirement recovery for the investment in rates based on a 100% investment by the Company prior to DOE approval being obtained, is the applicable investment still eligible for matching funds under the program?

¹ The Company's response begins on page 2.

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IIJA

Response:

Yes, the Company intends to deviate from the original award by more than 10 percent. The Company's original project scope had an estimated budget of \$283 million with a maximum federal funding amount of \$50 million. The Company has since reduced the number of devices (e.g., reclosers) and other investments (e.g., fiber) that it intends to install over the next five years from what was included in the original IIJA application based on the Company's updated needs analysis and the timing and pace of the investments through the annual electric ISR Plan process.

The Company is still gathering information on the updated costs for the modified scope but estimates that the updated budget will be reduced by more than 10 percent. This will result in a corresponding reduction in the funding amount based on the cost share percentages, which are fixed under the contract with DOE, i.e., 18 percent (federal government) and 82 percent (Rhode Island Energy). The Company responds to the questions in parts a. through h., as follows:

- a. Yes, the Company intends to seek approval from the Department of Energy ("DOE") for a modification that reflects the change in project scope and budget from the original IIJA application upon which an award was issued by the DOE.
- b. The Company does not know the timing of when it will obtain the "approval" or learn of disapproval from DOE, or what that approval process will entail.
- c. If DOE does not grant approval of the modification of the scope of the project, the Company would have the ability to terminate the award. It is also possible that DOE may terminate the award if they determine that the modification no longer meets DOE's objectives for the award. The Company has been keeping DOE informed regarding the evolving scope of the project, and, therefore, does not expect DOE would deny the modification; however, there are still many unknowns with the status of the award, as discussed in part e., below. The Company is unable to say, at this time, how it would proceed under the award if DOE does not approve the modification.
- d. There is no deadline by which the Company must accept or decline the award to avoid losing the award; however, see the response to part e. regarding the status of the award under the new presidential administration.
- e. The Company does not know what, if any, impact the change in the presidential administration will have upon the grant award or the likelihood of obtaining approval of a modification from DOE. President Trump's Unleashing American Energy Executive

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IIJA

Order directs all agencies to pause IIJA funding disbursements and review the IIJA programs disbursements for consistency with the law and policies outlined in the Executive Order. The agencies need to report to the Director of the National Economic Council ("NEC") and Director of Office of Management and Budget ("OMB") within 90 days on the agencies' findings and recommendations. No funds can be disbursed until the Director of OMB and Assistant to the President for Economic Policy determine that the disbursements are consistent with the recommendations they decide to adopt. Currently, DOE is not authorized to discuss the modification with the Company. Rhode Island Energy will assess next steps after it receives further information whether the Director of OMB and Assistant to the President for Economic Policy determine that the disbursements are consistent with the recommendations they decide to adopt; however, at this time, there remain many unknowns and a risk that the Company does not receive any federal funding for the project.

- f. If the Company is unable to obtain the requisite approval from DOE, the Company still intends to move forward with the eligible investments, subject to cost recovery of those investments either through the ISR Plan process or a future base distribution rate case. See the Company's response to PUC 2-15 for a description of those investments and spending, and where they appear in Attachment 3 in Section 2 of the FY 2026 ISR Plan.
- g. The Company notes that the DOE is not matching the Company's spending. The amount of federal funding is based on a cost share with DOE. DOE's cost share is 18 percent and the Company's cost share is 82 percent. These percentages were determined based upon the original project budget in the IIJA application (\$283 million) and the maximum of funding amount of \$50 million. Nonetheless, yes, if the Company moves forward with investments during FY 2026 prior to DOE approval of the modification, those investments would still be eligible for cost sharing; however, see the response to part e. regarding the uncertainty of the recent Executive Order on the status of the award.
- h. Yes, the Company is eligible for cost sharing once it has incurred the eligible project costs and invoiced DOE for reimbursement. This applies to investments that are implemented and put into service during the performance period of the award. Note, however, that the Company is still trying to obtain approval from DOE for costs incurred prior to October 1, 2024 for investments that are already in service. See also the Company's response to part e. regarding the uncertainty of the award under the new presidential administration.

PUC 2-17¹
IIJA

Request:

In Docket 23-48-EL, the response to PUC 9-11 attached a copy of the grant application of the Company, which included information produced by DOE regarding the grant process. On page 15 of 142 of the Attachment 9-11-1, DOE included the following statement:

“DOE is looking to leverage funding to unlock transformative projects that would not be built and deployed without the federal funding under the GRIP program across the transmission system, distribution system, and combination system approaches – including catalyzing and unlocking increased investment into the transmission system to support greater overall grid resilience and reliability at the greatest scale.”

On page 24 of 142 (Attachment 9-11-1), it states:

“The applicant should describe in a narrative how the grant funding provided by this program would result in proposed activities that are additional to efforts that would have been undertaken but for the funding and will generate the greatest community or regional resilience benefit in reducing the likelihood and consequences of disruptive events.”

On page 4 of 25 (Attachment 9-11-2), the Company provided the following narrative:

“DOE Impact: This work will not proceed at this pace or scale without federal funding. Federal funding will both accelerate and unlock a number of resilience investments. Without federal funding, 100% of proposal costs will be recovered from customers; if selected, federal funding will go directly to reducing costs for all Rhode Island customers. Furthermore, federal funding will enable two significant and replicable advancements in community engagement. First, the Project Team will pilot an enhanced community and customer engagement strategy that provides more visibility and education about how RIE is making STRONG resilience investments. Second, the Project Team will develop and pilot the Community Prioritized Resilience Investment Framework to bring community voices to the discussion about how, when, and where to make resilience investments, with the objective of pulling in supplemental private funding to reduce customer costs. The ultimate project goal is to accelerate and strengthen reliability and resilience beyond the development baseline.”

¹ The Company's response begins on page 2.

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IIJA

Request (continued):

- a. Did the Company interpret the DOE conditions as including a condition in the DOE IIJA grant process that directly or indirectly conditioned approval of a grant on the assumption that the grant applicant would not have gone forward with the proposed investments or would have delayed going forward with the proposed investments, but for the approval of the grant? Please explain the Company's understanding.
- b. Please provide information which shows the baseline against which the Company measured both the pace and scale of the deployment of IIJA investments, resulting in the Company being able to state in good faith: "This work will not proceed at this pace or scale without federal funding."
- c. Please reconcile the Company's statement quoted above from Attachment 9-11-2 with the requirement for ISR approval that the investments relating to the IIJA grant included in the FY 2026 capital plan are needed in the short and long term to maintain reliability of the system.
- d. Are there any investments included in the FY 2026 capital spending plan that the Company would not have included in the FY 2026 spending, but for the fact that the Company was awarded the IIJA grant? If so, please identify those investments.

Response:

First, an administrative clarification: the citation from the application in the body of the question was from the application for federal funding related to resilience investments (STRONG, Attachment PUC 9-11-2) for which the Company was not selected. The Company included the same statement in its application for federal funding related to smart grid investments (Smart Grid for Smart Decarbonization, Attachment PUC 9-11-3):

"DOE Impact: This work will not proceed at this pace or scale without federal funding. Federal funding will accelerate investment in – and benefits from – the proposed IT/OT by up to two years and will expand the scope of smart IT investments to include Asset Hub and Digital Twin. The entirety of proposed investments will provide direct energy benefits to all RIE customers through improved reliability, quicker and less costly interconnections for DER, and faster deployment of electric vehicle (EV) charging stations at scale. Without federal funding, 100% of proposal costs will be recovered from customers; if selected, federal funding will go directly to reducing costs for all Rhode

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IIJA

Island customers. With the current macroeconomic landscape and historically high energy supply costs across New England, federal funding is also likely to expand the scale at which this investment occurs. Furthermore, the Project Team's proposed cost share (80% of total project costs) signifies the importance of the proposed work and grows the value of federal funding. The OT investments included in this proposal are scalable, and RIE may not be able to fund the full scale of investments in the timeframe targeted without federal funding." (Attachment 9-11-3, p 3 of 25)

For completeness, the Company responds to this data request (parts (b) through (d)) for both of its applications.

- a. The Company interpreted that DOE's selection of a grant was dependent in part on the degree to which the proposed investments would have delayed moving forward. The basis of the Company's interpretation includes both the language cited in the body of the question and the evaluation criteria described in the DOE's Funding Opportunity Announcement (Attachment PUC 9-11-1, pp 82-83 of 142² and pp 86-87 of 142³ excerpted below for each application's "Topic Area"⁴):

"Criterion 2 for Topic Area 1: Project Plan and Project Financial Feasibility (20%)

This criterion involves consideration of the following factors: ...

- The degree to which the proposed project yields additive benefit(s) from the federal funding to undertake additional efforts that would not be taken but-for the funding or to accelerate or expand planned activities that would not be accelerated or expanded but-for the funding. ..."

"Criterion 2 for Topic Area 2: Project Plan and Project Financial Feasibility (20%)

This criterion involves consideration of the following factors: ...

- The degree to which the proposed project yields additive benefit(s) from the federal funding to undertake additional efforts that would not be taken but-for the funding or to accelerate or expand planned activities that would not be accelerated or expanded but-for the funding. ..."

² Note that comprehensive evaluation criteria for the Company's application related to resilience investments are described on pp 82-86 and 94-96.

³ Note that comprehensive evaluation criteria for the Company's application related to smart grid investments are described on pp 86-90 and 94-96.

⁴ The application in Attachment PUC 9-11-2, for investments related to resilience, was submitted within Topic Area 1. The application in Attachment PUC 9-11-3, for investments related to smart grid, was submitted within Topic Area 2.

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IIJA

The Company refers to these criteria as the “but-for criteria” within its response to this data request.

- b. The baseline the Company implicitly referenced in its application for funding for resilience investments (Attachment PUC 9-11-2) was its 5-year capital investment forecast, which had been developed based on findings of area studies as of the writing of the application which occurred in the first quarter of calendar year 2023.

The baseline the Company implicitly referenced in its application for funding for smart grid investments (Attachment PUC 9-11-3) was its Grid Modernization Plan (as submitted in Docket 22-56-EL), overlaid with the plausibility of potential removal of some aspects of the proposed investments from the Company's future proposed ISR Plans (additional context provided in the Company's response to part (c)).

- c. The Company opens its response by level-setting on the Company's assumptions and understanding.

First, the Company offers a summary of its understanding of DOE's perspective regarding its “but-for” criteria. First, the “but-for” criteria is not a binary criteria; applications were evaluated on the degree to which some aspect of the proposed investment was accelerated or expanded. Second, the “but-for” criteria applies to the entire portfolio of proposed investments described within an application. If an application requests federal funding for multiple projects, not all projects need to be accelerated or expanded to achieve some level of positive rating in the “but-for” criteria. Third, the proposed projects themselves do not need to be wholly accelerated or expanded; the “but-for” criteria may be partially satisfied if an aspect of a project is accelerated or expanded. Second, the Company offers a summary of its understanding of how DOE discerns (or more accurately, does not discern) between funding streams within the entire application investment portfolio, specifically in relation to the “but-for” criteria. The Company's understanding is that each application represents a total portfolio with a total cost and some degree of positive rating in the “but-for” criteria. Importantly, there is no requirement to link federal dollars or non-federal cost share to a specific aspect of the total portfolio, be it a specific project or aspect of a project.

Based on the Company's understanding of these two items, the Company generally does not see a need to reconcile the two statements in question. Consider first a general hypothetical to illustrate this concept. Consider a project that was in the Company's five-year plan for the fifth year. With federal funding, the investment would be accelerated to

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IIJA

year three. Assuming the Company seeks cost share through the ISR, the Company would include the project in the ISR year that aligns with the accelerated timeline. Federal funding would be applied first to cover the cost of the acceleration from year five to year three, and then cover additional costs of the project, thereby reducing costs to be recovered through the ISR. Therefore, the proposal of the project through the ISR is not at odds with the intent of the ISR cost recovery mechanism because no cost is proposed to be recovered prior to the year in which the project would have been implemented. In effect, the federal funding pays for the acceleration, at minimum.

To be clear, the Company does not intend for its selection for federal funding to obviate the regulatory review process or the due diligence of any party involved. Furthermore, the Company does not intend to inflate its proposed ISR budget through projects that would not be used and useful. Finally, the Company seeks to leverage federal funding to reduce costs for customers; although the Company's intent is to offset ISR cost recovery with federal funding, the Company is seeking cost share through funding mechanisms including but not limited to the ISR.

The following content responds specifically to the projects proposed in each of the Company's applications for federal funding.

Regarding the Company's statement in its application for funding for resilience investments (Attachment PUC 9-11-2):

“DOE Impact: This work will not proceed at this pace or scale without federal funding. Federal funding will both accelerate and unlock a number of resilience investments. Without federal funding, 100% of proposal costs will be recovered from customers; if selected, federal funding will go directly to reducing costs for all Rhode Island customers. Furthermore, federal funding will enable two significant and replicable advancements in community engagement. First, the Project Team will pilot an enhanced community and customer engagement strategy that provides more visibility and education about how RIE is making STRONG resilience investments. Second, the Project Team will develop and pilot the Community Prioritized Resilience Investment Framework to bring community voices to the discussion about how, when, and where to make resilience investments, with the objective of pulling in supplemental private funding to reduce customer costs. The ultimate project goal is to accelerate and strengthen reliability and resilience beyond the development baseline.”

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IIJA

The Company describes the nature of accelerated pace and expanded scale within the body of its application, excerpted below, and annotates each with the Company's pace and timing of the proposed project absent federal funding (the Company was not selected for funding for resilience investments).

"At this time, the only planned work includes repairs, which would not prevent future flooding impacts and outages. With funding, investments would be accelerated and expanded to include flood mitigation measures." (Mitigate substation flooding: p 7 of 25) Absent federal funding, the Company is not accelerating or expanding these investments.

"With funding, these investments would be accelerated and expanded to include the important distribution conversion measures..." (Strengthen substation resilience and accommodate electrification: p 7 of 25) Absent federal funding, the Company is not accelerating or expanding these investments.

"With funding, these investments would be accelerated." (Accelerate feeder resilience: p 8 of 25) Absent federal funding, the Company is not accelerating these investments.

"With funding, these investments would be accelerated by up to three years." (Address wind-driven outages for rural feeder: p 9 of 25) Absent federal funding, the Company is not accelerating these investments.

Note that the work proposed as "Relocate coastal feeders underground", "Relocate transmission line of significance to DAC communities underground", "Utility-scale energy storage to reduce outages for DAC communities", and the "Community Prioritized Resilience Investment Framework" were not within the Company's planned investments or activities (p 8 of 25, 10 of 25, and 10-11 of 25, respectively) Absent federal funding, none of these investments or activities are being accelerated or expanded.

Regarding the Company's statement in its application for funding for smart grid investments (Attachment PUC 9-11-3):

"DOE Impact: This work will not proceed at this pace or scale without federal funding. Federal funding will accelerate investment in – and benefits from – the proposed IT/OT by up to two years and will expand the scope of smart IT

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IIJA

investments to include Asset Hub and Digital Twin. The entirety of proposed investments will provide direct energy benefits to all RIE customers through improved reliability, quicker and less costly interconnections for DER, and faster deployment of electric vehicle (EV) charging stations at scale. Without federal funding, 100% of proposal costs will be recovered from customers; if selected, federal funding will go directly to reducing costs for all Rhode Island customers. With the current macroeconomic landscape and historically high energy supply costs across New England, federal funding is also likely to expand the scale at which this investment occurs. Furthermore, the Project Team's proposed cost share (80% of total project costs) signifies the importance of the proposed work and grows the value of federal funding. The OT investments included in this proposal are scalable, and RIE may not be able to fund the full scale of investments in the timeframe targeted without federal funding." (Attachment 9-11-3, p. 3 of 25)

The first highlighted statement describes the nature of accelerated pace and expanded scale of IT investments that occur outside of the ISR process; therefore, the requirement for ISR approval that the investments relating to the IIJA grant included in the FY 2026 capital plan are needed in the short and long term to maintain reliability of the system is not applicable.

The second and third highlighted statements allude to the fact that concerns over customer bill affordability may result in a quantity of operational technologies, like reclosers, that are removed from the Company's proposed ISR budget. The Company's position is that these investments are needed in the short and long term to maintain reliability of the system, which is why they were proposed through the ISR dockets; nonetheless, federal funding allows the Company to expand the scale of operational technology deployment relative to approved investment.

- d. No. All of the investments in the FY 2026 ISR Plan would have been included in the filing without the IIJA federal cost-share.

PUC 2-18
IIJA

Request:

Please explain how the IIJA grant from DOE would be treated by the Company for federal income tax purposes, and explain whether the federal income tax treatment will have an impact on the amounts included in rate base.

Response:

For federal income tax purposes, the Company will treat the Infrastructure, Investments and Jobs Act ("IIJA") grants from the Department of Energy ("DOE") as taxable income in the year received pursuant to Internal Revenue Code ("IRC") Section 118. The amendments to IRC Section 118 by the Tax Cuts and Jobs Act require that these government grants be treated as taxable income in the year of receipt.

The federal income tax treatment of the IIJA grant will have an impact on the tax amounts included in rate base because the financial reporting and tax treatments of the IIJA grant are different, which will impact deferred taxes. As noted above, the receipt of the IIJA grants are treated as income for tax purposes in the year the grant is received. In contrast, the IIJA grant would reduce the book cost of plant for financial reporting purposes in the year of receipt and an increase in financial income would result through lower book depreciation over the book life of the plant. Because of this book versus tax timing difference, a deferred tax asset ("DTA") will be recorded for the immediate increase in the Company's tax liability because of the receipt of the grant and the simultaneous increase in the tax basis over the book basis of the asset; and this DTA will increase rate base. As the plant asset is depreciated for book (assuming the grant does not reduce the book cost to zero) and tax purposes, the DTA will reverse and eventually change to a deferred tax liability ("DTL") due to accelerated tax depreciation, and this DTL will reduce rate base. Once tax depreciation is complete and the book depreciation continues over the longer book life of the asset, the DTL will reverse until it is zero at the end of the asset's book life.

PUC 2-19
IIJA

Request:

In Ms. Castro's testimony, she uses a hypothetical \$100,000 investment on page 11 to illustrate rate accounting treatment. Please expand and change the hypothetical with a schedule, showing the depreciation and revenue requirement year-by-year, assuming the \$100,000 investment is depreciated over 25 years, and the amount of sharing from the federal government is 18%.

Response:

Please see Attachment PUC 2-19 for a year-by-year revenue requirement schedule for 25 years for an investment of \$82,000 that was assumed to be placed in service in FY 2026. The net \$82,000 investment represents a total investment of \$100,000 offset by \$18,000 (representing 18% federal cost share amount). The Company used a hypothetical depreciation life of 25 years (4%) to calculate the revenue requirement. The hypothetical example strictly shows the impact of the grant without consideration of other items like cost of removal, retirements, and tax repairs. The tax impacts of government funding discussed in the response to PUC 2-18 are reflected in this revenue requirement schedule.

The Narragansett Electric Company
d/b/a Rhode Island Energy
Electric Infrastructure, Safety, and Reliability (ISR) Plan
Fiscal Year 2026 Revenue Requirement on FY 2026 Actual Incremental Capital Investment

Line No.		1	2	3	4	5	6	7	8	9	10	11	12	13
		Fiscal Year 2026 (a)	Fiscal Year 2027 (b)	Fiscal Year 2028 (c)	Fiscal Year 2029 (d)	Fiscal Year 2030 (e)	Fiscal Year 2031 (f)	Fiscal Year 2032 (g)	Fiscal Year 2033 (h)	Fiscal Year 2034 (i)	Fiscal Year 2035 (j)	Fiscal Year 2036 (k)	Fiscal Year 2037 (l)	Fiscal Year 2038 (m)
<u>Capital Investment Allowance</u>														
1	Non-Discretionary Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	Discretionary Capital Lesser of Actual Cumulative Non-Discretionary Capital Additions or Spending, or Approved Spending (non-intangible)	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
3	Total Allowed Capital Included in Rate Base (non-intangible)	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
<u>Depreciable Net Capital Included in Rate Base</u>														
4	Total Allowed Capital Included in Rate Base in Current Year	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
5	Retirements	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Net Depreciable Capital Included in Rate Base	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
<u>Change in Net Capital Included in Rate Base</u>														
7	Capital Included in Rate Base	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
8	Depreciation Expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	Incremental Capital Amount	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
10	Cost of Removal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	Total Net Plant in Service	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
<u>Deferred Tax Calculation:</u>														
12	Composite Book Depreciation Rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
13	Vintage Year Tax Depreciation:													
14	Tax Depreciation and Year 1 Basis Adjustments	(\$14,250)	\$7,219	\$6,677	\$6,177	\$5,713	\$5,285	\$4,888	\$4,522	\$4,462	\$4,461	\$4,462	\$4,461	\$4,462
15	Cumulative Tax Depreciation-PPL	(\$14,250)	(\$7,031)	(\$354)	\$5,823	\$11,536	\$16,821	\$21,709	\$26,231	\$30,693	\$35,154	\$39,616	\$44,077	\$48,539
16	Book Depreciation	\$1,640	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280
17	Cumulative Book Depreciation	\$1,640	\$4,920	\$8,200	\$11,480	\$14,760	\$18,040	\$21,320	\$24,600	\$27,880	\$31,160	\$34,440	\$37,720	\$41,000
18	Cumulative Book / Tax Timer	(\$15,890)	(\$11,951)	(\$8,554)	(\$5,657)	(\$3,224)	(\$1,219)	\$389	\$1,631	\$2,813	\$3,994	\$5,176	\$6,357	\$7,539
19	Effective Tax Rate	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
20	Deferred Tax (Asset) / Liability	(\$3,337)	(\$2,510)	(\$1,796)	(\$1,188)	(\$677)	(\$256)	\$82	\$343	\$591	\$839	\$1,087	\$1,335	\$1,583
21	Add: CY 2025 Federal NOL (Generation) / Utilization	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	Net Deferred Tax (Asset) / Liability before Proration Adjustment	(\$3,337)	(\$2,510)	(\$1,796)	(\$1,188)	(\$677)	(\$256)	\$82	\$343	\$591	\$839	\$1,087	\$1,335	\$1,583
<u>Rate Base Calculation:</u>														
23	Cumulative Incremental Capital Included in Rate Base	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
24	Accumulated Depreciation	(\$1,640)	(\$4,920)	(\$8,200)	(\$11,480)	(\$14,760)	(\$18,040)	(\$21,320)	(\$24,600)	(\$27,880)	(\$31,160)	(\$34,440)	(\$37,720)	(\$41,000)
25	Deferred Tax Asset / (Liability)	\$3,337	\$2,510	\$1,796	\$1,188	\$677	\$256	(\$82)	(\$343)	(\$591)	(\$839)	(\$1,087)	(\$1,335)	(\$1,583)
26	Year End Rate Base before Deferred Tax Proration	\$83,697	\$79,590	\$75,596	\$71,708	\$67,917	\$64,216	\$60,598	\$57,057	\$53,529	\$50,001	\$46,473	\$42,945	\$39,417
<u>Revenue Requirement Calculation:</u>														
27	Average Rate Base before Deferred Tax Proration Adjustment	\$41,848	\$81,643	\$77,593	\$73,652	\$69,813	\$66,067	\$62,407	\$58,828	\$55,293	\$51,765	\$48,237	\$44,709	\$41,181
28	Proration Adjustment	\$19	\$36	\$31	\$26	\$22	\$18	\$14	\$11	\$11	\$11	\$11	\$11	\$11
29	Average ISR Rate Base after Deferred Tax Proration	\$41,867	\$81,679	\$77,624	\$73,678	\$69,834	\$66,085	\$62,422	\$58,839	\$55,304	\$51,776	\$48,248	\$44,720	\$41,192
30	Pre-Tax ROR	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%
31	Return and Taxes	\$3,446	\$6,722	\$6,388	\$6,064	\$5,747	\$5,439	\$5,137	\$4,842	\$4,552	\$4,261	\$3,971	\$3,680	\$3,390
32	Book Depreciation	\$1,640	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280
33	Annual Revenue Requirement	\$5,086	\$10,002	\$9,668	\$9,344	\$9,027	\$8,719	\$8,417	\$8,122	\$7,832	\$7,541	\$7,251	\$6,960	\$6,670

The Narragansett Electric Company d/b/a Rhode Island Energy Electric Infrastructure, Safety, and Reliability (ISR) Plan Fiscal Year 2026 Revenue Requirement on FY 2026 Actual Incremental Capital Investment		14	15	16	17	18	19	20	21	22	23	24	25	26
Line No.		Fiscal Year 2039 (n)	Fiscal Year 2040 (o)	Fiscal Year 2041 (p)	Fiscal Year 2042 (q)	Fiscal Year 2043 (r)	Fiscal Year 2044 (s)	Fiscal Year 2045 (t)	Fiscal Year 2046 (u)	Fiscal Year 2047 (v)	Fiscal Year 2048 (w)	Fiscal Year 2049 (x)	Fiscal Year 2050 (y)	Fiscal Year 2051 (z)
	<u>Capital Investment Allowance</u>													
1	Non-Discretionary Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	Discretionary Capital Lesser of Actual Cumulative Non-Discretionary Capital Additions or Spending, or Approved Spending (non-intangible)	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
3	Total Allowed Capital Included in Rate Base (non-intangible)	Sum of Lines 1 through 2	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
	<u>Depreciable Net Capital Included in Rate Base</u>													
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
5	Retirements	Company's Record	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Net Depreciable Capital Included in Rate Base	Year 1 = Line 4 - Line 5; Then = Prior Year Line 6	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
	<u>Change in Net Capital Included in Rate Base</u>													
7	Capital Included in Rate Base	Line 3	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
8	Depreciation Expense		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	Incremental Capital Amount	Year 1 = Line 7 - Line 8; Then = Prior Year Line 9	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
10	Cost of Removal	Company's Record	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	Total Net Plant in Service	Line 9 + Line 10	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
	<u>Deferred Tax Calculation:</u>													
12	Composite Book Depreciation Rate	Assumption of 25 year life	1/	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
13	Vintage Year Tax Depreciation:													
14	Tax Depreciation and Year 1 Basis Adjustments	Year 1 = Page 3, Line 30, Column (a), Then = column (d)	\$4,461	\$4,462	\$4,461	\$4,462	\$4,461	\$4,462	\$4,461	\$2,231	\$0	\$0	\$0	\$0
15	Cumulative Tax Depreciation-PPL	Prior Year Line 15 + Current Year Line 14	\$53,000	\$57,462	\$61,923	\$66,385	\$70,846	\$75,308	\$79,769	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
16	Book Depreciation	year 1 = Line 6 * Line 12 * 50%; Then = Line 6 * Line 12	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$1,640
17	Cumulative Book Depreciation	Prior Year Line 17 + Current Year Line 16	\$44,280	\$47,560	\$50,840	\$54,120	\$57,400	\$60,680	\$63,960	\$67,240	\$70,520	\$73,800	\$77,080	\$80,360
18	Cumulative Book / Tax Timer	Line 15 - Line 17	\$8,720	\$9,902	\$11,083	\$12,265	\$13,446	\$14,628	\$15,809	\$14,760	\$11,480	\$8,200	\$4,920	\$1,640
19	Effective Tax Rate		21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
20	Deferred Tax (Asset) / Liability	Line 18 * Line 19	\$1,831	\$2,079	\$2,327	\$2,576	\$2,824	\$3,072	\$3,320	\$3,100	\$2,411	\$1,722	\$1,033	\$344
21	Add: CY 2025 Federal NOL (Generation) / Utilization	Company's Record	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	Net Deferred Tax (Asset) / Liability before Proration Adjustment	Sum of Lines 20 through 21	\$1,831	\$2,079	\$2,327	\$2,576	\$2,824	\$3,072	\$3,320	\$3,100	\$2,411	\$1,722	\$1,033	\$344
	<u>Rate Base Calculation:</u>													
23	Cumulative Incremental Capital Included in Rate Base	Line 11	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
24	Accumulated Depreciation	-Line 17	(\$44,280)	(\$47,560)	(\$50,840)	(\$54,120)	(\$57,400)	(\$60,680)	(\$63,960)	(\$67,240)	(\$70,520)	(\$73,800)	(\$77,080)	(\$80,360)
25	Deferred Tax Asset / (Liability)	-Line 22	(\$1,831)	(\$2,079)	(\$2,327)	(\$2,576)	(\$2,824)	(\$3,072)	(\$3,320)	(\$3,100)	(\$2,411)	(\$1,722)	(\$1,033)	(\$344)
26	Year End Rate Base before Deferred Tax Proration	Sum of Lines 23 through 25	\$35,889	\$32,361	\$28,833	\$25,304	\$21,776	\$18,248	\$14,720	\$11,660	\$9,069	\$6,478	\$3,887	\$1,296
	<u>Revenue Requirement Calculation:</u>													
27	Average Rate Base before Deferred Tax Proration Adjustment	Year 1 = Current Year, Line 26 * 50%; Then = (Prior Year Line 26 + Current Year Line 26) ÷ 2	\$37,653	\$34,125	\$30,597	\$27,068	\$23,540	\$20,012	\$16,484	\$13,190	\$10,365	\$7,774	\$5,182	\$2,591
28	Proration Adjustment	Page 4, Line 42	\$11	\$11	\$11	\$11	\$11	\$11	\$11	(\$9)	(\$30)	(\$30)	(\$30)	(\$15)
29	Average ISR Rate Base after Deferred Tax Proration	Line 28 + Line 29	\$37,663	\$34,135	\$30,607	\$27,079	\$23,551	\$20,023	\$16,495	\$13,181	\$10,335	\$7,744	\$5,153	\$2,562
30	Pre-Tax ROR	Docket 4770	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%
31	Return and Taxes	Line 29 * Line 30	\$3,100	\$2,809	\$2,519	\$2,229	\$1,938	\$1,648	\$1,358	\$1,085	\$851	\$637	\$424	\$211
32	Book Depreciation	Line 16	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$1,640
33	Annual Revenue Requirement	Line 31 + Line 32	\$6,380	\$6,089	\$5,799	\$5,509	\$5,218	\$4,928	\$4,638	\$4,365	\$4,131	\$3,917	\$3,704	\$3,491

**The Narragansett Electric Company
d/b/a Rhode Island Energy
FY 2026 Electric Infrastructure, Safety, and Reliability (ISR) Plan
Calculation of Tax Depreciation and Repairs Deduction on FY 2026 Incremental Capital Investments**

Line No.			Fiscal Year			
			2026 (a)	(b)	(c)	(d) (e)
	<u>Capital Repairs Deduction</u>					
1	Plant Additions	Page 1, Line 3	\$82,000	20 Year MACRS Depreciation		
2	IRC §118 Taxable Income - Grants		\$18,000			
3	Tax Basis in Plant Additions	Line 1 + Line 2	\$100,000			
4	Capital Repairs Deduction Rate	Per Tax Department 1/	0.00%			
5	Capital Repairs Deduction	Line 3 × Line 4	\$0	MACRS basis: Line 24 \$100,000		
6						
7	<u>Book / Tax Basis Differences (excl. Tax Repairs):</u>			Calendar Year		
8	IRC §118 Taxable Income - Grants	Line 2	\$18,000			
9				Annual Cumulative		
10	<u>Bonus Depreciation</u>					
11	Tax Basis in Plant Additions	Line 3	\$100,000	Mar-2026	3.750%	\$3,750 (\$14,250)
12	Less Capital Repairs Deduction	Line 5	\$0	Mar-2027	7.219%	\$7,219 (\$7,031)
13	Plant Additions Net of Capital Repairs Deduction	Line 11 - Line 12	\$100,000	Mar-2028	6.677%	\$6,677 (\$354)
14	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	0.00%	Mar-2029	6.177%	\$6,177 \$5,823
15	Plant Eligible for Bonus Depreciation	Line 13 * Line 14	\$0	Mar-2030	5.713%	\$5,713 \$11,536
16	Bonus Depreciation Rate	at 0%	0.00%	Mar-2031	5.285%	\$5,285 \$16,821
17	Bonus Depreciation	Line 15 * Line 16	\$0	Mar-2032	4.888%	\$4,888 \$21,709
18				Mar-2033	4.522%	\$4,522 \$26,231
19	<u>Remaining Tax Depreciation</u>			Mar-2034	4.462%	\$4,462 \$30,693
20	Tax Basis in Plant Additions	Line 3	\$100,000	Mar-2035	4.461%	\$4,461 \$35,154
21	Less Capital Repairs Deduction	Line 5	\$0	Mar-2036	4.462%	\$4,462 \$39,616
22	Less Bonus Depreciation	Line 17	\$0	Mar-2037	4.461%	\$4,461 \$44,077
	Remaining Plant Additions Subject to 20 YR MACRS Tax			Mar-2038	4.462%	\$4,462 \$48,539
23	Depreciation	Line 20 - Line 21 - Line 22	\$100,000	Mar-2039	4.461%	\$4,461 \$53,000
24	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	Mar-2040	4.462%	\$4,462 \$57,462
25	Remaining Tax Depreciation	Line 23 * Line 24	\$3,750	Mar-2041	4.461%	\$4,461 \$61,923
26				Mar-2042	4.462%	\$4,462 \$66,385
27	FY26 (Gain)/Loss incurred due to retirements	Per Tax Department 2/	\$0	Mar-2043	4.461%	\$4,461 \$70,846
28	Cost of Removal	Page 29 of 42, Line 10	\$0	Mar-2044	4.462%	\$4,462 \$75,308
29				Mar-2045	4.461%	\$4,461 \$79,769
				Mar-2046	2.231%	\$2,231 \$82,000
					100.00%	\$100,000
30	Total Tax Depreciation, Repairs Deduction offset by Grant Income	Sum of Lines 5, 17, 25, 27, and 28 Less Line 8	(\$14,250)			
31						

1/ Per Tax Department
2/ Per Tax Department

The Narragansett Electric Company
d/b/a Rhode Island Energy
FY 2026 Electric Infrastructure, Safety, and Reliability (ISR) Plan
Calculation of Net Deferred Tax Reserve Proration on FY 2026 Incremental Capital Investment

Line No.	Deferred Tax Subject to Proration	Fiscal Year 2026 (a)	Fiscal Year 2027 (b)	Fiscal Year 2028 (c)	Fiscal Year 2029 (d)	Fiscal Year 2030 (e)	Fiscal Year 2031 (f)	Fiscal Year 2032 (g)	Fiscal Year 2033 (h)	Fiscal Year 2034 (i)	Fiscal Year 2035 (j)	Fiscal Year 2036 (k)	Fiscal Year 2037 (l)	Fiscal Year 2038 (m)	Fiscal Year 2039 (n)
1	Book Depreciation														
2	Bonus Depreciation														
3	Remaining MACRS Tax Depreciation														
4	FY 2026 tax (gain)/loss on retirements														
5	Cumulative Book / Tax Timer														
6	Effective Tax Rate														
7	Deferred Tax Reserve														
8	Capital Repairs Deduction														
9	IRC §118 Taxable Income - Grants														
10	Cost of Removal														
11	Book/Tax Depreciation Timing Difference at 3/31/2026														
12	Cumulative Book / Tax Timer														
13	Effective Tax Rate														
14	Deferred Tax Reserve														
15	Total Deferred Tax Reserve														
16	Net Operating Loss														
17	Net Deferred Tax Reserve														
18	Cumulative Book/Tax Timer Subject to Proration														
19	Cumulative Book/Tax Timer Not Subject to Proration														
20	Total Cumulative Book/Tax Timer														
21	Total FY 2026 Federal NOL (Utilization)														
22	Allocated FY 2026 Federal NOL Not Subject to Proration														
23	Allocated FY 2026 Federal NOL Subject to Proration														
24	Effective Tax Rate														
25	Deferred Tax Benefit subject to proration														
26	Net Deferred Tax Reserve subject to proration														
27	Proration Calculation														
28	April														
29	May														
30	June														
31	July														
32	August														
33	September														
34	October														
35	November														
36	December														
37	January														
38	February														
39	March														
40	Deferred Tax Without Proration														
41	Average Deferred Tax without Proration														
42	Proration Adjustment														

Column Notes:
(d) Sum of remaining days in the year (Col (c)) ÷ 365
(e) Current Year Line 26 ÷ 12 × Current Month Col (d)

The Narragansett Electric Company
d/b/a Rhode Island Energy
FY 2026 Electric Infrastructure, Safety, and Reliability (ISR) Plan
Calculation of Net Deferred Tax Reserve Proration on FY 2026 Incremental Capital Investment

Line No.			Fiscal Year 2040 (o)	Fiscal Year 2041 (p)	Fiscal Year 2042 (q)	Fiscal Year 2043 (r)	Fiscal Year 2044 (s)	Fiscal Year 2045 (t)	Fiscal Year 2046 (u)	Fiscal Year 2047 (v)	Fiscal Year 2048 (w)	Fiscal Year 2049 (x)	Fiscal Year 2050 (y)	Fiscal Year 2051 (z)
1	Book Depreciation	Page 29 of 42, Line 16	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$3,280	\$1,640
2	Bonus Depreciation	Page 3, Line 18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Remaining MACRS Tax Depreciation	- Page 3, Col (d), starting with Line 6	(\$4,462)	(\$4,461)	(\$4,462)	(\$4,461)	(\$4,462)	(\$4,461)	(\$2,231)					
4	FY 2026 tax (gain)/loss on retirements	- Page 3, Line 28	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	(\$1,182)	(\$1,181)	(\$1,182)	(\$1,181)	(\$1,182)	(\$1,181)	\$1,049	\$3,280	\$3,280	\$3,280	\$3,280	\$1,640
6	Effective Tax Rate		21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
7	Deferred Tax Reserve	Line 5 * Line 6	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	\$220	\$689	\$689	\$689	\$689	\$344
Deferred Tax Not Subject to Proration														
8	Capital Repairs Deduction	- Page 3, Line 5, Col (a), Then = 0												
9	IRC §118 Taxable Income - Grants	Page 3, Line 8, Col , Then = 0												
10	Cost of Removal	- Page 3, Line 29, Col (a), Then = 0												
11	Book/Tax Depreciation Timing Difference at 3/31/2026													
12	Cumulative Book / Tax Timer	Sum of Lines 8 through 11												
13	Effective Tax Rate													
14	Deferred Tax Reserve	Line 12 * Line 13												
15	Total Deferred Tax Reserve	Line 7 + Line 14	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	\$220	\$689	\$689	\$689	\$689	\$344
16	Net Operating Loss	- Page 29 of 42, Line 21	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17	Net Deferred Tax Reserve	Line 15 + Line 16	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	\$220	\$689	\$689	\$689	\$689	\$344
Allocation of FY 2026 Estimated Federal NOL														
18	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	(\$1,182)	(\$1,181)	(\$1,182)	(\$1,181)	(\$1,182)	(\$1,181)	\$1,049	\$3,280	\$3,280	\$3,280	\$3,280	\$1,640
19	Cumulative Book/Tax Timer Not Subject to Proration	Line 12	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20	Total Cumulative Book/Tax Timer	Line 18 + Line 19	(\$1,182)	(\$1,181)	(\$1,182)	(\$1,181)	(\$1,182)	(\$1,181)	\$1,049	\$3,280	\$3,280	\$3,280	\$3,280	\$1,640
21	Total FY 2026 Federal NOL (Utilization)	- Page 29 of 42, Line 21 / 21%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	Allocated FY 2026 Federal NOL Not Subject to Proration	(Line 19 / Line 20) * Line 21	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	Allocated FY 2026 Federal NOL Subject to Proration	(Line 18 / Line 20) * Line 21	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
24	Effective Tax Rate		21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
25	Deferred Tax Benefit subject to proration	Line 23 * Line 24	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Net Deferred Tax Reserve subject to proration	Line 7 + Line 25	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	\$220	\$689	\$689	\$689	\$689	\$344
		(c) (d) (s) (t) (u) (v) (w) (x) (y) (z) (aa) (ab) (ac) (ad)												
Proration Calculation														
		Number of Days in Month Proration Percentage	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
27	April	30 91.78%	(\$19)	(\$19)	(\$19)	(\$19)	(\$19)	(\$19)	\$17	\$53	\$53	\$53	\$53	\$26
28	May	31 83.29%	(\$17)	(\$17)	(\$17)	(\$17)	(\$17)	(\$17)	\$15	\$48	\$48	\$48	\$48	\$24
29	June	30 75.07%	(\$16)	(\$16)	(\$16)	(\$16)	(\$16)	(\$16)	\$14	\$43	\$43	\$43	\$43	\$22
30	July	31 66.58%	(\$14)	(\$14)	(\$14)	(\$14)	(\$14)	(\$14)	\$12	\$38	\$38	\$38	\$38	\$19
31	August	31 58.08%	(\$12)	(\$12)	(\$12)	(\$12)	(\$12)	(\$12)	\$11	\$33	\$33	\$33	\$33	\$17
32	September	30 49.86%	(\$10)	(\$10)	(\$10)	(\$10)	(\$10)	(\$10)	\$9	\$29	\$29	\$29	\$29	\$14
33	October	31 41.37%	(\$9)	(\$9)	(\$9)	(\$9)	(\$9)	(\$9)	\$8	\$24	\$24	\$24	\$24	\$12
34	November	30 33.15%	(\$7)	(\$7)	(\$7)	(\$7)	(\$7)	(\$7)	\$6	\$19	\$19	\$19	\$19	\$10
35	December	31 24.66%	(\$5)	(\$5)	(\$5)	(\$5)	(\$5)	(\$5)	\$5	\$14	\$14	\$14	\$14	\$7
36	January	31 16.16%	(\$3)	(\$3)	(\$3)	(\$3)	(\$3)	(\$3)	\$3	\$9	\$9	\$9	\$9	\$5
37	February	28 8.49%	(\$2)	(\$2)	(\$2)	(\$2)	(\$2)	(\$2)	\$2	\$5	\$5	\$5	\$5	\$2
38	March	31 0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
39	Total	365	(\$113)	(\$113)	(\$113)	(\$113)	(\$113)	(\$113)	\$101	\$315	\$315	\$315	\$315	\$157
40	Deferred Tax Without Proration	Line 26	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	(\$248)	\$220	\$689	\$689	\$689	\$689	\$344
41	Average Deferred Tax without Proration	Line 40 × 0.5	(\$124)	(\$124)	(\$124)	(\$124)	(\$124)	(\$124)	\$110	\$344	\$344	\$344	\$344	\$172
42	Proration Adjustment	Line 39 - Line 41	\$11	\$11	\$11	\$11	\$11	\$11	(\$9)	(\$30)	(\$30)	(\$30)	(\$30)	(\$15)

Column Notes:

- (d) Sum of remaining days in the year (Col (c)) ÷ 365
(e) Current Year Line 26 ÷ 12 × Current Month Col (d)

PUC 2-20
IIJA

Request:

In the Company's response to DIV 1-63, the response appears to indicate that the Company is seeking approval of the IIJA investments in the ISR plan.

- a. Please provide a description of the "approval" that the Company is seeking, including proposed language for the Commission to adopt for the approval, if the Commission determines that approval is appropriate.
- b. Please clarify whether the Company is seeking any pre-approval of the Company's plan for any investments eligible for IIJA funding for which the Company will seek recovery outside of the ISR.

Response:

- a. The Company is seeking approval of the investments it has proposed in its fiscal year ("FY") 2026 Electric ISR Plan and the resulting proposed ISR budget. Any reference to approval of "IIJA investments" is intended only to reflect that some of the investments proposed in the FY 2026 Electric ISR Plan may also be eligible for federal cost sharing through the Company's IIJA award. The Company did not intend to indicate any additional approval related to IIJA investments, generally.
- b. No, the Company is not seeking any pre-approval for investments that are eligible for IIJA funding and that the Company will seek recovery for outside of the ISR.

PUC 2-21
IIJA

Request:

The Company's response to DIV 1-59 references a "first performance period" "commencement date" that started on October 1, 2024. Please explain what this means and explain what the Company has done to meet the performance requirement.

Response:

The award is a five-year performance period that began on the "commencement date" of October 1, 2024, which is the date on which the Department of Energy issued the award to the Company and expires on September 30, 2029. The "first performance period" is the first year of the award from October 1, 2024 through September 30, 2025. This is the time period during which the Company would be able to incur and submit allowable project costs for eligible investments for reimbursement under the award agreement. The Company has not undertaken any performance requirements yet.

PUC 2-22
IIJA

Request:

In the terms and conditions attached to DIV 1-60, page 5, there is a condition that states: “If you earn program income during the project period as a result of this award, you must deduct the program income from the total allowable project costs to determine the net allowable costs on which the Federal share is based.” Please explain the Company’s understanding of this provision and the extent to which it may apply to the Company’s grant.

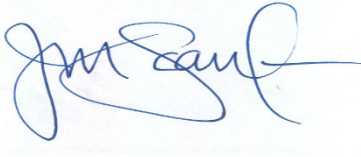
Response:

The “total allowable project costs” are the actual costs that the Company incurs for the project and invoices to Department of Energy (“DOE”). The cost share percentages are applied to that amount. To the extent there was program income, such program income must be deducted from project costs, resulting in a net allowable cost figure for determining the amount of funding the federal government will provide as part of its cost share for the project; it is this amount that may be invoiced to DOE. It is the Company’s understanding that this provision is a standard provision of the DOE contract, and program income does not apply to the Company’s grant.

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

February 28, 2025

Date

Docket No. 24-54-EL – RI Energy’s Electric ISR Plan FY 2026
Service List as of 2/21/2025

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