

November 16, 2020

VIA ELECTRONIC MAIL

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

RE: Docket 4995 – FY2021 Electric Infrastructure, Safety, and Reliability Plan Quarterly Update – Second Quarter Ending September 30, 2020

Dear Ms. Massaro:

On behalf of National Grid,¹ I have enclosed an electronic version of the Company's fiscal year (FY) 2021 Electric Infrastructure, Safety, and Reliability (ISR) Plan quarterly update for the second quarter ending September 30, 2020.² Pursuant to the provisions of the approved FY 2018 Electric ISR Plan, the Company committed to providing quarterly updates on the progress of its Electric ISR program to the Rhode Island Public Utilities Commission and the Rhode Island Division of Public Utilities and Carriers.

Thank you for your attention to this matter. If you have any questions, please contact me at 401-784-7288.

Very truly yours,

Jennifer Brooks Hutchinson

Enclosures

cc: Docket 4995 Service List Christy Hetherington, Esq. John Bell, Division Greg Booth, Division

¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

² Per Commission counsel's update on October 2, 2020, concerning the COVID-19 emergency period, the Company is submitting an electronic version of this filing followed by five (5) hard copies filed with the Clerk within 24 hours of the electronic filing.

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.

Joanne M. Scanlon

November 16, 2020
Date

Docket No. 4995 - National Grid's Electric ISR Plan FY 2021 Service List as of 1/29/2020

Name/Address	E-mail Distribution	Phone
Jennifer Hutchinson, Esq.	jennifer.hutchinson@nationalgrid.com;	401-784-7288
National Grid	celia.obrien@nationalgrid.com;	
280 Melrose St.	Joanne.scanlon@nationalgrid.com;	
Providence, RI 02907		
National Grid	Melissa.Little@nationalgrid.com;	
Melissa Little	Patricia.easterly@nationalgrid.com;	
Patricia Easterly		
Kathy Castro	Kathy.Castro2@nationalgrid.com;	
Susan Toronto Ryan Constable	Susan.Toronto@nationalgrid.com;	
William Richer	Ryan.Constable@nationalgrid.com;	
	William.Richer@nationalgrid.com;	
Division of Public Utilities (Division)	Chetherington@riag.ri.gov;	
Christy Hetherington, Esq.	Dmacrae@riag.ri.gov;	
Dept. of Attorney General	MFolcarelli@riag.ri.gov;	
150 South Main St.	John.bell@dpuc.ri.gov;	
Providence, RI 02903	Jonathan.Schrag@dpuc.ri.gov;	
	Joseph.shilling@dpuc.ri.gov;	
	Robert.Bailey@dpuc.ri.gov;	
David Effron	Djeffron@aol.com;	603-964-6526
Berkshire Consulting	<u>Djemon@aor.com</u> ,	003-904-0320
12 Pond Path		
North Hampton, NH 03862-2243		
Gregory L. Booth, PLLC	gboothpe@gmail.com;	919-441-6440
14460 Falls of Neuse Rd.	7	
Suite 149-110		
Raleigh, N. C. 27614		

Linda Kushner	Lkushner33@gmail.com;	919-810-1616
L. Kushner Consulting, LLC		
514 Daniels St. #254		
Raleigh, NC 27605		
Office of Energy Resources (OER)	daniel.majcher@doa.ri.gov;	401-222-3417
Daniel Majcher, Esq.		
Dept. of Administration	Nancy.Russolino@doa.ri.gov;	
Division of Legal Services	Christopher.Kearns@energy.ri.gov;	
One Capitol Hill, 4 th Floor	Nicholas.Ucci@energy.ri.gov;	
Providence, RI 02908	Carrie.Gill@energy.ri.gov;	
File an original & ten copies w/:	Luly.massaro@puc.ri.gov;	401-780-2107
Luly E. Massaro, Commission Clerk Public Utilities Commission	John.harrington@puc.ri.gov;	
89 Jefferson Blvd.	Cynthia.WilsonFrias@puc.ri.gov;	
Warwick, RI 02888	Todd.bianco@puc.ri.gov;	
	Alan.nault@puc.ri.gov;	
	Margaret.hogan@puc.ri.gov;	

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 4995 FY 2021 Electric Infrastructure, Safety and Reliability Plan FY 2021 Quarterly Update Second Quarter Ending September 30, 2020 Page 1 of 20

Electric Infrastructure, Safety, and Reliability Plan FY 2021 Quarterly Update Second Quarter Ending September 30, 2020

EXECUTIVE SUMMARY

As shown in Attachment A during the first six months of Fiscal Year 2021 (FY 2021), the Company¹ spent \$46.1 million for capital investment projects against a FY 2021 budget of \$49.4 million. Spending was under-budget by \$3.3 million. FY 2021 Non-Discretionary spending was \$1.5 million over the budget of \$17.8 million. FY 2021 Discretionary spending, including the Southeast Substation project, was \$4.7 million under the budget of \$31.6 million. Spending in each of these categories is addressed in more detail below. The Company forecasts spending of \$101.0 million for capital investment projects in FY 2021, \$2.8 million under the budget of \$103.8 million.

-

¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 4995 FY 2021 Electric Infrastructure, Safety and Reliability Plan FY 2021 Quarterly Update Second Quarter Ending September 30, 2020 Page 2 of 20

I. FY 2021 Capital Spending by Key Driver Category

1. Non-Discretionary Spending

a. Customer Request/Public Requirement

For the first six months of FY 2021, capital spending in the Customer Request/Public Requirement category was \$9.6 million, which was under budget by \$2.3 million. The major drivers of the variance are

- Actuals billings associated with a joint-owned pole agreement exceeded budgeted billings resulting in additional credits applied to the New Business-Residential category.
- New Business Commercial and Public Requirements projects spending was \$2.2 million underbudget. It is anticipated that these projects will end the year slightly under budget.
- The timing of Distributed Generation project spending vs. construction advances resulted in a variance of \$3.7 million at the end of September. FY 2021 net forecasted spending related to Distributed Generation projects is anticipated to be on budget at \$1.0 million.
- The projects associated with Meter Purchases and Installations are under budget by \$0.8 million as of September 30. Spending for the fiscal year is anticipated to be underbudget by a similar amount due to decreased field activity for meter changes and installations due to COVID pandemic work rules.
- No spending has taken place for advanced capacitor/regulator controls and feeder monitor sensors under the Strategic DER Advancement project. The fiscal year forecast remains at \$2.0 million.

At this time, the Company forecasts FY 2021 spending in the category will be \$3.0 million under budget.

b. <u>Damage/Failure</u>

For the first six months of FY 2021 capital spending in the Damage/Failure category was \$9.7 million, which was \$3.8 million over the budget of \$5.9 million. This variance is primarily driven by actual spending on major storms totaling \$3.5 million, which is \$2.6 million over the budget of \$0.9 million. In addition, spending under the Damage/Failure blanket is overbudget by \$1.2 million. The Company began adopting the new practice of categorizing failed only work in this category and all other work in the Asset Replacement category in the Discretionary portfolio. The transition to the new process is underway and is being reviewed monthly.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 3 of 20

The Company forecasts that the Major Storms project will continue to be overspent through the end of the fiscal year. Related to the Damage/Failure projects, the Company anticipates that that after certain work identified as Asset Replacement is reclassified to Discretionary spending, actual spending will be close to budget at the end of the fiscal year.

2. <u>Discretionary Spending</u>

a. Asset Condition (without Southeast Substation)

For the first six months of FY 2021 capital spending in the Asset Condition category (excluding the Southeast Substation project) was \$14.3 million, which was \$1.6 million under the budget of \$15.9 million. The major drivers of this variance are as follows:

- Capital spending on Dyer Street substation was \$3.6 million under the fiscal year-to-date budget of \$3.8 million. This project was "paused" in FY 2020 due to cost estimates coming in higher than expected. The Company performed a revised option analysis, which resulted in an updated project at reduced costs and created spending shifts from the first half of FY 2021 to the last half of FY 2021 and into FY 2022. The Company forecasts capital spending of \$2.9 million against a FY 2021 budget of \$7.2 million.
- Capital spending on the Providence Area Study projects was \$1.7 million under the fiscal year-to-date budget of \$2.3 million primarily due to project delays, which are expected to catch up by year end.
- Capital spending on URD and Underground Cable Replacement programs was \$6.4 million, which is \$2.3 million over the budget of \$4.1 million. It is anticipated that spending on these programs will be essentially on budget at the end of the fiscal year.
- Capital spending on the Apponaug Substation retirement that was included in the Central Rhode Island East Area Study was \$0.4 million and is budgeted to be completed in FY 2021 for approximately \$0.9 million, which is more than the FY 2021 budget, as the budget did not reflect completing the project in FY 2021.
- Two additional projects were completed during the first six months of FY 2021. Capital spending on Kent County Breaker Replacement project was \$0.5 million and capital spending on the Distribution Secondary Network Arc project was \$0.7 million. Both projects were expected to be completed in previous years and lagged into FY 2021 after the FY 2021 budget was set. These projects are considered substantially complete and will be moved to plant in service during FY 2021.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 4 of 20

At this time, the Company forecasts that spending in this category will be \$1.7 million under budget at the end of the year primarily due to the delays in the Dyer Street project offset by the smaller projects shown above.

b. Non-Infrastructure

For the first six months of FY 2021 capital spending for the Non-Infrastructure category was \$0.7 million, which was \$0.4 million over the budget of \$0.3 million. This variance is attributed to the application of capital overheads. At this time, the Company forecasts that spending in this category will be slightly under the FY 2021 budget of \$0.6 million.

c. System Capacity and Performance

For the first six months of FY 2021 capital spending for the System Capacity and Performance category was \$7.0 million, which was \$3.3 million under the budget of \$10.3 million. The Aquidneck Island projects are driving the fiscal year-to-date variance with actual spending of \$3.3 million against a budget of \$6.6 million. Underspending was a result of work restrictions related to COVID-19, which caused shifts in some construction costs to the second half of the year and FY 2022. In addition, some contingency reserves related to the Aquidneck Island projects have been reduced as final costs become known.

At this time, the Company forecasts that System Capacity and Performance capital spending will be \$4.5 million under budget at the end of the year due to the following projects:

- Aquidneck Island capital spending is forecasted to be \$9.1 million, \$4.4 million under the budget of \$13.5 million. Reduction in spending relate to COVID-19 work requirements shifting some construction costs into FY 2022 as well as the removal of contingencies once it was determined that an outage could move forward in the third quarter.
- New Lafayette substation project is forecasted to be \$1.6 million over the budget of \$0.4 million as a result of advancing civil work to enable efficiencies by coordinating with a Distributed Generation project taking place on the same site.
- East Providence substation project spending is forecasted to be \$1.3 million under the budget of \$1.6 million due to project delays.
- The Company forecasts that capital spending on Strategic DER Advancement projects will be \$0.7 million under budget primarily due to forecasted costs associated with Mobile 3V0 units coming in less than originally estimated.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 4995 FY 2021 Electric Infrastructure, Safety and Reliability Plan FY 2021 Quarterly Update Second Quarter Ending September 30, 2020 Page 5 of 20

d. Southeast Substation Projects

For the first six months of FY 2021, capital spending on the Southeast Substation project was \$4.8 million, which is \$0.2 million under the budget of \$5.1 million. It is anticipated that the FY 2021 spending will be \$2.7 million over the budget of \$10.1 million consistent with the underspending in FY 2020 due to project delays. See <u>Attachment G</u> for additional details.

e. Large Project Variances

The Company provides explanations for large projects² with variances that exceed +/- 10% of the annual fiscal year budget in quarterly reports. These projects represented \$38.0 million of the total FY 2021 budget of \$103.8 million. This project information is provided in Attachment E.

f. New Distribution System Technology Update

The FY 2021 Quarterly Update includes an explanation of all new technologies the Company is exploring to assist in distribution system planning, particularly as they relate to the integration of distributed energy resources or to providing additional visibility on the distribution grid. Most recently, the Company has increased its use of Python Scripting to improve automation in CYME as well as other computer programs. For example, the recent COVID scenario analysis utilized Python scrips to run the initial CYME analysis.

3. Investment Placed-in-Service

During the first six months of FY 2021, \$44.5 million of plant additions were placed in service which is 40% of the FY 2021 target of \$110.5 million. The Company forecasts plant additions of \$110.7 for the fiscal year. Details by spending rationale are included in Attachment B.

As shown on <u>Attachment B</u>, Non-Discretionary plant additions placed in service during the first six months of FY 2021 totaled \$20.8 million, which is 56% of the annual forecast of \$37.3 million. Discretionary plant additions placed in service during the first six months of FY 2021 totaled \$23.8 million, which is 32% of the annual forecast of \$73.4 million.

² Large projects are defined as exceeding \$1.0 million in total project cost.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 4995 FY 2021 Electric Infrastructure, Safety and Reliability Plan FY 2021 Quarterly Update Second Quarter Ending September 30, 2020 Page 6 of 20

4. Vegetation Management (VM)

During the first six months of FY 2021 the Company completed 578 miles or 48% of its annual distribution mileage cycle pruning goal of 1,215 miles. VM O&M spending was \$4.5 million. The Company expects to complete 100% of the FY 2021 work plan within its budget of \$10.6 million.

Attachment C provides the spending through the second quarter of FY 2021 and an update of the gypsy moth and other pest-related damage tracked by the Company.

5. Inspection and Maintenance (I&M)

During the first six months of FY 2021, the Company completed 63% of its annual structure inspection goal of 48,631 with an associated spend of \$0.2 million. This spending includes mobile elevated voltage testing and repairs, which the PUC approved in Docket No. 4237.

The Company began performing inspections on its overhead distribution system in FY 2011 and began performing the repairs based on those inspections in FY 2012. Deficiencies found are categorized as Level I, II, or III. Level I deficiencies are repaired immediately or within 30 days of the inspection. During the first six months of FY 2021, no Level I deficiencies were found. As of September 30, 2020, the Company has completed repairs for 33% of the total deficiencies found. This information is summarized in the table below.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 7 of 20

Summary of Deficiencies and Repair Activities RI Distribution				
Year Inspection Performed	Priority Level/Repair Expected	Deficiencies Found (Total)	Repaired as of 9/30/20	Not Repaired as of 9/30/20
	I	18	18	0
FY 2011	II	13,146	13,128	18
	III	28	28	0
	I	17	17	0
FY 2012	II	15,847	15,506	341
	III	626	624	2
	l	15	15	0
FY 2013	II	25,883	16,471	9,412
	III	8,780	4,617	4,163
		11	11	0
FY 2014	II	22,096	4,367	17,729
	III	8,414	3,014	5,400
		5	5	0
FY 2015	II	20,901	1	20,900
	III	4,366	0	4,366
		2	2	0
FY 2016	II	11,018	743	10,275
	III	6,441	149	6,292
		2	2	0
FY 2017	II	8,300	0	8,300
	III	7,539	0	7,539
		11	11	0
FY 2018	II	8,639	0	8,639
	III	7,196	0	7,196
	I	28	28	0
FY 2019	II	3,699	0	3,699
ļ	III	2,464	0	2,464
	I	19	19	0
FY 2020	II	63	1	62
	III	27	0	27
	I	0	0	0
FY 2021	II	13	0	13
	III	29	0	29
Total Since Program Inception	I, II, III	175,643	58,777	116,866

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 8 of 20

Through the second quarter of FY 2021, the Company's manual elevated voltage testing has not indicated any instances of elevated voltage.

Manual Elevated Voltage Testing							
Manual Elevated Voltage Testing Total System FY 2021 Units Units with Voltage Found Tested with Yoltage (>1.0v) Testing 9/30/20 (>1.0v) Total System FY 2021 Units Units with Voltage Found (>1.0v)							
Distribution Facilities	268,651	30,801	0	0%			
Underground Facilities	12,438	0	0	0%			
Street Lights	4,929	349	0	0%			

FY 2021 I&M program costs and other O&M spending are shown in Attachment D.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 9 of 20

Attachment A

US Electricity Distribution - Rhode Island Capital Spending by Spending Rationale FY 2021 through September 30, 2020 (\$000)

		FYTD	
	Budget	Actual	Variance Over Spend / (Under Spend)
Customer Request/Public Requirement	\$11,894	\$9,633	(\$2,261)
Damage Failure	\$5,908	\$9,663	\$3,755
Subtotal Non-Discretionary	\$17,802	\$19,296	\$1,494
Asset Condition	\$15,900	\$14,272	(\$1,628)
Non-Infrastructure	\$288	\$741	\$453
System Capacity & Performance	\$10,296	\$6,965	(\$3,331)
Subtotal Discretionary (excl. SE Sub)	\$26,484	\$21,978	(\$4,506)
Southeast Substation Project	\$5,082	\$4,841	(\$241)
Subtotal Discretionary	\$31,566	\$26,820	(\$4,746)
Total Capital Investment in System	\$49,368	\$46,116	(\$3,252)

	FY 2021				
Budget	Forecast	Variance Over Spend / (Under Spend)			
\$26,540	\$23,483	(\$3,057)			
\$12,365	\$16,323	\$3,958			
\$38,905	\$39,806	\$901			
\$31,040	\$29,316	(\$1,724)			
\$580	\$440	(\$140)			
\$23,145	\$18,607	(\$4,538)			
\$54,765	\$48,364	(\$6,401)			
\$10,080	\$12,794	\$2,714			
\$64,845	\$61,158	(\$3,687)			
\$103,750	\$100,964	(\$2,786)			

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 10 of 20

Attachment B

US Electricity Distribution - Rhode Island Plant Additions by Spending Rationale FY 2021 through September 30, 2020 (\$000)

	FY Target	FYTD Actual	FY Forecast	% of Target Placed in Service	% of Forecast Placed in Service
Customer Request/Public Requirement	\$21,210	\$11,152	\$20,646	53%	54%
Damage Failure	\$12,335	\$9,611	\$16,648	78%	58%
Subtotal Non-Discretionary	\$33, <i>54</i> 5	\$20,763	\$37,294	62%	56%
Asset Condition (w/Southeast Substation)	\$38,948	\$20,309	\$46,504	52%	44%
Non- Infrastructure	\$566	\$9	\$440	2%	2%
System Capacity & Performance	\$37,435	\$3,467	\$26,488	9%	13%
Subtotal Discretionary	\$76,949	\$23,785	\$73,432	31%	32%
Total Plant Additions	\$110,494	\$44,548	\$110,726	40%	40%

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 11 of 20

Attachment C

US Electricity Distribution - Rhode Island Vegetation Management O&M Spending FY 2021 through September 30, 2020 (\$000)

			FY 2021 Year-	
	Budget	Actual	End Forecast	% Spend
Cycle Pruning (Base)	\$6,100	\$2,820	\$6,100	46%
Hazard Tree	\$1,750	\$537	\$1,750	31%
Sub-T (on & off road)	\$550	\$82	\$550	15%
Police/Flagman Details	\$775	\$266	\$775	34%
Core Crew (all other activities)	\$1,425	\$798	\$1,425	56%
Total VM O&M Spending	\$10,600	\$4,503	\$10,600	42%

	Goal	Completed	FY YTD Complete	% Complete
Distribution Mileage Trimming	1,215	578	608	48%

Gypsy Moth Update

District	Circuit	Location	Removals
Coastal	49_56_54F1	Coventry	65
Coastal	49_56_63F6	Hopkins Hill	26
Capital	49_53_127W40	Nasonville	92
Capital	49_53_23F3	Farnum Pike	31
Capital	49_53_23F5	Farnum Pike	30
Capital	49_53_23F6	Farnum Pike	30
Capital	49_53_38F1	Putnam Pike	211
Capital	49_53_26W5	Woonsocket	3
Capital	49_53_26W3	Woonsocket	2
Totals			490

FY 2021 Q2 Gypsy Moth Update				
FY 2021 Total Gypsy Moth Spend \$396,913				
Gypsy Moth Removals	490			
Cost/Tree	\$810			

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 12 of 20

Attachment D

US Electricity Distribution - Rhode Island Inspection and Maintenance Program and Other O&M Spending FY 2021 through September 30, 2020 (\$000)

			FY 2021 Year-	
	Budget	Actual	End Forecast	% Spend
Opex Related to Capex	\$435	\$184	\$435	42%
Inspections & Repair Related Costs	\$600	\$216	\$600	36%
System Planning & Protection Coordination Study	\$25	\$0	\$25	0%
VVO/CRV Program	\$432	\$7	\$124	2%
Total I&M Program and Other O&M Spending	\$1,492	\$408	\$1,184	27%

	Goal	Completed	FYTD Complete	% Complete
RI Distribution Overhead Structures Inspected	48,631	30,532	30,532	63%

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 13 of 20

Attachment E

US Electricity Distribution - Rhode Island Project Variance Report FY 2021 through September 30, 2020 (\$000)

			FYTD 2021		FY 2021			
Project Description	Project Funding Number(s)	Budget	Actual	Overspend / (Underspend)	Budget	Forecast	Overspend / (Underspend)	Variance Cause
Aquidneck Island Projects	CD00649, C024159, C015158, C028628, C054054, CD00656	\$6,646	\$3,294	(\$3,352)	\$13,485	\$9,127	(\$4,358)	Work shifting to FY22 and expecting lower project costs.
East Providence Substation	C046726 and C046727	\$774	\$176	(\$598)	\$1,550	\$240	(\$1,310)	Project delays.
New Lafayette Substation	C081675 and C081683	\$220	\$420	\$200	\$390	\$2,004	\$1,614	Advancing civil work to enable efficiencies by coordinating with a DG project taking place on the same site
Dyer Street Indoor Sub	C051205,C051211	\$3,808	\$198	(\$3,610)	\$7,160	\$2,860	(\$4,300)	Project paused as options are assessed
Providence Study	C078734,C078796,C078796, C078797,C078800, C078802-6,C078857	\$2,255	\$580	(\$1,675)	\$4,240	\$4,336	\$96	Project delays
FRANKLIN SQ BREAKER REPLACEMENT	C081006	\$600	\$302	(\$298)	\$1,135	\$1,046	(\$89)	Anticipating work will begin during the second half of the year.
SouthEast Substation (D-Line and D-Sub)	C053657, C053658, C080898	\$5,082	\$4,841	(\$241)	\$10,080	\$12,794	\$2,714	FY 2021 overspending is consistent with the underspending in FY 2020 due to project delays
		\$19,385	\$9,810	(\$9,575)	\$38,040	\$32,406	(\$5,634)	

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 4995 FY 2021 Electric Infrastructure, Safety and Reliability Plan FY 2021 Quarterly Update Second Quarter Ending September 30, 2020 Page 14 of 20

Attachment F

US Electricity Distribution - Rhode Island Damage/Failure Detail by Work Type FY 2021 through September 30, 2020 (\$000)

	D-Line Blanket	D-Line Property Damage	D-Line Storm	D-Sub Blanket	D-Sub & D- Line Specific	Grand Total
AFUDC	\$ 39	\$ -	\$ 29	\$ 4	\$ 1	\$ 73
Default Accounting	1,009	114	143	4	(16)	1,254
Engineering/Design/Supervision	430	49	286	1	3	769
Outdoor Lighting - Cable/Wire	5	0	0	-	-	5
Outdoor Lighting - Framing	28	1	1	-	-	30
Outdoor Lighting - Poles/Foundation	4	(1)	-	-	-	3
Overhead Bonding/Grounding	10	1	1	-	1	13
Overhead Services	148	(5)	92	-	-	235
Overhead Switches/Reclosers/Fuses	488	35	106	-	1	629
Overhead Transformers/Capacitors/Regulators/Meters	306	12	115	-	-	433
Overhead Wire & Conductor	310	4	184	-	-	497
Pole Framing	138	3	63	-	2	206
Poles/Anchors/Guying	840	279	2,261	ı	3	3,383
Substation Equipment Installations	-	-	-	135	346	481
Substations Civil/Structural	-	-	-	-	1	1
Switching and Restoration	(4)	(2)	30	-	-	23
Traffic Control	187	51	84	-	-	323
Underground Cable	645	96	10	-	9	759
Underground Cable Splicing	15	0	4	-	-	19
Underground Civil Infrastructure	170	206	8	-	29	414
Underground Direct-Buried Cable	460	0	22	-	-	482
Underground Services	25	0	7	-	0	32
Underground Switches/Reclosers/Fuses	24	-	3	-	-	27
Underground Transformers/Capacitors/Regulators/Meters	142	(7)	40	-	0	175
Damage / Failure before adjustment	\$ 5,417	\$ 835	\$ 3,487	\$ 143	\$ 380	\$ 10,263
Estimated reclassification adjustment - D/F to A/R	(600)	-	-	-	-	(600)
Total Adjusted Damage / Failure	\$ 4,817	\$ 835	\$ 3,487	\$ 143	\$ 380	\$ 9,663

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 15 of 20

Attachment G

US Electricity Distribution - Rhode Island
New Southeast Substation Budget and Project Management Report
FY 2021 through September 30, 2020

New Southeast Substation

Date: October 30, 2020









The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 16 of 20

New Southeast Substation Project Agenda



- Background & Drivers
- Scope
- Cost & Major Milestones
- Support Documentation
- Other

New Southeast Substation Project Background & Drivers



- Pawtucket No. 1 substation supplies load in the City of Pawtucket, Rhode Island. It consists of an indoor substation located in a four story brick building constructed in 1907 and an outdoor substation on the yard. It supplies approximately 36,000 customers with a peak electrical demand of 114MW. There are a number of concerns in this area:
 - The equipment in the indoor substation is 40 to 94 years old, obsolete, and no longer supported by any vendor. Parts have to be custom made or salvaged from facilities removed from service.
 - The building has structural issues that cause concern for the continued safe and reliable operation of the substation.
 - There is un-served load for loss of either the 73 transformer or the 74 transformer that exceeds the distribution planning criteria.
 - The loading on a number of feeders is projected to exceed summer normal ratings along with the loading on bus section 73

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 17 of 20

New Southeast Substation Project Scope



- Construct a new eight feeder 115/13.8kV metal clad station (Dunnell Park #1201) with two transformers and breaker and a half design on a site adjacent to the transmission line right of way on York Avenue in the City of Pawtucket.
- Supply the new station from the existing 115kV lines crossing the site, X-3 and T 7.
- Rearrange the 13.8kV distribution system so that the new station supplies most of the load east of the Seekonk River.
- Install a new control house at the Pawtucket No 1 station site to house the control equipment for the 115 kV station presently located in the four story brick building and upgrade the 115kV Line Protections (P-11,X-3,T-7).
- Upgrade in Valley station the 115kV Line Protections for P-11.
- Remove the indoor substation and all electrical equipment from the four story brick building and demolish the building.

New Southeast Substation Project Cost & Major Milestones



Project Cost

- Total Project Cost of \$38.182M (+/- 10%) DOA: \$38.182M
- Transmission Project Cost of \$12.742M (+/-10%)
- Distribution Project Cost of \$25.440M (+/-10%)

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 18 of 20

New Southeast Substation Project Cost & Major Milestones



- The variance between the initial potential project investment of \$23.000M and this sanction of \$38.182M was caused by:
 - Addition of new 115kV equipment on Pawtucket No. 1 and on the new substation (Dunnell Park #1201) as result of the review of protection requirements for the project. The updated scope includes the installation of 115kV CCVT's, Line Traps, Line Tuners and related relaying and civil & structural work on X-3 and T-7 transmission line terminals on both substations (\$4.485M).
 - Additional civil and environmental scope of work on Pawtucket No. 1 based on the final location of the new control house inside the 100 year floodplain and the alignment with Tidewater Environmental Project requirements (\$4.865M).
 - Underestimation on the scope and level of effort on the distribution line work for the new feeders and distribution circuits rearrangement on the City of Pawtucket (\$4.517M).
 - Increase on equipment market value and other miscellaneous additional costs (\$1.315M).

New Southeast Substation Project Major Milestones



Project Major Milestones

Project Sanction July 2019

Engineering Design Complete (EDC) December 2019

Construction Start January 2020

Dunnell Park Sub Ready for Load (RFL) April 2021

Pawtucket 1 & Valley Sub Ready for Load (RLF) November 2021

Construction Complete (CC) January 2022

Demolish Pawtucket 1 Station Building March 2022

Project Closeout December 2022

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 19 of 20

Fawtucket No. 1 Station

New Southeast Substation Project Support Documentation



New Southeast Station (Dunnell Park) - Location



The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4995
FY 2021 Electric Infrastructure, Safety and Reliability Plan
FY 2021 Quarterly Update
Second Quarter Ending September 30, 2020
Page 20 of 20

Attachment H

US Electricity Distribution - Rhode Island Meter Purchases FY 2021 through September 30, 2020

Quantity of Meters Purchased						
Туре	Description	Quantity				
METER	CENTRON - 2S ERT CL200	4,800				
METER	2S AMR 240V CL200	1,200				
INSTRUMENT TRANSFORMER	CUR OUTDOOR 15/5 15KV	24				
INSTRUMENT TRANSFORMER	CUR OUTDOOR 20/1 5KV	12				
INSTRUMENT TRANSFORMER	CUR OUTDOOR 100/5 15KV	6				
INSTRUMENT TRANSFORMER	CUR OUTDOOR 200/5 15KV	9				
INSTRUMENT TRANSFORMER	CUR OUTDOOR 60/1 7.2KV	4				
INSTRUMENT TRANSFORMER	CT 100:5	60				
INSTRUMENT TRANSFORMER	600:5 BASE BUSHINGS	30				
	TOTAL	6,145				