

February 16, 2018

BY HAND DELIVERY AND ELECTRONIC MAIL

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

**RE: Docket 4682 - Electric Infrastructure, Safety, and Reliability Plan
Quarterly Update – Third Quarter Ending December 31, 2017**

Dear Ms. Massaro:

On behalf of National Grid,¹ I have enclosed ten copies of the Company's fiscal year (FY) 2018 Electric Infrastructure, Safety, and Reliability (ISR) Plan quarterly update for the third quarter ending December 31, 2017. 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 781-907-2121.

Very truly yours,



Raquel J. Webster

Enclosures

cc: Docket 4682 Service List
Leo Wold, Esq.
Al Contente

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

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 16, 2018
Date

Docket No. 4682 National Grid's Electric Infrastructure, Safety and Reliability Plan FY 2018 - Service List as of 9/11/17

Name/Address	E-mail Distribution	Phone
Raquel J. Webster, Esq. National Grid 280 Melrose St. Providence, RI 02907	raquel.webster@nationalgrid.com ;	401-784-7667
	celia.obrien@nationalgrid.com ;	
	Joanne.scanlon@nationalgrid.com ;	
National Grid Jim Patterson Ryan Moe Adam Crary Melissa Little Aidimarys Martinez	Jim.patterson@nationalgrid.com ;	
	Ryan.moe@nationalgrid.com ;	
	Amy.tabor@nationalgrid.com ;	
	Adam.crary@nationalgrid.com ;	
	Melissa.little@nationalgrid.com ;	
	Aidimarys.martinez@nationalgrid.com ;	
Division of Public Utilities (Division) Leo Wold, Esq. Dept. of Attorney General 150 South Main St. Providence, RI 02903	Lwold@riag.ri.gov ;	
	Jmunoz@riag.ri.gov ;	
	Dmacrae@riag.ri.gov ;	
	Al.contente@dpuc.ri.gov ;	
	Macky.McCleary@dpuc.ri.gov ;	
	Jonathan.Schrag@dpuc.ri.gov ;	
	Kevin.Lynch@dpuc.ri.gov ;	
	Joseph.shilling@dpuc.ri.gov ;	
	Steve.scialabba@dpuc.ri.gov ;	
David Efron Berkshire Consulting 12 Pond Path North Hampton, NH 03862-2243	Djeffron@aol.com ;	603-964-6526
Greg Booth Linda Kushner PowerServices, Inc	gbooth@powerservices.com ;	919-256-5900

1616 E. Millbrook Road, Suite 210 Raleigh, NC 27609	Lkushner@powerservices.com ;	
Office of Energy Resources (OER) Andrew Marcaccio, Esq. Dept. of Administration Division of Legal Services One Capitol Hill, 4 th Floor Providence, RI 02908	Andrew.marcaccio@doa.ri.gov ;	401-222-3417
Christopher Kearns, OER Danny Musher Nick Ucci	Christopher.Kearns@energy.ri.gov ; Danny.Musher@energy.ri.gov ; Nicholas.Ucci@energy.ri.gov ;	
File an original & ten copies w/: Luly E. Massaro, Commission Clerk Public Utilities Commission 89 Jefferson Blvd. Warwick, RI 02888	Luly.massaro@puc.ri.gov ; Cynthia.WilsonFrias@puc.ri.gov ; Alan.nault@puc.ri.gov ; Todd.bianco@puc.ri.gov ;	401-780-2107

Electric Infrastructure, Safety, and Reliability Plan

FY 2018 Quarterly Update

Third Quarter Ending December 31, 2017

EXECUTIVE SUMMARY

Through the third quarter of fiscal year 2018 (FY 2018), the Company¹ spent \$66.3 million for capital investment projects against a FY 2018 year-to-date (YTD) budget of \$78.7 million. Overall, spending for FY 2018 through the third quarter was under-budget by approximately \$12.4 million. The Non-Discretionary category was approximately \$2.3 million under-budget, and the Discretionary category was approximately \$10.1 million under-budget. The South Street project made up \$4.7 million of the Discretionary under-budget spending. At this time, the Company anticipates that the overall capital spend for the FY 2018 fiscal year will be \$96.7 million, which is approximately \$3.9 million under the annual approved budget of \$100.6 million. Each category is addressed in more detail below.

On July 11, 2016, the Rhode Island Public Utilities Commission (PUC) issued an Order² directing the Company to provide more detail on capital spending in the Damage/Failure category. The detail on capital spending must include work type, location, and, where applicable, Level 1 Inspections and Maintenance (I&M) repairs completed with Damage/Failure funding. The Company has included additional detail on Level 1 I&M repairs in Section 5 of this report and has included summary information on capital spending in the Damage/Failure category in Attachment F of this report. Attachment F is also included as an executable Excel file that organizes raw data captured in the Company's financial, asset, and work management systems.

In Order No. 22471, the PUC also directed the Company to manage the South Street ISR Plan budget separate from other discretionary projects in the Plan. The Company also agreed to provide a quarterly budget and project management report on the South Street project. The latest report for December 2017 is included as Attachment G of this report.

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

² Written Order No. 22471 (issued on July 11, 2016 in Docket No. 4592), at pages 16, 29.

In Order No. 22955, the PUC directed that, commencing with the FY 2018 RI Electric ISR Third Quarter Report, the Company include an explanation of all new technologies that National Grid is exploring to assist in distribution planning, particularly related to the integration of distributed energy resources or providing additional visibility on the distribution grid.³ The most recent update is provided in Section 2 (e) below.

I. FY 2018 Capital Spending by Key Driver Category

1. Non-Discretionary Spending

a. Customer Request/Public Requirement - \$6.1 million under-budget variance YTD

Capital spending through the third quarter of FY 2018 in the Customer Request/Public Requirement category (*previously called the Statutory/Regulatory category*) was approximately \$11.0 million, which was \$6.1 million under the FY 2018 YTD budget of \$17.1 million. This under-budget variance was driven primarily by the following under-budget projects:

- The net YTD spending on “Distributed Generation” project spending is a credit of \$3.5 million, which results in a total under-budget balance of \$4.6 million. This variance was driven primarily by the Company’s collection of reimbursements for prior and future capital spending on projects.
- Capital spending for FY 2018 YTD on New Business Residential and Commercial projects was a combined \$2.4 million under-budget. This under-budget variance was primarily driven by capital spending on the liquefied natural gas (LNG) plant service terminal in Providence, which was under-budget FY 2018 YTD by approximately \$2.3 million. This variance was due to a reimbursement the Company received in FY 2018 (April 2017), which the Company budgeted for in FY 2017 (March 2017).

Among the major projects in this category, the following over-budget projects offset these under-budgets projects:

- Capital spending for FY 2018 YTD on the Citizens Bank Infrastructure Project was \$0.9 million. This project was not budgeted for the fiscal year.

³ Written Order No. 22955 (issued on November 14, 2017 in Docket No. 4682) at page 19.

- Capital spending for FY 2018 YTD on Meter Purchases was \$1.8 million, which was \$0.4 million over the FY 2018 YTD budget of \$1.4 million due to the earlier than planned delivery of the meter inventory.
- Capital spending for FY 2018 YTD on the Public Requirements projects was \$2.1 million, which was over-budget by \$0.3 million. This variance is primarily driven by higher spending on Department of Transportation projects.

Currently, the Company forecasts that the FY 2018 capital spending for the Customer Request/Public Requirement category will be approximately \$15.2 million, which is approximately \$6.6 million under the annual approved FY 2018 category budget of \$21.8 million. This variance is driven primarily by the reimbursements received in fiscal year 2018 for the Distribution Generation projects and the LNG Plant service terminal project.

b. Damage/Failure - \$3.8 million over-budget variance YTD

Capital spending through the third quarter of FY 2018 in the Damage/Failure category was \$12.3 million, which was approximately \$3.8 million over the FY 2018 YTD budget of \$8.5 million for this category. This variance was driven primarily by the following over-budget projects:

- Capital spending on the Ocean State Damage/Failure Blanket was \$8.2 million which was \$1.6 million over the FY 2018 YTD budget of \$6.6 million. The Company monitors charges to this blanket to minimize discretionary work from being incorrectly charged to this project.
- Capital spending on the Storm Capital Confirming program was \$3.5 million which was \$2.3 million over the FY 2018 YTD budget of \$1.2 million. The October 29th, 2017 Wind/Rain Storm was the single largest weather event contributing \$2.6 million in this category.
- Capital spending on the Franklin Square Protection project was \$0.2 million for the FY 2018 YTD. This project was not initially budgeted for FY 2018.

Currently, the Company forecasts that the FY 2018 capital spending for the Damage/Failure category will be \$15.7 million, which is approximately \$4.3 million over the annual approved FY 2018 category budget of \$11.4 million.

In summary, as shown in Attachment A, capital spending through the third quarter of FY 2018 in the Non-Discretionary Sub-category was \$23.3 million, which was approximately \$2.3 million under the FY 2018 YTD budget of \$25.6 million. At this time, the Company forecasts that capital spending in the Non-Discretionary Sub-category will be \$30.9 million, which is approximately \$2.3 million under the annual approved FY 2018 budget of approximately \$33.2 million.

2. Discretionary Spending

a. Asset Condition (without South Street) - \$0.7 million under-budget variance YTD

Capital spending through the third quarter of FY 2018 YTD in the Asset Condition category (absent the South Street project) was approximately \$12.5 million, which was \$0.7 million under the FY 2018 YTD budget of approximately \$13.2 million. The total variance for this category was driven primarily by the following under-budget projects:

- Capital spending for FY 2018 YTD on the Underground Residential Development Injection/Rehabilitation and the RI Underground Cable Replacement Program projects was a combined \$3.1 million, which was approximately \$1.1 million under the fiscal YTD budget of approximately \$4.2 million. This variance was due to construction scheduled in the final quarter of the fiscal year.
- Capital spending for FY 2018 YTD for the West Cranston Transformer project was approximately \$0.3 million for the fiscal YTD, which was \$0.6 million under the fiscal YTD budget of \$0.9 million.

Among the major projects in this category, the following over-budget projects offset these under-spending projects:

- Capital spending for FY 2018 YTD for the Ocean State Asset Replacement Blanket was approximately \$2.4 million, which was \$0.7 million over the fiscal YTD budget of \$1.7 million. This variance was due to higher than anticipated spending on small-scale asset replacement work.
- The Company advanced an unbudgeted project to replace the extremely deteriorating structure and equipment at the Geneva Substation. The Company spent \$0.4 million fiscal YTD on the project, and construction is complete.

At this time, for FY 2018, the Company forecasts that capital spending for the Asset Condition category, excluding the South Street project, will be approximately \$16.7 million, which is \$0.5 million under the annual approved category budget of \$17.2 million.

b. Non-Infrastructure – \$1.0 million under-budget variance YTD

Capital spending for FY 2018 YTD for the Non-Infrastructure category was approximately \$1.0 million under-budget due to accounting credit charges. These charges will be cleared to the appropriate work orders through the normal capital allocation process.

c. System Capacity and Performance - \$3.6 million under-budget variance YTD

Capital spending through the third quarter of FY 2018 for the System Capacity and Performance category was \$14.4 million, which was approximately \$3.6 million under the FY 2018 YTD budget of approximately \$18.0 million. This YTD variance was driven primarily by the timing of construction that was later than originally planned within the fiscal year on the following under-budget projects:

- Capital spending for FY 2018 YTD on the Aquidneck Island projects was \$1.4 million, which was approximately \$2.2 million under the YTD budget of \$3.6 million for the project.
- Capital spending for FY 2018 YTD on the New London projects was \$1.6 million, which was approximately \$1.5 million under the FY 2018 YTD budget of \$3.1 million for the project.
- Capital spending for FY 2018 YTD on the Volt/Var D-Line Project was approximately \$1.0 million, which was \$0.4 million under the fiscal year budget of \$1.4 million.
- Capital spending for FY 2018 YTD on the New Highland Drive Substation project was \$1.1 million, which was \$0.2 million under the FY 2018 YTD budget of \$1.3 million for the project.

Major projects in this category that offset these under-budget projects were:

- Capital spending for FY 2018 YTD on the Quonset Substation Expansion project was approximately \$2.9 million, which was \$0.6 million over the FY 2018 YTD budget of \$2.3 million. This YTD variance was driven by the Company's receipt of materials

earlier than planned. The cost estimate on this project is also higher than planned. Therefore, the Company expects that this project will be approximately \$1.1 million over-budget by the end of the fiscal year.

At this time, for FY 2018, the Company forecasts that capital spending for the System Capacity and Performance category will be approximately \$25.8 million, which is approximately \$1.9 million over the approved budget of \$23.9 million for FY 2018 for this category. The Company is currently evaluating the over budget variances in this category and may defer projects and/or scale-down programs to achieve a year-end forecast that is approximate to budget.

d. South Street Project – \$4.7 million under-budget variance YTD

Capital spending for the third quarter of FY 2018 on the South Street Indoor Substation Replacement project was approximately \$16.7 million, which is \$4.7 million under the fiscal YTD budget of \$21.5 million. The primary driver for this variance is the current capital overhead allocations, which are lower than the original estimates. The second driver for this variance is the timing of FY 2018 payments that result in a YTD variance but will not carry forward as a year-end variance. As a result, the Company expects the year-end forecast for this project to be approximately \$2.7 million under the fiscal year-end budget of \$25.8 million. This variance will be due primarily to the lower overhead allocation charge.

Finally, as noted above and as shown in Attachment A, total capital spending through the third quarter of FY 2018 in the Discretionary Sub-category was approximately \$43.0 million, which was approximately \$10.1 million under the FY 2018 YTD budget of \$53.1 million. The Company forecasts that for FY 2018, total capital spending for the Discretionary category will be \$65.9 million, which is approximately \$1.5 million under the annual approved budget of \$67.4 million. As noted above, the Company expects that the South Street project will be \$2.7 million under-budget at the end of the fiscal year. This project budget is being managed separate from the remaining Discretionary Sub-category. Projects in the Discretionary Sub-category will be managed to the \$41.6 million FY 2018 budget.

In Docket No. 4473, the PUC ordered the Company to include, beginning with the FY 2017 Electric ISR Plan filing, a proposal to identify and report in quarterly and annual reconciliation filings the projects that exceeded or were under the fiscal year-to-date and fiscal year-end budgets by ten percent (10%).⁴ For the identified projects, the Company must note whether variances were due to the project being accelerated or delayed, or

⁴ Docket No. 4473 Order No. 21559 at p. 25.

³ Large projects are defined as exceeding \$1.0 million in total project cost.

whether the variances were due to an increase or decrease in total project cost. The Company agreed to provide in the quarterly reports explanations for the portfolio of large projects³ with variances that exceed +/- 10% of the annual fiscal year budget. The Company forecasts that these projects will represent approximately \$24.1 million of the total FY 2018 budget of \$100.6 million. This information is provided in Attachment E.

e. New Distribution System Technology Update

In Order No. 22955, the PUC directed that, commencing with the FY 2018 RI Electric ISR Third Quarter Report, the Company include an explanation of all new technologies that National Grid is exploring to assist in distribution planning, particularly related to the integration of distributed energy resources or providing additional visibility on the distribution grid.⁵

The Company has obtained sample copies of the latest CYME software containing hosting capacity functionality through its annual service contracts with CYME International T&D. Although full deployment is not complete, National Grid plans to complete its analysis and data portal goals using these sample copies.

The hosting capacity module requires a version of CYME (the Software) that was made available in October 2017. However, due to the Software version's distributed generation short-circuit calculation issues, the Company refrained from full deployment of this version until sufficient testing was completed. The tests were completed as of December 2017 and the Company's Information System department is preparing the full deployment of the Software version that includes the hosting capacity module. Expected completion date is the March 2018.

National Grid has also explored a variety of Energy Storage (ES) evaluation tools. For example, the Electric Power Research Institute's (EPRI) StorageVET cloud based benefit cost analysis tool was tested. No specific tool or method has been committed to at this time. The Company notes that many evaluation tools incorporate other system operator rates, rules, and ancillary services and incorporation of ISO-NE rules and services is pending.

To improve the visibility of the distribution grid to distributed energy resource providers, the Company proposed to begin work on a Data Portal within the 2018 System Reliability Procurement (SRP) Report. National Grid is on track to deliver the first phase by June 2018.

⁵ Written Order No. 22955 (issued on November 14, 2017 in Docket No. 4682), at page 19.

3. Investment Placed-in-Service

Overall, 38.3 million of investment (44% of the fiscal year-end forecast) was placed-in-service through the third quarter of FY 2018. At this time, the Company's expects placing portions of the South Street project in-service later in FY 2018. The Company forecasts that plant-in-service will be approximately \$86.2 million at the end of the fiscal year, which is an increase from the original FY 2018 Electric ISR Plan forecasted amount of \$74.8 million. Details by spending rationale are included in Attachment B.

4. Vegetation Management (VM)

Through the third quarter of FY 2018, the Company completed 65% of its annual distribution mileage cycle pruning goal of 1,233 miles. This represents an associated spend of 57% of the FY 2018 budget for the cycle pruning program. The mileage total has been reduced from the original 1,270 which was forecast to account for mileage which will be deferred to FY 2019. For FY 2018, the Company's VM operation and maintenance (O&M) spending is forecasted to be on budget at \$9.4 million.

Attachment C provides the FY 2018 spending for all sub-components in the VM category.

5. Inspection and Maintenance (I&M)

Through the third quarter of FY 2018, the Company completed 62% of its annual structure inspection goal of 53,128 with an associated spend of approximately \$0.3 million, or approximately 43% of the Repair and Inspections Related Cost subcategory budget. The Repairs and Inspection Related Costs subcategory forecast includes the FY 2018 mobile elevated voltage testing and repairs, which the PUC approved in Docket No. 4237. Attachment D provides the FY 2018 spending for all components in the I&M category.

The Company began performing inspections on its overhead distribution system in FY 2011, and, in FY 2012, began performing the repairs based on those inspections. The Company categorizes the deficiencies found as Level I, II, or III, and repairs Level I deficiencies either immediately or within approximately one week of the inspection. The Company bundles Level II and III work for planned replacement. At this time, the Company has completed repairs reported for approximately 32% of the total deficiencies found. Total deficiencies found and repairs made-to-date is shown in the table below.

Summary of Deficiencies and Repair Activities RI Distribution				
Year Inspection Performed	Priority Level/Repair Expected	Deficiencies Found (Total)	Repaired as of 12/31/17	Not Repaired as of 12/31/17
FY 2011	I	18	18	0
	II	13,146	13,128	18
	III	28	28	0
FY 2012	I	17	17	0
	II	15,847	15,454	393
	III	626	567	59
FY 2013	I	15	15	0
	II	26,882	16,149	10,733
	III	9,056	4,596	4,460
FY 2014	I	11	11	0
	II	23,196	2,726	20,470
	III	8,776	1,455	7,321
FY 2015	I	5	5	0
	II	21,549	1	21,548
	III	4,391	0	4,391
FY 2016	I	2	2	0
	II	11,596	0	11,596
	III	6,498	0	6,498
FY 2017	I	2	2	0
	II	8,300	0	8,300
	III	7,539	0	7,539
FY 2018	I	6	5	1
	II	4,717	0	4,717
	III	5,284	0	5,284
Total Since Program Inception	I, II, III	167,507	54,179	113,328

FY 2018 – I&M Level 1 Deficiencies Repaired						
Year Inspection Performed	Deficiencies Found	Structure Number	Location	Description of Work Performed	Inspection Date	Repaired Date
2017	1	96	Main Rd., Tiverton	Repaired floating insulator	5/11/2017	5/12/2017
	1	91	Armistice Blvd., Pawtucket	Repaired broken neutral	6/14/2017	6/14/2017
	1	21	Cleveland St., Pawtucket	Cut down street light service wire	6/19/2017	6/19/2017
	1	16	Lafayette St., Pawtucket	New service and secondary pole	6/26/2017	6/29/2017
	1	11	Chambers St., Cumberland	Troubleman disconnected and cut down due to st light service hot on ground	8/16/2017	8/16/2017
	1	85-30	Roosevelt Ave., Central Falls	Replaced nomenclature. Completed in field by TW per OH Sup. 12/23/2017	12/21/2017	12/23/2017

As shown in the table below, results of the Company’s manual elevated voltage testing for FY 2018 have not indicated any instances of elevated voltages found through either overhead or manual elevated voltage inspections.

Manual Elevated Voltage Testing				
Manual Elevated Voltage Testing	Total System Units Requiring Testing	FY 2018 Units Completed thru 12/31/17	Units with Voltage Found (>1.0v)	Percent of Units Tested with Voltage (>1.0v)
Distribution Facilities	250,441	32,552	2	0%
Underground Facilities	13,870	1,572	0	0%
Street Lights	5,885	1,419	3	0%

Attachment A
US Electricity Distribution - Rhode Island
Capital Spending by Spending Rationale
FY 2018 through December 31, 2017
(\$000)

	FYTD			FY 2018 Total		
	Budget	Actual	Variance	Budget	Forecast	Variance
Customer Request/Public Requirement	\$17,102	\$10,957	(\$6,145)	\$21,853	\$15,218	(\$6,635)
Damage Failure	\$8,530	\$12,370	\$3,840	\$11,379	\$15,664	\$4,285
<i>Subtotal Non-Discretionary</i>	\$25,632	\$23,327	(\$2,305)	\$33,232	\$30,882	(\$2,350)
Asset Condition	\$13,190	\$12,527	(\$663)	\$17,207	\$16,721	(\$486)
Non-Infrastructure	\$414	(\$632)	(\$1,046)	\$553	\$266	(\$287)
System Capacity & Performance	\$17,989	\$14,360	(\$3,628)	\$23,855	\$25,792	\$1,937
<i>Subtotal Discretionary (Without South Street)</i>	\$31,593	\$26,256	(\$5,337)	\$41,615	\$42,779	\$1,164
South Street Project	\$21,486	\$16,738	(\$4,748)	\$25,773	\$23,076	(\$2,697)
<i>Subtotal Discretionary</i>	\$53,079	\$42,994	(\$10,085)	\$67,388	\$65,855	(\$1,533)
Total Capital Investment in System	\$78,710	\$66,321	(\$12,390)	\$100,620	\$96,737	(\$3,883)

() denotes an underspend for the period

*FY 2018 impact of change in capital overhead allocation results in shift between categories, but no impact to total capital clearing costs.

Attachment B
US Electricity Distribution - Rhode Island
Plant Additions by Spending Rationale
FY 2018 through December 31, 2017
(\$000)

	FY 2018 Annual ISR Forecast	FYTD Actual in Service	FY 2018 Year- end Forecast	% of FY 2018 Year-end Forecast Placed in Service
Customer Request/Public Requirement	\$20,202	\$14,009	\$16,603	84%
Damage Failure	\$12,529	\$9,974	\$13,766	72%
<i>Subtotal Non-Discretionary</i>	\$32,731	\$23,983	\$30,369	79%
Asset Condition (w/South Street)	\$22,199	\$8,678	\$46,007	19%
Non- Infrastructure	\$0	\$3	\$87	3%
System Capacity & Performance	\$19,913	\$5,627	\$9,710	58%
<i>Subtotal Discretionary</i>	\$42,112	\$14,308	\$55,804	26%
Total Capital Investment in System	\$74,843	\$38,291	\$86,173	44%
* () denotes an underspend for the period				

Attachment C
US Electricity Distribution - Rhode Island
Vegetation Management O&M Spending
FY 2018 through December 31, 2017
(\$000)

	FY 2018 Annual ISR Budget	FYTD Actual Spend	FY 2018 Year- end Forecast	Forecasted Variance	FYTD % Spend
Cycle Pruning (Base)	\$5,500	\$3,154	\$5,500	\$0	57%
Hazard Tree	\$1,250	\$889	\$1,250	\$0	71%
Sub-T (on & off road)	\$650	\$160	\$650	\$0	25%
Police/Flagman Details	\$775	\$603	\$775	\$0	78%
Core Crew (all other activities)	\$1,225	\$985	\$1,225	\$0	80%
Total VM O&M Spending	\$9,400	\$5,791	\$9,400	\$0	62%

	FY 2018 Goal	FYTD Goal	FYTD Complete	FYTD % Complete	FY 2018 % Complete
Distribution Mileage Trimming	1,233	925	805	87%	65%

Attachment D
US Electricity Distribution - Rhode Island
Inspection and Maintenance Program O&M Spending
FY 2018 through December 31, 2017
(\$000)

	FY 2018 Annual ISR Budget	FYTD Actual Spend	FY 2018 Year- end Forecast	FYTD % Spent
Opex Related to Capex	\$362	\$132	\$189	37%
Repair & Inspections Related Costs	\$623	\$268	\$623	43%
System Planning & Protection Coordination Study	\$25	\$18	\$25	72%
VVO/CRV Program	\$60	\$69	\$69	115%
Total I&M O&M Spending	\$1,070	\$487	\$906	46%
Removal Costs	\$161	\$68	\$156	42%
Total Program Costs	\$1,231	\$555	\$1,062	45%

	FY 2018 Goal	FYTD Goal	FYTD Complete	FYTD % Complete	FY 2018 % Complete
RI Distribution Overhead Structures Inspected	53,128	39,846	33,030	83%	62%

Attachment E
US Electricity Distribution - Rhode Island
Project Variance Report
FY 2018 through December 31, 2017
(\$000)

Project Description	Project Funding	FYTD			FY 2018 Total			Variance Cause
		Budget	Actual	Variance	Budget	Forecast	Variance	
Aquidneck Island Projects (Gate 2, Newport, Jepson)	CD00649, C024159, C015158, C028628, C054054, CD00656	\$3,613	\$1,376	(\$2,236)	\$4,301	\$6,260	\$1,959	Delay with permitting issues. FY 2018 spend to increase in Q4 with project schedule adjustments. No change to project scope.
Citizens Bank Infrastructure	C073957	\$0	\$923	\$923	\$0	\$1,176	\$1,176	Emergent mandatory customer project.
Volt/Var Program	C077201, C075571, C053111, C076367, C046352, C075573, C076365, C077200, C053488, C052708	\$1,400	\$1,047	(\$353)	\$1,400	\$1,626	\$226	Construction scheduled for second half of fiscal year. Communication solution higher than initial budget.
New Highland Drive Distribution	CD00978	\$1,329	\$1,096	(\$233)	\$1,329	\$1,372	\$43	Budgeted early in year but expected to increase costs which will align forecast closer to budget.
Franklin Square Breaker Replacements	C068686	\$1,444	\$1,798	\$354	\$1,450	\$1,622	\$172	Schedule carryover of work from FY 2017.
New London Avenue Substation	C028920, C028921	\$3,093	\$1,576	(\$1,516)	\$5,670	\$4,391	(\$1,278)	Construction start slightly delayed from original plan. No change to overall project.
West Cranston Transformer Replacement	C055844	\$865	\$309	(\$555)	\$1,008	\$631	(\$377)	Project schedule partially phased to FY 2019. No change to project scope.
Quonset Sub D-Line and D-Sub	C053646, C053647	\$2,301	\$2,938	\$637	\$2,789	\$3,901	\$1,112	Increase in labor cost estimate from planning to project grade estimate. No change to project scope.
Chase Hill D-Line and D-Sub	C024175, C024176	\$2,554	\$2,660	\$106	\$3,856	\$2,977	(\$879)	Advanced project in FY 2017
LNG D-Line and D-Sub	C051203, C051204	\$2,207	(\$74)	(\$2,281)	\$2,283	\$21	(\$2,263)	Reimbursement planned to occur in FY 2017 when budget was set. Reimbursement received in FY 2018.
		\$18,806	\$13,651	(\$5,155)	\$24,087	\$23,976	(\$111)	

* () denotes an underspend for the period

Attachment F
US Electricity Distribution - Rhode Island
Damage/Failure Detail by Work Type
FY 2018 through December 31, 2017

		Project Type					Grand Total
		D-Line Blanket	D-Line Property Damage	D-Line Storm	D-Sub Blanket	D-Sub & D-Line Specific	
Operation Description Rollup	AFUDC	\$7,517	\$0	\$7,674	(\$6,841)	\$2,354	\$10,703
	Default Accounting	\$1,327,484	\$47,477	\$121,737	(\$56,387)	\$34,244	\$1,474,554
	Engineering/Design/Supervision	\$792,855	\$31,908	\$310,944	\$20,814	\$130,550	\$1,287,072
	Outdoor Lighting - Cable/Wire	\$22,832	\$776	\$0	\$0	\$0	\$23,608
	Outdoor Lighting - Framing	\$140,463	\$2,053	\$409	\$0	\$0	\$142,925
	Outdoor Lighting - Poles	\$12,380	\$6,413	\$0	\$0	\$0	\$18,793
	Overhead Bonding/Grounding	\$18,932	(\$689)	\$113	\$0	\$0	\$18,356
	Overhead Services	\$206,096	\$187	\$133,363	\$0	\$0	\$339,646
	Overhead Switches/Reclosers/Fuses	\$502,965	(\$4,980)	\$59,506	\$0	\$0	\$557,491
	Overhead Transformers/Capacitors/Regulators	\$565,758	\$8,844	\$191,974	\$0	\$0	\$766,576
	Overhead Wire & Conductor	\$287,205	\$3,232	\$185,601	\$0	\$0	\$476,038
	Pole Framing	\$173,344	(\$2,815)	\$63,153	\$0	\$0	\$233,682
	Poles/Anchors/Guying	\$962,890	\$176,516	\$2,256,823	\$0	\$0	\$3,396,229
	Substation Equipment Installations	\$9,844	\$0	\$0	\$340,788	\$38,459	\$389,091
	Substations Civil/Structural	\$0	\$0	\$0	(\$349)	\$179,272	\$178,923
	Switching and Restoration	\$50,975	\$1,228	\$2,225	\$0	\$0	\$54,427
	Traffic Control	\$240,469	\$31,011	\$64,715	\$429	\$0	\$336,625
	Underground Cable	\$1,479,458	\$50,212	\$45,073	\$0	\$0	\$1,574,743
	Underground Cable Splicing	\$85,386	\$0	\$2,027	\$0	\$0	\$87,413
	Underground Civil Infrastructure	\$429,474	\$59,015	\$10,066	\$0	\$0	\$498,554
	Underground Direct-Buried Cable	\$109,864	\$0	\$8,863	\$0	\$0	\$118,727
	Underground Services	\$7,626	\$2,632	\$3,068	\$0	\$0	\$13,326
	Underground Switches/Reclosers/Fuses	\$65,994	\$3,248	\$1,028	\$0	\$0	\$70,270
	Underground Transformers/Capacitors/Regulator	\$248,246	\$14,089	\$39,703	\$0	\$0	\$302,039
	Grand Total	\$7,748,056	\$430,357	\$3,508,064	\$298,454	\$384,879	\$12,369,810

* () denotes an underspend for the period
In some cases, the default accounting operation is used to capture work performed.
The single largest weather event contributing to the D-Line Storm category is the 10/29/2017 Wind/Rain Storm, \$2.6 million
The Franklin Square Protection Scheme Replacement costs are in the D-Sub specifics category

Attachment G
US Electricity Distribution - Rhode Island
South Street Budget and Project Management Report
January 2018 Update

South Street Project Status Update Meeting

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South Street Project: Agenda

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- Safety Moment
- Project Milestone Schedule
- November Deliverables
- December Deliverables
- TRC Payment Schedule
- Open PCRs



South Street Project: Safety Moment

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- Driving Safety
 - Winter conditions
 - Prepare now
 - Snow tires, emergency kit in vehicle

- Construction site safety update – TRC
 - Overall site safety



South Street Project: Major Milestones



South Street Upcoming Milestones	
Milestone	Scheduled Date
Begin Transmission Conduit Installation	5/2016
Building Foundation Pile Installation completion	7/2016
First Transmission Outage – MH installation	9/2016
Building Foundation completion	10/2016
Distribution Duct bank – start of installation	1/2017
Complete building enclosure	2/2017
Substation Construction Complete	11/2017
Start of testing and commissioning	11/2017
Distribution Cutover – Phase 1 (Start)	2/2018
Distribution Cutover – Phase 2 (Start)	9/2018
Distribution Cutover – Phase 3 (Start)	2/2019
Cutover Complete	4/2019
Completion of Demolition of existing substation	9/2019



South Street Project: November Deliverables

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TRC Deliverables

- Construction of 115kV yard – Complete
- Transmission Cable Installation and testing – Complete
- Distribution Conduit North Side – Complete
- Fence design – Complete
- Building Activities – Ongoing
 - HVAC - Ongoing
- Ground Grid – Ongoing
- Paving of Yard – Ongoing
- Distribution cable installation – Ongoing
- Termination of distribution cable - Ongoing
- Outage sequencing – Ongoing



South Street Project: December Deliverables



TRC Deliverables

- **Building Activities – Ongoing**
 - HVAC - Ongoing
- **Ground Grid – Ongoing**
- **Paving of Yard – Ongoing**
- **Distribution cable installation – Ongoing**
- **Termination of distribution cable - Ongoing**
- **Outage sequencing – Ongoing**
- **Distribution cable splicing by Boulos – To commence next week.**
- **Cable testing inside the building by National Grid – To commence next week.**
- **O&M and PTO testing by National Grid – Ongoing**
- **Fence installation – To Commence by the end of December.**



South Street Project: TRC FY18 Payment Schedule



Distribution							
	April	May	August	October	December	February	March
C051212	\$3,108,630.06	\$564,032.23	\$1,009,209.39	\$4,036,837.56	\$4,532,537.40	\$2,355,962.97	\$267,142.74
C051213	\$0.00	\$18,658.00	\$102,326.00	\$409,306.00	\$459,566.00	\$238,877.00	\$27,085.00

Transmission								
	April	May	August	October	November	December	February	March
C055584	\$0.00	\$490,268.00	\$83,732.00	\$334,929.00	\$376,056.00	\$0.00	\$195,469.00	\$22,164.00
C055585	\$0.00	\$1,000,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
C055586	\$468,485.00	\$420.00	\$2,310.00	\$9,246.00	\$10,382.00	\$10,382.00	\$5,396.00	\$610.97
C055623	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00



South Street Project: PCRs

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- Open PCRs
 - Contaminated Solid above the contracted amount (Reviewed – waiting on response from environmental group)
 - Obstructions – Ongoing
 - Transmission Credit – Waiting on response
 - Added security – Just received

