

February 16, 2017

BY HAND DELIVERY AND ELECTRONIC MAIL

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

**RE: Docket 4592 - Electric Infrastructure, Safety, and Reliability Plan
Quarterly Update – Third Quarter Ending December 31, 2016**

Dear Ms. Massaro:

On behalf of National Grid,¹ I have enclosed ten copies of the Company's fiscal year (FY) 2017 Electric Infrastructure, Safety, and Reliability (ISR) Plan quarterly update for the third quarter ending December 31, 2016. Pursuant to the provisions of the approved FY 2017 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 4592 Service List
Leo Wold, Esq.
Steve Scialabba
Al Contente

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

Electric Infrastructure, Safety, and Reliability Plan

FY 2017 Quarterly Update

Third Quarter Ending December 31, 2016

EXECUTIVE SUMMARY

Through the third quarter of fiscal year 2017 (FY 2017), the Company¹ spent \$65.8 million for capital investment projects against a FY 2017 year-to-date (YTD) budget of approximately \$64.3 million. Overall, spending for FY 2017 through the third quarter was slightly over-budget by approximately \$1.5 million. The Non-Discretionary category was approximately \$3.1 million over-budget, and the Discretionary category was \$1.6 million under-budget. The primary driver of the Non-Discretionary category over-budget spending was the Damage/Failure category, which is \$2.8 million over-budget YTD. The Company anticipates that the overall capital spend for the FY 2017 fiscal year will be \$83.6 million, which is approximately \$0.2 million over the annual approved budget of \$83.4 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. Particularly, the information would 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 FY 2017 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 August 2016 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).

I. FY 2017 Capital Spending by Key Driver Category

1. Non-Discretionary Spending

a. Customer Request/Public Requirement - \$0.3 million – over-budget variance YTD

Capital spending through the third quarter of FY 2017 in the Customer Request/Public Requirement category (*previously called the Statutory/Regulatory category*) was \$15.2 million, which was approximately \$0.3 million over the FY 2017 YTD budget of \$14.9 million. This variance was driven primarily by the following:

- Capital spending through the third quarter on the Block Island Transmission System (BITS) Wakefield Substation Upgrades project was over-budget by approximately \$1.9 million. This variance is driven by higher than expected soil remediation environmental costs, an increase project estimate based on final engineering detail, and carry-over charges the Company originally expected would be complete in FY 2016 but which were delayed into FY 2017.
- Capital spending on Distributed Generation projects through the third quarter was a combined \$0.9 million over budget due to reimbursements having been collected in prior fiscal years and construction occurring this fiscal year.
- Capital spending on New Business Residential and Commercial projects through the third quarter was a combined \$2.6 million over budget. Customer connections have increased relative to prior years. The Company expects a large reimbursement for a commercial new business project in the fourth quarter, and forecasts that this category will be only \$0.9 million over budget at year-end.

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

- Capital spending on the Public Requirements projects through the third quarter was a combined \$3.5 million under budget due to reimbursements collected on projects that were completed in prior fiscal years, such as the I-195 and Apponaug Circulator Department of Transportation projects.

Overall, for FY 2017, capital spending for the Customer Request/Public Requirement category is forecasted to be under-budget by approximately \$1.2 million at fiscal-year end. The under-budget position is driven by the public requirements reimbursement.

b. Damage/Failure - \$2.8 million – over-budget variance YTD

Capital spending through the third quarter of FY 2017 in the Damage/Failure category was \$11.9 million, which was approximately \$2.8 million over the FY 2017 YTD budget of \$9.1 million. This variance was driven primarily by the following over-budget project:

- Capital spending through the third quarter of FY 2017 on the unbudgeted Valley 102 22T Replacement project was \$1.7 million. The failed 22T transformer was replaced in the first quarter to ensure that the unit was on-line for peak summer load. This project is complete, and the Company does not expect any further charges for this project.
- The distribution line Damage/Failure blanket spending was approximately \$0.9 million over-budget through the third quarter. The Company continues to monitor charges to this blanket to minimize discretionary work from being incorrectly charged to this project.

At this time, the Company forecasts that overall capital spending for the Damage/Failure category will be \$14.6 million, which is approximately \$3.1 million over the annual approved budget of \$11.5 million. This variance is driven primarily by the Valley 102 22T Replacement project and the distribution line damage/failure spending.

Finally, in summary, as shown in Attachment A, capital spending through the third quarter of FY 2017 in the Non-Discretionary Sub-category was \$27.2 million, which was approximately \$3.1 million over the FY 2017 YTD budget of \$24.0 million. At this time, the Company forecasts that capital spending in the Non-Discretionary Sub-category will be \$32.8 million, which is approximately \$1.9 million over the annual approved budget of approximately \$30.9 million. This variance will be driven primarily by the unbudgeted Valley 102 22T Replacement project and distribution line damage/failure spending.

2. Discretionary Spending

a. Asset Condition - \$0.7 million over-budget variance YTD

Capital spending through the third quarter of FY 2017 in the Asset Condition category (absent the South Street project) was approximately \$13.1 million, which was \$0.7 million over the FY 2017 YTD budget of approximately \$12.4 million. The total variance for this category was driven primarily by the following over-budget projects:

- Capital spending through the third quarter of FY 2017 on the Underground Residential Development Injection/Rehabilitation projects (IRURD) was a combined \$1.2 million over budget. This variance exists because the timing of work in FY 2017 was higher in the first three months of the fiscal year versus the fourth quarter. The Company forecasts that the year-end spending for this program will be approximate to budget due to negligible that will be completed in the fourth quarter.
- Capital spending through the third quarter of FY 2017 on the Inspections & Maintenance program was \$2.5 million, which was approximately \$0.8 million over the FY 2017 YTD budget of \$1.6 million. This variance exists because the timing of work in FY 2017 was higher in the first three months of the FY versus the final quarter of the year. The Company forecasts that the year-end spending for this program will be over-budget by \$0.3 million because the Company advanced more work than originally planned.

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

- Capital spending through the third quarter of FY 2017 for the Ocean State Asset Replacement Blanket was under-budget by approximately \$0.6 million due to lower than anticipated spending on small-scale asset replacement work.
- The Company budgeted approximately \$0.5m for a spare substation transformer purchase. The Company has deferred the purchase of this equipment and does not forecast any spend for the spare substation transformer in FY 2017.

Overall, for FY 2017, the Company forecasts that capital spending for the Asset Condition category, excluding the South Street project, will be \$17.5 million. This is approximately \$1.0 million under the annual approved budget of \$18.5 million due to the noted reductions in Asset Condition blanket and Spare Transformer spending.

b. Non-Infrastructure – \$1.5 million under-budget variance year-to-date

During the third quarter of FY 2017, the Company had a credit of approximately \$1.5 million for the Non-Infrastructure category. This credit variance was primarily due to the costs of capital overhead allocations being transferred into construction projects at a lower rate than expected in the first three-quarters of the fiscal year. As stated in the second quarter Electric ISR Report, these charges, which reside temporarily in a Non-Infrastructure project, will be cleared to construction projects in the last quarter of the year. The Company expects that the Non-Infrastructure category will be approximately \$0.2 million over-budget at fiscal year-end due to higher than budgeted general equipment purchases.

c. System Capacity and Performance - \$0.1 million under-budget variance YTD

Capital spending through the third quarter of FY 2017 for the System Capacity and Performance category was \$13.0 million, which was approximately \$0.9 million under the FY 2017 YTD budget of \$13.9 million. This variance was driven primarily by the following projects:

- As noted in the FY 2017 first quarter Electric ISR Report, the New London Avenue project is being deferred into FY 2018 in order to offset other over spending in the Discretionary portfolio (except South Street). Therefore, capital spending through the third quarter was under-budget by approximately \$2.1 million. The Company forecasts that, by the end of the fiscal year, this project will be under budget by \$3.8 million.
- Capital spending through the third quarter on the Aquidneck Island projects was a combined \$1.2 million under budget due to delays in securing rights and permitting for the new substations. The Company forecasts that, by the end of the fiscal year, these projects will be under budget by \$1.3 million.
- The Long Terms Study funding project is \$0.6m under budget year to date. The Company transferred approximately \$1.0 million of Providence area study costs, which were prior fiscal charges, into the South Street project during FY 2017. The Company did not advance any additional construction in the discretionary category (absent South Street) as a result of this transfer. This is in-line with the Company's agreement to not advance or delay work in the discretionary category (absent South Street) as a result of changes to South Street spending.

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

- Capital spending through the third quarter of FY 2017 on the projects related to Kilvert Street 87 was approximately \$1.3 million over budget. These projects were originally expected to be complete in FY 2016, and the budget for FY 2017 was for final charges during the closeout of the project. However, construction for these projects was partially delayed into FY 2017. At this time, the Company forecasts that this project total will be approximately \$1.5 million over-budget at the end of the fiscal year.
- Capital spending through the third quarter of FY 2017 on the Chase Hill substation project is \$0.3 million over budget. The Company has reallocated FY 2017 funding from the New London substation project to this project in order to complete sufficient

work to energize the substation this fiscal year. The Company forecasts that this project will be over budget by \$1.0 million by the end of the fiscal year.

- Capital spending through the third quarter of FY 2017 on the on the Quonset Substation Expansion project was \$0.8 million, which was \$0.3 million over the YTD budget \$0.5 million. The variance is driven by the timing of engineering and material costs occurring in the first three quarters of the fiscal year. Therefore, the Company expects the project to be approximately \$0.2 million over-budget by the end of the fiscal year.

Overall, for FY 2017, the Company forecasts that capital spending for the System Capacity and Performance category will be approximately \$17.3 million, which is approximately \$1.0 million under-budget for FY 2017.

d. South Street Project – On Budget FY 2017 YTD

Capital spending through the third quarter of FY 2017 on the South Street Indoor Substation Replacement project was approximately \$13.7 million. At this time, the Company expects the year-end forecast for this project to be approximately on-budget at fiscal year-end.

As noted in Attachment A, capital spending through the third quarter of FY 2017 in the entire Discretionary category is \$38.6 million, which is \$1.6 million under the YTD budget of \$40.2 million. This under budget variance is driven predominately by the capital clearing credit in the Non-Infrastructure sub-category. At this time, the Company expects the total Discretionary spending to be approximately \$50.8 million, which is \$1.8 million under-budget at fiscal year-end. Approximately \$1.0 million of the variance is driven by the aforementioned transfer of charges from the Long Term Study project to the South Street project. The remaining variance is driven by the New London project delay, which has been offset by over-spending on other projects.

In Docket No. 4473, the PUC ordered the Company to include in 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%).³ For the identified projects, the Company must note whether variances were due to the project being accelerated or delayed, or 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 projects⁴ with variances that

³ Docket No. 4473 Order No. 21559 at p. 25.

⁴ Large projects are defined as exceeding \$1.0 million in total project cost.

exceed +/- 10% of the annual fiscal year budget. These projects represent approximately \$19.6 million of the FY 2017 budget of \$83.4 million. This information is provided in Attachment E.

3. Investment Placed-in-Service

Overall, \$39.6 million of investment was placed-in-service through the third quarter of FY 2017. At this time, the Company estimates that it will place \$73.9 million of plant-in-service in FY 2017, which is approximately \$5.4 million below the original FY 2017 Electric ISR Plan planned amount of \$78.5 million. This represents less than a 1% forecasted decrease from the original planned amount. Details by spending rationale are included in Attachment B.

At this time, the Non-Discretionary fiscal year-end forecast for plant additions of \$29.3 million is approximately \$2.1 million above the original FY 2017 Electric ISR Plan planned amount of \$31.4 million. The Discretionary year end forecast for plant additions of \$44.5 million is \$0.5 million below the original FY 2017 Electric ISR Plan of \$47.1 million.

4. Vegetation Management (VM)

Through the third quarter of FY 2017, the Company completed 64% of its annual distribution mileage cycle pruning goal of 1,224 miles. This represented an associated spend of 59% of the FY 2017 budget for the cycle pruning program. For FY 2017, the Company's VM operation and maintenance (O&M) spending is forecasted to be on budget at \$8.7 million.

Attachment C provides the FY 2017 spending for all sub-components in the VM category.

5. Inspection and Maintenance (I&M)

Through the third quarter of FY 2017, the Company completed 76% of its annual structure inspection goal of 50,567 with an associated spend of approximately 40% of the total I&M budget. The Company expects that the I&M forecast will be on budget at the end of the fiscal year. The Repairs and Inspection Related Costs subcategory forecast includes the FY 2017 mobile elevated voltage testing and repairs, which the PUC approved in Docket No. 4237. Attachment D provides the FY 2017 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 are 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 12/31/16	Not Repaired as of 12/31/16
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	13,078	13,804
	III	9,056	3,390	5,666
FY 2014	I	11	11	0
	II	23,196	2,330	20,866
	III	8,776	1,189	7,587
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	1	1	0
	II	5,726	0	5,726
	III	6,023	0	6,023
Total Since Program Inception	I, II, III	153,409	49,234	104,175

FY 2017 – I&M Level 1 Deficiencies Repaired						
Year Inspection Performed	Deficiencies Found	Structure Number	Location	Description of Work Performed	Inspection Date	Repaired Date
FY 2017	1	280-31	2210 Mendon Rd, Cumberland, RI 02864	Abandoned property, lift secondary taps from service.	4/22/2016	4/22/2016

As shown in the table below, results of the Company's manual elevated voltage testing for FY 2017 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 2017 Units Completed thru 12/31/16	Units with Voltage Found (>1.0v)	Percent of Units Tested with Voltage (>1.0v)
Distribution Facilities	250,441	39,278	0	0%
Underground Facilities	13,870	4,071	0	0%
Street Lights	5,884	3,751	9	0%

Attachment B
US Electricity Distribution - Rhode Island
Plant Additions by Spending Rationale
FY 2017 through December 31, 2016
(\$000)

	FY 2017 Annual ISR Forecast	FYTD Actual in Service	FY 2017 Year- end Forecast	% of FY 2017 Year-end Forecast Placed in Service
Customer Request/Public Requirement	\$19,971	\$9,915	\$14,857	67%
Damage Failure	\$11,425	\$10,436	\$14,462	72%
<i>Subtotal Non-Discretionary</i>	\$31,396	\$20,351	\$29,319	69%
Asset Condition	\$26,481	\$10,055	\$15,489	65%
Non- Infrastructure	\$271	\$0	\$0	0%
System Capacity & Performance	\$20,330	\$9,213	\$29,083	32%
<i>Subtotal Discretionary</i>	\$47,082	\$19,268	\$44,572	43%
Total Capital Investment in System	\$78,478	\$39,619	\$73,891	54%
* () denotes an underspend for the period				

Attachment C
US Electricity Distribution - Rhode Island
Vegetation Management O&M Spending
FY 2017 through December 31, 2016
(\$000)

	FY 2017 Annual ISR Budget	FYTD Actual Spend	FY 2017 Year- end Forecast	Forecasted Variance	FYTD % Spend
Cycle Pruning (Base)	\$5,050	\$2,985	\$5,050	\$0	59%
Hazard Tree	\$950	\$572	\$950	\$0	60%
Sub-T (on & off road)	\$780	\$351	\$780	\$0	45%
Police/Flagman Details	\$714	\$473	\$714	\$0	66%
Core Crew (all other activities)	\$1,225	\$720	\$1,225	\$0	59%
Total VM O&M Spending	\$8,719	\$5,101	\$8,719	\$0	59%
	FY 2017 Goal	FYTD Goal	FYTD Complete	FYTD % Complete	FY 2017 % Complete
Distribution Mileage Trimming	1,224	796	788	99%	64%

Attachment D
US Electricity Distribution - Rhode Island
Inspection and Maintenance Program O&M Spending
FY 2017 through December 31, 2016
(\$000)

	FY 2017 Annual ISR Budget	FYTD Actual Spend	FY 2017 Year- end Forecast	FYTD % Spent	
Opex Related to Capex	\$450	\$204	\$475	45%	
Repair & Inspections Related Costs	\$817	\$284	\$817	35%	
System Planning & Protection Coordination Study	\$25	\$24	\$25	96%	
Total I&M O&M Spending	\$1,292	\$512	\$1,317	40%	
Removal Costs	\$320	\$140	\$250	44%	
Total Program Costs	\$1,612	\$652	\$1,567	40%	
	FY 2017 Goal	FYTD Goal	FYTD Complete	FYTD % Complete	FY 2017 % Complete
RI Distribution Overhead Structures Inspected	50,567	37,925	38,329	101%	76%

Attachment F
US Electricity Distribution - Rhode Island
Damage/Failure Detail by Work Type
FY 2017 through December 31, 2016

		Project Type					Grand Total
		D-Line Blanket	D-Line Property Damage	D-Line Storm	D-Sub Blanket	D-Sub Specific	
Operation Description Rollup	AFUDC	\$3,402	\$1	(\$1,257)	(\$268)	\$3,025	\$4,903
	Default Accounting	\$850,304	(\$52,812)	\$60,289	\$43,241	\$135,931	\$1,036,953
	Engineering/Design/Supervision	\$738,385	\$57,858	\$150,063	\$72,540	\$332,006	\$1,350,852
	Outdoor Lighting - Cable/Wire	\$125,048	\$1,312	\$46			\$126,407
	Outdoor Lighting - Framing	\$182,018	\$1,367	\$3,025			\$186,411
	Outdoor Lighting - Poles	\$75,269	\$4,047				\$79,316
	Overhead Bonding/Grounding	\$21,302	\$27	\$888			\$22,217
	Overhead Services	\$322,967	\$15,125	\$87,646			\$425,737
	Overhead Switches/Reclosers/Fuses	\$700,314	\$18,586	\$63,017			\$781,917
	Overhead Transformers/Capacitors/Regulators	\$594,200	\$14,021	\$84,900			\$693,121
	Overhead Wire & Conductor	\$346,289	\$29,482	\$67,720	\$113		\$443,605
	Pole Framing	\$237,562	\$6,172	\$47,923			\$291,657
	Poles/Anchors/Guying	\$1,027,072	\$140,896	\$528,788			\$1,696,756
	Substation Equipment Installations	\$69,794			\$724,485	\$1,565,220	\$2,359,499
	Substations Civil/Structural				\$6,812	\$207,427	\$214,238
	Switching and Restoration	\$23,902	\$10,821	\$900			\$35,624
	Traffic Control	\$293,500	\$24,295	\$36,763			\$354,557
	Underground Cable	\$876,743	\$23,786	\$42,370			\$942,899
	Underground Cable Splicing	\$57,452	\$254	\$922			\$58,628
	Underground Civil Infrastructure	\$111,336	\$4,617				\$115,953
	Underground Direct-Buried Cable	\$33,582	\$6,656	\$1,099			\$41,338
	Underground Services	\$25,532	\$18,222	\$447			\$44,202
	Underground Switches/Reclosers/Fuses	\$27,343		\$4,971			\$32,314
	Underground Transformers/Capacitors/Regulators	\$255,393	\$13,672	\$2,211			\$271,276
	Grand Total	\$6,998,709	\$338,405	\$1,182,733	\$846,922	\$2,243,609	\$11,610,379

* () denotes an underspend for the period

Costs include prior year adjustments

The Valley Street 102 22T Transformer Replacement accounts for \$1.7 million of D-Sub specifics category

The single largest weather event contributing to the D-Line Storm category is the 9/4/2016 Hurricane Hermine, \$232 thousand

The Company expects D-Line Blanket spending levels in FY 2017 to be consistent with FY 2016

Attachment G
US Electricity Distribution - Rhode Island
South Street Budget and Project Management Report
February 2017 Update

South Street Project Status Update Meeting

nationalgrid
HERE WITH YOU. HERE FOR YOU.



South Street Project: Agenda

nationalgrid
HERE WITH YOU. HERE FOR YOU.

- Safety Moment
- Project Milestone Schedule
- January Deliverables
- February Deliverables
- Project Cash Flow
- TRC Payment Schedule
- Project Risks
- Open PCRs
- Other



South Street Project: Safety Moment



- Winter conditions
 - Storm is occurring
 - Do not drive unless absolutely necessary



South Street Project: Major Milestones

nationalgrid
HERE WITH YOU. HERE FOR YOU.

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)	8/2018
Distribution Cutover – Phase 3 (Start)	2/2019
Cutover Complete	4/2019
Completion of Demolition of existing substation	8/2019



South Street Project: Major Milestones

nationalgrid
HERE WITH YOU. HERE FOR YOU.

<u>Critical Path/Building:</u>		<u>Transmission:</u>	
Wall Panel Completion	1/27/2017	Complete T2 Conduit	04/12/2017
Hoist Installed and Certified	02/28/2017	Complete T3 Conduit	4/24/2017
Roof Installation Complete	03/08/2017	Complete T1 Conduit	05/04/2017
Building Weather Tight	03/09/2017	Complete T2 Riser Structure	05/08/2017
Switchgear - Received and Available	03/21/2017	Complete T3 Riser Structure	05/16/2017
Reactors - Received and Available	04/11/2017	Complete T1 Riser Structure	05/24/2017
P&C Panels - Received and Available	04/28/2017	Receive Transmission Cable	06/30/2017
Disconnect Switches - Received and Available	05/01/2017	T1, T2, T3 Cable Installation Complete including Splicing	01/02/2018
Primary Bus & Connections - Received and Available	05/15/2017		
Battery Banks - Received and Available:	06/05/2017		
Building Occupancy Permit	07/18/2017		
<u>Distribution:</u>		<u>Substation</u>	
Design Complete	02/24/2017	Pile Driving complete	03/31/2017
Commence Conduit Installation on South Side	04/17/2017	Ground grid complete	07/21/2017
Complete Conduit Installation on South Side	06/23/2017	Transformers delivered	08/01/2017
Commence Conduit Installation on North Side	06/26/2017	Bus Work Complete	09/08/2017
Complete Cable Pulling South Side	06/30/2017	Foundation complete	09/17/2017
Complete Conduit Installation on North Side	08/31/2017		
Complete Cable Pulling North Side	09/06/2017		



South Street Project: January Deliverables



TRC Deliverables

- Supply revision of fence design – Complete
- Supply estimate for proposed fence design – Complete
- Install remaining 2 sets of stairs – Complete
- Installation of building panels – Complete
- Submit distribution IFC design for the North End – Complete
- Submitted 30% distribution design for South End of substation - Complete
- Obtain new Transmission cable supplier – Ongoing
- Continue with electrical work in building – Ongoing
- Engineering Activities – On Going

National Grid Deliverables

- Continued to work on open change orders – Responded to remaining PCRs that could be addressed.
- Distribution underground crews continue to work on a path to Rochembeau substation – 98% complete
- Reviewed 30% distribution design for South side of substation – Complete
- Resurveyed distribution manholes on the North Side of the substation - Complete
- Worked with TRC to answer any open questions regarding the Transmission cable supplier – Complete
- Presented fence design to our internal local team – Complete
- Supplied response to Pipe Jacking PCR - Complete
- Review design – ongoing
- Review submittals – On going



South Street Project: February Deliverables



TRC Deliverables

- Supply revision of fence design – Complete
- Start of excavation for piles – 2/20/2017
- Start Pile driving activities – 2/28/2017
- Caulking of building - Ongoing
- Obtain new Transmission cable supplier – Ongoing
- Continue with electrical work in basement - Ongoing
- Engineering Activities – On going

National Grid Deliverables

- National Grid met with the City of Providence to show the proposed fence – Complete
- National Grid met with CV to show the proposed fence – Complete
- Supply zoning application for proposed fence – 2/28/2017
- Manhole survey on South side of substation – 2/13/2017
- Review submittals – On going



South Street Project: Permitting Update



- Permitting
 - CRMC – Complete
 - Providence Historic District Commission (PHDC) – Complete
 - EFSB – Complete
 - DDRC- Complete for current construction activity.
 - Might need to obtain approval from DDRC for type of fence/Wall that will be installed.
 - Zoning
 - Will need to review the need to obtain zoning approval for proposed fencing



South Street Project: Project Cash Flow

nationalgrid
HERE WITH YOU. HERE FOR YOU.

Transmission	Spend to Date	FY16 (4/1/15 to 3/31/16)	FY17 (4/1/16 to 3/31/17)	FY18 (4/1/17 to 3/31/18)	FY19 (4/1/18 to 3/31/19)	FY20 (4/1/19 to 3/31/20)
Transmission Substation- C055584	Data Not Available	\$2,561,202.99	\$12,592,923	\$4,205,675	\$1,448,465	\$0.00
U. G. Transmission Cable C055585	Data Not Available	\$549,817	\$4,337,153	\$1,146,258	\$136,850	\$786,724
Remote End Conv. Mods C055586	Data Not Available	\$620,988	\$1,122,531	\$629,199	\$68,601	\$94,156

Distribution	Spend to Date	FY16 (4/1/15 to 3/31/16)	FY17 (4/1/16 to 3/31/17)	FY18 (4/1/17 to 3/31/18)	FY19 (4/1/18 to 3/31/19)	FY20 (4/1/19 to 3/31/20)
Distribution -Line - C051213	Data Not Available	\$1,640,056	\$4,858,095	\$4,267,341	\$1,641,283	\$2,040,688
Distribution Substation - C051212	Data Not Available	\$5,414,016	\$10,555,779	\$21,505,766	\$2,443,605	\$0

Note:

- 1) Some Risk is included in the projected spend.
- 3) Reimbursement for the T-line work is not included in the above tables (only on the spend to date).
- 4) Funding Number for D-sub /T-sub removal is not included in the above tables (not capital).



South Street Project: TRC FY17 Payment Schedule



Distribution	June	September	December	February	March
C051212	\$2,040,040	\$2,639,537	\$2,425,009	\$256,411.65	\$0.00
C051213	\$433,242	\$265,697	\$475,313.04	\$42,158	\$573,586

Transmission	June	September	December	February	March
C055584	\$1,480,015	\$2,305,390	\$2,557,927	\$226,877	\$2,611,787
C055585	\$591,949	\$979,375	\$1,083,742	\$96,123	\$357,809
C055586	\$283,045	\$280,301	\$388,220	\$34,433	\$0.00



South Street Project: Project Risks (Transmission)

nationalgrid
HERE WITH YOU. HERE FOR YOU.

Transmission				
Risk (included in cashflow)	Line of Business	Risk Response	Estimated Cost	Confirmation Date
Work Delay due to CV developers (FY17FY18)	Tsub - South Street Tline Tsub - Remote	Working with CV to determine their construction schedule to prevent potential construction delays.	\$400,000	09/01/2018
Transmission Outage Delay (FY17, FY18)	Tsub - South Street Tsub Tsub-remote	Schedule has been created. Working on getting the outage team together to assure that we lock in outage window.	\$225,000	09/01/2018
Transmission line excavation (FY17, FY18)	Tline	Valued engineering to assure that most obstacles are avoided. Soil borings/Below grade investigation being performed.	\$1,000,000	10/01/2017
Building demo (off hour work/additional contamination Tsub removal)	Tsub - South Street Removal	Initial testing has been performed to determine the level of contamination. However, equipment was energized and testing was limited.	\$400,000	09/30/2019



South Street Project: Project Risks (Distribution)

nationalgrid
HERE WITH YOU. HERE FOR YOU.

Distribution				
Risk (included in cash flow)	Line of Business	Risk Response	Cost	Confirmation Date
Work Delay due to CV developers (FY17, FY18)	Dsub - South Street Dline	Working with CV to determine their construction schedule to prevent potential construction delays.	\$585,000.00	09/01/2018
Transmission Outage Delay (FY18)	Dsub - South Street Dline	Schedule has been created. Working on getting the outage team together to assure that we lock in outage window.	\$254,690.00	09/01/2018
Remote End Work Delay (FY18)	Dsub - Remote	Site investigation has taken place. Working with CV to prevent construction delays.	\$250,000.00	08/15/2017
Trench/Cutovers (FY17 and FY18) Dline	Dline	Manhole survey to determine sequence of cutover and location of cable splicing.	\$4,000,000	09/01/2018



South Street Project: PCRs



■ Open PCR status

- T1 Jacking - \$210 – approved
- Order of cutover for the 11kV to 23kV transformers – Rejected.
- Future distribution manholes – National Grid Responded (acceptance of design, additional bids are being sought).
- Remote Telecomm Design brief (PCR #39) – National Grid Responded. A meeting between National Grid and TRC took place to review.

- Additional depth - \$900k – Information was supplied to National Grid (If new distribution design is created by TRC, overall cost will be less).



South Street Project: Other



- Other
 - Schedule is becoming a concern.

