

February 29, 2016

## VIA ELECTRONIC SERVICE

Honorable Kathleen Burgess Secretary Burgess New York State Public Service Commission Three Empire State Plaza Albany, NY 12223-1350

> Re: Cases 09-E-0715, 09-G-0716, 09-E-0717 and 09-G-0718 – Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation for Electric and Gas Service

Dear Secretary Burgess:

Pursuant to Section X.B of the Joint Proposal approved by the New York State Public Service Commission's <u>Order Establishing Rate Plan</u>, issued and effective September 21, 2010, in the above-referenced proceeding, New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation respectfully submit the attached Annual Capital Expenditures Report.

If you have any questions, please contact me at 585.724.8003.

Respectfully submitted,

Joseph J. Syta

Attachment



NYSEG and RG&E AVANGRID Networks March 1, 2016

# 2015 Annual Capital Expenditures Report

Cases 09-E-0715, 09-G-0716, 09-E-0717, and 09-G-0718





This report is in response to the requirements set forth in Section X, Paragraph B of the Joint Proposal ("JP") in Cases 09-E-0715, 09-G-0716, 09-E-0717, and 09-G-0718. The requirement stated in the JP is as follows:

"The Companies will provide to Staff and interested parties, on an annual basis, a report on total electric, gas and common expenditures, a detailed status report for each electric capital project over \$1 million and each gas capital project over \$500,000, and for each such project that experiences a plus or minus 10% cost variation an explanation of the variation. The report will include an explanation for removing or adding capital projects from or to those listed in Appendix L. This report shall include the status of the Auburn 345kV Source project."

The following schedules provide the required information for calendar year 2015:

- Schedule A lists all Electric projects at each company that meet the stated \$1 million threshold and all Gas projects at each company that meet the stated \$500,000 threshold. This report does not include projects with a plus or minus 10% cost variance with respect to the amounts listed in Appendix L. The term of Appendix L was only through 2013; without a basis for 2014 a variance is not determinable.
- Schedule B provides a detailed status report for each Electric and Gas project listed in Schedule A;
- Schedule C is the December 2015 Variance Report with capital expenditures during 2015 and showing Electric project variances as well as listing Electric projects that were added to or removed from those listed in Appendix L.
- Schedule D is in a similar format to Schedule C and provides the variance explanations for Gas projects that meet the requested criteria.
- Schedule E provides a status for the Auburn Transmission Project (Auburn 345kV Source project in Appendix L).

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## New York State Electric & Gas Corporation Rochester Gas and Electric Corporation Annual Capital Investment Report Schedule A

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NYSEG & RG&E Annual Capital Expenditure Report List of Projects Meeting Threshold

## **Electric Projects with actual investment greater than \$1M:** RG&E:

- 1 FERC Brightline BES
- 2 Ginna Retirement Transmission Alternative
- 3 Rochester Area Reliability Project
- 4 Sectionalize 115kV Circuit 917
- 5 Station 56 Addition 12kV Source
- 6 Station 95 Transformer Addition
- 7 Station 262 New 115-34.5kV Substation
- 8 Station 218 to Clyde New 34.5kV Transmission Line
- 9 Station 210 Modernization
- 10 Station 38 Substation Modernization
- 11 Station 5 Substation Modernization Project
- 12 Station 23 New Downtown 115kV Source
- 13 Station 23 Add Transformer and 11kV Switchgear
- 14 Mobile Substation #3 and 5
- 15 University of Rochester New 115/34.5kV Substation 251
- 16 Inner Loop Transformation City of Rochester
- 17 Winton Road North Relocate Electric Facilities
- 18 I390 at 15A Highway Relocation
- 19 RG&E SPCC Program

NYSEG:

- 20 Jennison Substation Separation from AES Plant
- 21 Auburn Transmission Project
- 22 Eelpot, Add 2nd 115-34.5kV Trans
- 23 Goudey Substation Separation from AES Plant
- 24 Greenidge Substation Separation from AES Plant
- 25 Harris Lake Diesel Generator Upgrade
- 26 Hickling Substation Separation from AES Plant
- 27 IEC 61850 Servers NYSEG
- 28 Keuka Substation Replace Bank #2 Transformer
- 29 Klinekill-Valkin-Const New 115kV TL CCTP
- 30 Line 807, Convert to 115kv Operation
- 31 Lockheed Martin Project
- 32 Mechanicville Reinforcement Project
- 33 Mobile Radio Project
- 34 Marcy South Series Compensation Project
- 35 NY SPCC Program NYSEG
- 36 NYSEG Subtations Flo Breaker Replace
- 37 NYSEG Distributed Outage Management





- 38 Perry Center Area Install New 34.5kV Substation
- 39 Raylinski Tap to Coons Crossing Rebuild Line 601
- 40 Silver Creek Substation Rebuild
- 41 Stephentown Substation New Transformer
- 42 Tom Miller New Substation
- 43 Transit Street Substation Relocate 12kV Circuits MGP
- 44 Watercure Rd Sub-Install 2nd 345kV Transformer
- 45 Westover (Goudey) New Transformer Bank

NYSEG / RG&E:

46 - NY Energy Control Center

#### Gas Projects and Programs with actual investment greater than \$500,000:

RG&E and NYSEG Programs :

- 47 Leak Prone Main Replacement Program
- 48 Leak Prone Services Replacement Program
- 49 Gas Meters Program
- 50 Gas Regulator Modernization and Automation Program
- 51 Distribution Main Replacement Program, Replace Gas Mains
- 52 Minor Government Jobs Program, Replace Gas Mains
- 53 Minor New Residential Services Program, Install Gas Services
- 54 Minor Government Jobs Program, Replace Gas Mains

NYSEG:

- 55 Chemung Leak Prone Service Replacement
- 56 Mechanicville Compressed Natural Gas Project
- 57 NYS Route 281, Cortland
- 58 Plattsburgh gas Franchise Expansion
- 59 Robinson Road Gate Station Rebuild, Lockport

RG&E:

- 60 Buffalo Road Regulator Station Upgrade
- 61 Inner Loop Project
- 62 New Empire West Gate Station, Build New Gate Station
- 63 CM4 Gas In-line Inspection Equipment Project





## New York State Electric & Gas Corporation Rochester Gas and Electric Corporation Annual Capital Investment Report Schedule B

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## 1 FERC – Brightline BES

As of December 31, 2016

#### Project Overview

Since 2012, Iberdrola USA has conducted a program to ensure compliance to the FERC Brightline Order. This order establishes the BES (Bulk Electric System) as including most facilities 100kV and above. The work associated with this program is being managed according to the IUSA PMO (Project Management Organization) standards. The goal of the program is to ensure compliance by the enforcement date of the Brightline Order, which is July 1, 2016.

The scope for the program was established by a NERC Reliability Standard GAP analysis conducted in 2011. The program includes the following projects:

- CIP Implementation
  - Install security systems at five RG&E BES substations
- System Operations
  - Have the NYSEG and RG&E Energy Control Centers (ECC's) register as Transmission Operators (TOP's) and build a NERC compliance program.
- System Protection
  - Determine areas in identified parts of the BES system where protection devices limit facility ratings.
- Substation Maintenance
  - Develop testing plans for BES substation equipment identified in NYSEG's and RG&E's BES substations.
- System Planning
  - Conduct a planning study on NYSEG's and RG&E's BES system to determine where NERC TPL (Transmission Planning) Standards are not met.
- Facility Ratings
  - Deploy a common database to store BES facility ratings information for NYSEG and RG&E

#### Project Activities / Key Accomplishments in 2015

- CIP Implementation
  - Security systems installed at all five RG&E substations.
- System Operations
  - TOP on site certification review by NPCC for RG&E and NYSEG completed. No issues the Certification Team found would prevent a recommendation of TOP Certification by NPCC.



- System Protection
  - Relay settings changes completed at RG&E.
  - Engineering completed for three relay upgrades at NYSEG.
- Substation Maintenance
  - Testing on NYSEG and RG&E BES equipment underway.
  - Protection System Maintenance Plans completed.
- System Planning
  - Solutions Study work completed to address issues from Needs Assessment.
- Facility Ratings
  - o A database was acquired and testing started by IT.
  - Facility ratings for NYSEG and RG&E were gathered for the BES network.

#### **Project Activities Planned for 2016**

- CIP Implementation
  - Complete compliance signoff.
- System Operations
  - Address actions from Certification Team by 4/1/2016 to achieve TOP certification.
- System Protection
  - Construct the NYSEG relay upgrades.
- Substation Maintenance
  - Complete compliance signoff.
  - Continue NYSEG and RG&E BES equipment testing.
- System Planning
  - Finalize Solution Study Reports.
  - o Continue conceptual work on new BES projects.
- Facility Ratings
  - o Rollout to IUSA the ratings database.





## 2 Ginna Retirement Transmission Alternative

As of December 31, 2015

#### Project Overview

This project consists of two major elements and work at Station 80. First, RG&E will upgrade the Company's facilities at Station 122. The work at Station 122 consists of: replacing three transformers at Station 122 with new transformers from 200MVA class to 450MVA class; reconfiguring the 345 kV circuit breaker to a breaker and a half configuration; and replacing the 115 kV open-air breaker configuration with a 115 kV gas-insulated switchgear arranged in a breaker and half configuration. Second, RG&E will uprate four circuits: 34.5 kV Circuit 718; 34.5 kV Circuit 735; 34.5 kV Circuit 770; and 11 kV Circuit 623. Finally, RG&E will construct a new bay of 345 kV circuit breakers at Station 80 with new control and protection systems.

The upgrades and reconfiguration included in this project are needed to solve the thermal overloads at Station 122 and to ensure that only one bulk transformer can be lost in a single contingency. A GIS breaker and half is needed to replace the existing 115kV park due to a fault over duty failure because of the replacement of the transformers. The new (fifth) 345 kV bay is needed to resolve the stuck breaker at Station 80, which will ensure that only one bulk transformer is lost in a single contingency. Additionally, the upgrade of circuits enables the RG&E network to transfer power from Station 80 to Station 122 and vice versa. This ability allows for the reduction or elimination of thermal overloads under contingency conditions.

#### Project Activities / Key Accomplishments in 2015

- EM&CP approval for ST 80
- Started construction of the 115kV GIS at ST 122
- Started construction of T4 and T6 Foundation at ST 122
- T4 & T6 installed at ST 122

#### **Project Activities Planned for 2016**

- Complete construction of transmission lines and the remote ends
- Complete underground and aboveground construction at ST 80 and ST 122
- Commissioning of ST 122 and 80





## 3 Rochester Area Reliability Project

As of December 31, 2015

#### Project Overview

During a long term outage of the Ginna Nuclear Station at a load level of 1843MW, subsequent loss of the 345/115kV 462 MW transformer #5 at Station 80 will cause the Station 80 345/115kV transformers #1 and #3, and all the three Station 122 345/115kV transformers to be at their full capacity. Thus, at peak load levels forecasted for 2014, the system will be at its full capacity under single contingency conditions. Add new 345kV breaker and a half scheme substation, Station 255, with two 440MVA 345/115kV transformers with LTC, one 115kV 300/350MVA line from Station 255 to Station 418, and one 115kV 300/350MVA line to Station 23 115kV.

#### Project Activities / Key Accomplishments in 2015

- Finish underground construction of ST 80 4th Bay
- Start aboveground construction of ST 80 4th Bay
- Support DPS in ST 255 site decision
- Studies to evaluate ST 255 Site 20 alternative

#### **Project Activities Planned for 2016**

- Determine final location of Station 255
- Complete construction for Station 80 4th Bay
- Restart the procurement process
- File EM&CP 3 including overhead TL and ST 255

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## 4 Sectionalize 115kV Circuit 917

As of December 31, 2015

#### Project Overview

The RG&E owned 115kV circuit number 917 includes 6 tapped substations and over 30,000 customers. The existing 917 Line protection is provided by primary and secondary step distance electromechanical relays located at Station 418 and microprocessor based relays at Station 7.

The purpose of this project is to minimize the impacts of faults on this line by sectionalizing the line at various locations using breakers and motor-operated switching sectionalizing schemes at various substations. The solution required to sectionalize the line is to install circuit breakers and switches in each of the 115kV buses at Stations 69,70 and 71. It is also required to equip the existing 115kV disconnect switches at Stations 69, 70, 71 and 113 with motor operating mechanisms as well as supervisory elements for remote control. Protections and controls necessary to isolate each section of the line with minimum delay will be provided for the project, as well as fiber optic communication.

#### Project Activities / Key Accomplishments in 2015

- Finalize Station 69 detailed engineering
- Construct Station 69 in ground package
- Complete SPC 3-7 for Station 69
- Construct Station 70 in ground package

#### Project Activities Planned for 2016

- Complete Station 69 above ground construction
- Finalize station 70 detailed engineering
- Complete Station 70 above ground construction
- Complete SPC 3-7 for Station 70
- Complete detailed engineering for Station 71



#### 5 Station 56 Addition 12kV Source

As of December 31, 2015

#### Project Overview

Station 56 is a 12kV source which supplies approximately 4,500 upscale, mainly residential customers in the Towns of Pittsford and Brighton. Station 53 operates at 4kV supplying 1,400 customers in an adjacent area. The Station 56 transformer is loaded beyond 90% of its 22MVA capability at peak periods, while Station 53 is loaded at peak to its Planned Loading Beyond Nameplate rating. There are insufficient ties to supply either service area in the event of a transformer problem resulting in long outage durations. This project will eliminate Station 53 and increase the capacity at Station 56 to improve potential reliability to the entire area while allowing room for further growth. Through the application of best practice substation design, the project will upgrade the existing equipment and provide increased operational capability.

The project is to install a new source for the existing Station 56 12kV yard by installing a new 115-12kV, 12/22 MVA transformer (4T), three 115kV breakers and associated disconnect switches, 115kV bus work, 12kV GIS equipment, 12kV GIS building and new control room in the GIS building. All site work will be contained within the fenced area of the existing substation 115/12kV yard.

#### Project Activities / Key Accomplishments in 2015

- Detailed engineering
- Distribution line upgrades (circuits 267, 268 and 402)
- Complete construction of phase 1
- Commissioning phase 1
- Transformer #4 energized
- New 12kV GIS energized
- Circuit 5178, 5179 and 5180 re-energized

#### **Project Activities Planned for 2016**

- Civil construction phase 2
- Above-grade construction phase 2
- Commission phase 2
- Transformer #3 energized
- Conversion of circuit 267, 268 and 402 from 4kV to 12kV



## 6 Station 95 Transformer Addition

As of December 31, 2015

#### **Project Overview**

Station 95 serves approximately 15MW of load which relates to approximately 2,320 customers, one of which is Kodak. During high load periods, the loss of the existing 34.5kV/11.5kV transformer at Station 95 results in overloading the 11.5kV 676 Line. This would result in a cable failure and low-voltages to the customers supplied from Station 95, including Kodak. The customer load would then have to be transferred to Station 403 to supply the impacted customers. Load would need to be reduced by 3MW. The period of exposure is approximately 850 hour per year. The criterion used to justify this project is the single contingency criteria for the transmission system that provides for loss of any element results in the remaining elements being below their long-term emergency rating.

#### Project Activities / Key Accomplishments in 2015

- Construction of firewalls
- Transformer #4 installation
- Testing and commissioning
- Transformer #4 energization
- Project placed in service

#### Project Activities Planned for 2016

• No planned work for 2016 - project in service

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## 7 Station 262 – New 115-34.5kV Substation

As of December 31, 2015

#### Project Overview

This project is an infrastructure upgrade. A new substation that taps Line 901 with a new 57MVA 115/34.5kV transformer will be added as well as a new 34.5kV line from the new Station 262 to existing Station 26. A second 37 MVA 34.5/11.5kV transformer will be added at Station 26 plus complete substation modernization.

#### Project Activities / Key Accomplishments in 2015

- Station 26 and Station 262 electric conceptual engineering completed
- Station 26 and Station 262 procurement of electrical detailed engineering
- Station 26 and Station 262 detailed engineering initiated
- Station 262 property closeout
- Station 26 permit approvals initiated
- Station 26 architectural design development
- Station 262 existing building demolition
- Power transformers purchased
- Station 26 grounding grid and TRV studies
- GIS 115 kV purchased
- Capacitor bank procurement process initiated

#### **Project Activities Planned for 2016**

- 34.5 kV underground transmission line design completion
- Extension of the Station 262 building permit
- Station 26 and 262 detailed engineering completion
- Station 262 IG/ AG initiation
- Station 26 building / architectural design procurement complete
- Station 262 building / architectural design award and >40% completion
- Station 26 permits finalized
- Station 26 manholes relocation and easement completion
- Circuit 806 Duct bank scope completion
- GIS 115 kV purchased design completion
- Create RFPs and initiate procurement process for materials (conductors, control panels and equipment, batteries and etc.)
- Create RFP and initiate procurement of SP&C 3 to 7 packages and testing and commissioning portion of the project



## 8 Station 218 to Clyde – New 34.5kV Transmission Line

As of December 31, 2015

#### Project Overview

The existing Station 199 in Clyde to Station 218 line services approximately 25 MW of load and 9,217 customers. During high load periods, the line exceeds its normal rating. This results in shedding approximately 3MW of load to relive the overload. The period of exposure is approximately 175 hours per year. The criteria used for this project is the system normal criteria for the transmission system that requires all in service elements remain below its normal rating.

Modifications will be made to Circuit 708. Circuit 708 originates from Station 199 and serves six substations. In order to split the current load from existing circuit 708, a new 34 kV line, Circuit 804, will be constructed. Circuit 804 will be installed somewhat parallel with 708 to a point near Station 218.

The northern loop of Circuit 708 will be split with half being connected to the new Circuit 804. The other half remains connected to Circuit 708. Circuit 708 will be re-constructed along portions of the route to replace aging infrastructure and improve its line conductor ratings.

This project will require the addition of an outdoor breaker bay and building expansion at Station 199. The work will include, but is not limited to, the bay and building development, DC Battery System evaluation and design, and SCADA. The existing station has sufficient room to add a second breaker bay.

The existing control building must expanded because it does not have adequate room for the modern control panels, DC system and telecom system.

#### Project Activities / Key Accomplishments in 2015

- Detail engineering completion.
- Transmission line material and substation equipment procurement completion.
- Environmental, licensing and permit approvals.
- Right of way (ROW) easement completion.
- Construction procurement process completion.
- New 10.8 mile section of transmission line completed and renamed 708.
- Issue PO for construction of Circuits 708 North and 804.
- Station 199 energized.

#### Project Activities Planned for 2016

- Finish material procurement
- Complete construction and energization of Circuits 708 North and 804
- Complete Station 199 upgrades

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## 9 Station 210 Modernization

As of December 31, 2015

#### Project Overview

This project will replace the existing transformer, replace the control house with a new control/power new 12 kV gas insulated switchgear, install new motor operated disconnect switches and a new breaker in the 34kV side, update the associated 4 kV equipment to 12kV with a new IEC 61850 control system and install a new fiber optic link, patch panel and multiplex. The distribution circuits will also be upgraded. The four existing 4 kV circuits (5309, 5310, 5311 and 5312) to 12 kV will be reconstructed and converted. The automation portion will develop the control system standard and will implement the iSAS@work lberdrola tool.

#### Project Activities / Key Accomplishments in 2015

- Conceptual engineering scope initiated
- Project charter completed
- Pilot Project scope of work approved by engineering
- 3D Library development and operating guide development for conceptual engineering
- Bentley software licenses purchased and training completed.

#### Project Activities Planned for 2016

- Conceptual engineering completion
- Procurement of detailed engineering
- Detailed engineering RFP and distribution engineering scope





## 10 Station 38 - Substation Modernization

As of December 31, 2015

#### Project Overview

The scope of this project is replace existing switchgear by installing new 34.5 kV, 11.5 kV and 4 kV GIS SF6 switchgear. This project includes the removal and replacement of 3T and 4T transformers that are outdated and replacements parts have become difficult to procure, upgrading auxiliary services for the station, new electronic protection relays with IEC 61850 capabilities will be installed, adjacent to new battery banks and AC/DC control panels. The entire infrastructure will increase safety for local operators and protect the reliability of the downtown underground network.

#### Project Activities / Key Accomplishments in 2015

- 3T and 4T transformers purchased
- Various survey and geotechnical studies
- 34.5 kV, 11.5 kV and 4kV switchgear purchased
- 61850 SEL relay purchased
- Electric conceptual engineering initiated
- Mezzanine structural design initiated

#### **Project Activities Planned for 2016**

- Structural mezzanine design completion
- Electric conceptual engineering completion
- Detailed engineering initiation
- Batteries and rectifiers procurement completion
- Capacitor bank procurement completion
- Power cable procurement initiation
- Control cable procurement initiation
- Ground resistors procurement
- SP&C 3 to 7 procurement initiation



## 11 Station 5 Substation Modernization Project

As of December 31, 2015

#### Project Overview

The scope of the project is to step up substation from 11.5kV to 34.5 kV; 3 generators injection to a single bus and one feeder for Fossil & Hydro general services from the same 11.5 kV Bus; 50 MVA Transformer 11.5/34.5 kV; evacuating step up generation through midpoint tap of line 713 in 34.5kV.

#### Project Activities / Key Accomplishments in 2015

- Completion of in-ground and above-ground engineering
- Ground Grid Study completed
- Engineering and Demolition of 4kV room completed

#### **Project Activities Planned for 2016**

- Underground circuit install initiation
- Detailed engineering completion
- 34.5 kV, 11.5 kV, and 4kV switchgear delivery
- Batteries and rectifiers delivery
- Power cable procurement
- SP&C 3 to 7 procurement

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## 12 Station 23 – New Downtown 115kV Source

As of December 31, 2015

#### Project Overview

This project will build a new 115kV gas insulated switchgear substation at Station 23, fed by the existing lines 901 and 920 that originate from Station 82 and Station 42, respectively. Lines 901 and 902 will be changed from Station 82 to Station 33 so that the Line 901 orginates at of Station 82 and Line 902 originates at Mortimer Station. Line 901 will be re-conductored to 400MVA. A phase-shifting transformer will be added on Line 920 at Station 42. The project will also relocate the 11kV phase-shifting transformer from Station 23 to new Station 137.

Two new 115-34.5kV transformers will be added at Station 23. A 34.5kV line from each new transformer will be run to feed the bus at new Station 137.

#### Project Activities / Key Accomplishments in 2015

- Conceptual engineering completed.
- Issued PO for detailed engineering
- Completed construction on Station 42 PST foundation and oil containment
- Installed and assemble new 115kV PST at Station 42
- Constructed control house expansion at Station 42
- Relocated 11kV PST from Station 23 to Station 137

#### **Project Activities Planned for 2016**

- Complete Station 82 protection work
- Complete detailed engineering (except for SPC 3-7)
- Start detailed engineering SPC3-7
- Begin procurement of critical outstanding material (UG cables, steel poles, AG cable, etc.) and construction packages.
- Complete the installation of the 115kV GIS
- Complete the installation of the 34.5kV GIS
- Start the construction of the duct bank construction of L943





## 13 Station 23 – Add Transformer and 11kV Switchgear

As of December 31, 2015

#### Project Overview

The project will replace two 115kV transformers and four sections of 11.5kV switchgear. Transformer replacements are due to aging infrastructure. Transformers 1T and 2T are leaking and have reached the end of their useful life. Two of the four bus sections of 11kV are over dutied and need to be upgraded for proper fault current ratings. There are six over dutied breakers on Bus 1 and six on Bus 2 (all are approximately 125% over dutied). Bus 3 and Bus 4 have all 11kV breakers at 96% of rated capacity.

#### Project Activities / Key Accomplishments in 2015

- Conceptual engineering completed.
- Started detailed engineering
- Complete design approvals and authorized manufacture of 11.5 kV switchgear
- Progressed 115/11.5kV transformer order

#### Project Activities Planned for 2016

- Complete detailed engineering (except for SPC 3-7)
- Start detailed engineering SPC3-7
- Begin procurement of outstanding material and construction packages
- Complete the installation of the 11kV GIS Bus 3 and Bus 4

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## 14 Mobile Substation #3 and #5

As of December 31, 2015

#### Project Overview

Mobile substations are required in many scenarios to facilitate substation upgrades and improvements. In most cases, lengthy and costly outages are required to perform the upgrades which can be avoided with mobile substations. RG&E's current mobile substation fleet has limited resources to cover the needs of projects on the RG&E electric system.

This project will provide two mobile substations for station upgrades. The mobile units provide coverage that the current fleet of mobile substations cannot provide. The project includes the following units:

- 1.) MUS # 3 Mobile substation rated at 46MVA at 115/34.5kV and 28 MVA at 115/13.1-11.5kV.
- 2.) MUS #5 Mobile substation rated at 37.3MVA at 34.5/13.1-11.5kV including 38kV and 15kV GIS SG

#### Project Activities / Key Accomplishments in 2015

- Procurement PO's awarded for MUS #3 and #5
- Detailed engineering for GIS # 5 initiation
- Detailed engineering for MUS 3 and 5 initiation
- MUS 3 and 5 1st and 2nd milestone payments

#### **Project Activities Planned for 2016**

- Detailed engineering for GIS # 5 completion
- Detailed engineering MUS # 3and 5 completion
- Factory testing of MUS # 3and 5 completion
- Delivery of MUS # 3 and 5
- Commissioning Initial scope for MUS # 3 and 5 completion
- Capital investment is \$11.7 million





## 15 University of Rochester – New 115/34.5kV Substation 251

As of December 31, 2015

#### Project Overview

The University of Rochester has requested additional supply to be provided by RG&E to serve its projected load growth. Currently, Station 33 serves the University. There is no space to expand Station 33 to serve the additional load and resolve reliability issues. Station 251 will be built on the land provided by University that will be owned by RG&E. The substation will be a new 115 kV/11.5 kV breaker and a half substation with two (2) 115 kV/11.5 kV 70 MVA transformers. This substation will connect to lines 901 and 902 independently. The 11.5 kV distribution switchgear will be supplied, installed, owned and operated by U of R. This project enables RG&E to supply the University's projected load growth.

#### Project Activities / Key Accomplishments in 2015

- Station 251 / 1T, 2T and 11 kV RG&E Switchgear energized
- Station 251 / Line 942 with 10T and 11T energized
- Station 251 / ST 710 to feed U of R energized
- Station 251 / 3T energized
- Landscaping completed

#### Project Activities Planned for 2016

- Detailed Engineering completion for Line 901 tie-in and DTT (direct transfer trip) scope
- Procurement scope for Line 901 tie-in and DTT scope
- Construction scope for Line 901 tie-in and DTT scope
- Protection and Controls scope for Line 901 tie-in and DTT scope
- Energize Substation 251 by tie-in Line 901 and finish DTT scope
- National Grid connection
- Project close-out

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## 16 Inner Loop Transformation – City of Rochester

As of December 31, 2015

#### Project Overview

The City of Rochester is planning to fill in a portion of the Inner Loop from Monroe Ave north to Main St. The bridges at East Ave, Broad St and Monroe Ave will be eliminated. To complete this project, Union St north will be reworked to accommodate two way traffic.

#### Project Activities / Key Accomplishments in 2015

- Subway work (conduit and manholes) installations on Union St were completed.
- Cable installations (circuit re-routes -8) were completed on Union St to allow removal of the Broad St and East Ave bridges.
- 4kV circuits (eg. 308,367,etc) extended on Union St south of Broad St.

#### **Project Activities Planned for 2016**

- Subway removal work remains on Union St.
- Old circuit cable removals on Union St
- New subway (Manhole and conduits) system work remains on south end of project toward Monroe Ave.
- New 4kV and 11kV circuit installations remain at south end of project toward Monroe Ave
- Shutdowns required to tie in new circuit re-routes.
- Goal to complete all RG&E electric work by end of 2016, subject to road contractor schedule.





## 17 Winton Rd North – Relocate Electric Facilities

As of December 31, 2015

#### Project Overview

The City of Rochester is planning on improving Winton Road North between Browncroft Blvd and Corwin Street by full reconstruction of the highway and intersections. RG&E has overhead and underground facilities that are in conflict with the proposed construction. RG&E must relocate approximately 10 poles affecting 4kV circuit with equipment replacement, transfer and install new overhead primary and secondary conductors and remove old conductors and poles.

#### Project Activities / Key Accomplishments in 2015

 Completed all new subway work and cable pulling for reroutes of circuits in conflict with highway project

#### Project Activities Planned for 2016

- Complete switching
- Cut cables over
- Remove abandoned cables
- Remove abandoned subway system in conflict with highway project

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## 18 I390 at 15A Highway Relocation

As of December 31, 2015

#### Project Overview

NYSDOT is reconstructing and rehabilitating East Henrietta Rd (RT15A) in the area of I-390 and the Erie Canal. RG&E's scope of work includes the relocation of underground and overhead electric transmission and distribution facilities in conflict with the roadway improvements. RG&E will relocate approximately 5,400 feet of underground and 720 feet of overhead electric facilities associated with four (4) 4kV distribution circuits and one (1) 34.5kV transmission circuit.

#### Project Activities / Key Accomplishments in 2015

• Electric pole relocations and installation of underground subway facilities south of Erie Canal.

#### **Project Activities Planned for 2016**

• Electric pole relocations and installation of underground subway facilities and electric cable.

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## 19 RG&E SPCC Program

As of December 31, 2015

#### Project Overview

An SPCC plan must be updated for all facilities subject to regulation according to the SPCC Rule 40 CFR 112- Oil Pollution Prevention. This plan is to help prevent any discharge of oil into navigable waters or adjoining shorelines. Many of the plans for NYSEG and RG&E need an update and need to be certified by a Professional Engineer in order to comply correctly with these requirements. There are approximately 153 stations for RG&E. Following the development of the plans additional spill prevention measures may need to be installed and implemented at the facilities. The amount of additional measures will be determined after the completion of the plans.

#### Project Activities / Key Accomplishments in 2015

 Engineered and constructed, as required, Spill Prevention, Control and Countermeasures (SPCC) containment systems for 64 substations throughout RG&E's territory. This involved adding liner, barrier boom, catch basins with Hydro Carbon Flow Filters, Oil Minder Pumps, thresholds, etc.

#### Project Activities Planned for 2016

• Update SPCC Plan, as-builts and project closeout

**AVANGRID / INVESTMENT PLANNING** 





## 20 Jennison Substation – Separation from AES Plant

As of December 31, 2015

## **Project Overview**

Jennison substation is adjacent to the retired AES power plant. NYSEG has been dependent upon AES for reliable operation of the NYSEG transmission grid. AES provides AC power, batteries for DC power, heat, light, security and access to the plant control rooms that house NYSEG's Protection & Control and Joint Use Facilities (JUF). Due to bankruptcy proceedings by AES, NYSEG desires separation from AES Eastern Energy plant facilities and joint access/use of station control and protection equipment. The ultimate goal of this project is to remove dependencies from AES by acquiring additional land and constructing a new control house, installing necessary protection and control devices, new AC and DC station service panels, protection and control cabling and cutting over each substation transformer and line terminal to the new control house. Under future scopes of work, it is planned to replace/install one (1) new transformer bank and two (2) new breakers.

#### Project Activities / Key Accomplishments in 2015

- Perform all outages and testing & commissioning of the new control house
- Decommission the old control house.

#### Project Activities Planned for 2016

Complete all remote end work

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# 21 Auburn Transmission Project As of December 31, 2015

An update on the Auburn Transmission Project is provided in Schedule E.

**AVANGRID / INVESTMENT PLANNING** 





## 22 Eelpot, Add 2nd 115-34.5kV Transformer

As of December 31, 2015

#### Project Overview

Install a second 115/34.5kV, 30/40/56 MVA LTC transformer at the Eelpot Road substation. Work will include all associated equipment required with this transformer addition.

#### Project Activities / Key Accomplishments in 2015

- Award of construction contract for the above ground construction
- Begin installation of the substation equipment
- Phase A of in-ground construction
- Finish relay panels manufacturing

#### **Project Activities Planned for 2016**

- Complete protection and control engineering
- Fiber installation
- Above-grade construction initiation
- Commissioning of second transformer

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## 23 Goudey Substation – Separation from AES Plant

As of December 31, 2015

#### Project Overview

Goudey Substation is composed of two physically separate substation yards located near a retired power plant: a 115kV substation and a separate 34.5kV substation. At present, all protection and control (P&C) functions, AC distribution panels, the battery/charger system, and DC panels are located inside the plant (known as "AES Westover Plant"). NYSEG has been dependent upon AES for reliable operation of the NYSEG transmission grid as AES provides AC power, batteries for DC power, heat, light, security and access to the Plant Control Rooms that house NYSEG's Protection & Control and Joint Use Facilities (JUF). Due to bankruptcy proceedings by AES, NYSEG desires separation from AES Eastern Energy plant facilities and joint access/use of station control and protection equipment. The ultimate goal of this project is to remove dependencies from AES by acquiring additional land constructing a new control house, installing necessary protection and control devices, new AC and DC station service panels, protection and control cabling and cutting over each substation transformer and line terminal to the new control house. The Phase 1 scope of the project is to construct a new control house in a new expanded area of the 115kV substation yard, install new control, protection and AC/DC system and rewire with new cables and trench all substation protection and control currently located in the retired power plant to the new control house. Under the future scope of work, it is planned to replace and install the JUF which are one 115/34.5 kV transformer, one 115 kV circuit breaker, and one 34.5 kV circuit breaker and switches.

#### Project Activities / Key Accomplishments in 2015

- Completion of the detailed engineering
- Installation of all control and power cables
- Installation of all telecommunications infrastructure
- Installation of all new relay and control panels

#### Project Activities Planned for 2016

- Perform all outages and testing & commissioning
- Decommission the old control house
- Complete all remote end work



## 24 Greenidge Substation – Separation from AES Plant

As of December 31, 2015

#### Project Overview

Greenidge substation is composed of two physically separate substation yards. There is a 115kV switching station including a 115/34.5kV transformer, and there is a separate 34.5kV switching station. The 34.5kV substation is directly adjacent to a retired power plant. Due to bankruptcy proceedings by AES, NYSEG desires separation from AES Eastern Energy plant facilities and joint access/use of station control and protection equipment. The ultimate goal of this project is to remove dependencies from AES by acquiring additional land and constructing a new control house, installing necessary protection and control devices, new AC and DC station service panels, protection and control cabling and cutting over each substation transformer and line terminal to the new control house.

#### Project Activities / Key Accomplishments in 2015

- Perform all outages and testing & commissioning
- Decommission the old control house

#### **Project Activities Planned for 2016**

• Complete 115kV testing and commissioning

**AVANGRID / INVESTMENT PLANNING** 





## 25 Harris Lake – Diesel Generator Upgrade

As of December 31, 2015

#### Project Overview

Installation of new 2,500 kW diesel generator and connection to the existing fuel system.

#### Project Activities / Key Accomplishments in 2015

- Procurement process for the EPC award
- Conceptual engineering completed
- Detailed engineering in ground and above ground completed.
- Construction started.
- New 2,500 kW Generator delivered and installed
- Major equipment purchased and delivered.

#### **Project Activities Planned for 2016**

- Complete system protection and control engineering
- Testing and commissioning
- Project energization

AVANGRID / INVESTMENT PLANNING





## 26 Hickling Substation – Separation from AES Plant

As of December 31, 2015

#### Project Overview

AES filed for Chapter 11 bankruptcy protection: NYSEG is dependent upon AES for reliable operation of the NYSEG transmission grid. AES provides AC power, batteries for DC power, heat, light, security access to the plant control rooms that house NYSEG's Protection & Control, and joint use facility. Phase 1 of the project is to acquire additional land, construct a new control house, install all necessary protection and control devices in the new control house, install new substation AC station service, recable the entire substation to the new new control house and cut over each substation transformer and line terminal to the new new control house.

#### Project Activities / Key Accomplishments in 2015

- Perform remaining outages and testing & commissioning
- Decommission the old new control house
- Complete all remote end work

#### **Project Activities Planned for 2016**

• Update unit metering

AVANGRID / INVESTMENT PLANNING





## 27 IEC 61850 Servers - NYSEG

As of December 31, 2015

#### Project Overview

The IEC61850 project includes secure centralized engineering access control and device monitoring/reporting of the cyber infrastructure that is present across New York region in IUSA owned and operated electrical substations.

#### Project Activities / Key Accomplishments in 2015

 Procurement of Hardware, Software & Professional Services for IEC 61850 including 7 Checkpoint Firewall software licenses

#### **Project Activities Planned for 2016**

- Procurement of hardware, software and professional Services for IEC 61850 including 93 Checkpoint Firewall software licenses and 100 General Electric Simplicity Software licenses along with RGE and CMP
- Construct IT Network Connectivity for the P&C Central Firewall
- Construct servers & test applications: Proficy Webspace and Satellite TEST Environment

AVANGRID / INVESTMENT PLANNING





## 28 Keuka Substation – Replace Bank #2 Transformer

As of December 31, 2015

#### Project Overview

Replace existing 34.5-4.8kV 3-1phase 1MVA transformer with a new 5MVA- 34.4-4.8kV transformer protected by recloser and hook stick disconnect switches. The project will improve system reliability and add capacity to meet growing customer demand.

#### Project Activities / Key Accomplishments in 2015

- Completed protection & control detailed design
- Completed construction (above ground, protection & control)
- Tested and commission new transformer
- Energized the assets

#### **Project Activities Planned for 2016**

Project close-out

**AVANGRID / INVESTMENT PLANNING** 




# 29 Klinekill-Valkin-Const New 115kV TL CCTP

As of December 31, 2015

### Project Overview

The original scope of the project was to build a new 115kV line from National Grid Trunk #15 to NYSEG Klinekill substation, a new 115kV terminal at Klinekill substation, and a 3-breaker ring bus connecting to the 115kV National Grid line. An Article VII application was filed and during the Article VII proceeding a 34.5kV option

was suggested by the Department of Public Service. Currently the proceeding a 34.5kV option participants are engaged in discussions concerning the 34.5kV alternative.

### Project Activities / Key Accomplishments in 2015

- Further analysis of the low voltage proposal performed
- Conceptual engineering for the transmission line and substation completed
- Preliminary routing and design of the distribution feeders

### **Project Activities Planned for 2016**

- Complete detailed engineering
- Complete land acquisition for substation and easement for ROW.
- Start procurement process for long lead time items
- Award construction for transmission line and distribution feeders.
- Tree clearing for transmission ROW

AVANGRID / INVESTMENT PLANNING





## 30 Line #807 115kV Conversion

As of December 31, 2015

### Project Overview

The project consists of converting the existing Carmel to Wood Street to Katonah Line 807 from 46kV to 115kV operation. This line is already constructed to 115kV standards; therefore, the project is primarily substation modifications. A new 115kV line terminal and two new 115kV breakers will be added at Carmel Substation, two new 115kV line terminals and two new 115kV breakers will be added at Wood Street Substation, and a new 115kV line terminal and three new 115kV breakers will be added at Katonah Substation.

#### Project Activities / Key Accomplishments in 2015

- Completed the installation of the final breaker at Katonah Substation
- Completed in ground and above ground construction at Wood St.

#### **Project Activities Planned for 2016**

- Complete detailed engineering for the Carmel Substation
- Complete testing and commissioning of two new breakers at Wood Street
- Order long lead items for Carmel Substation.

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## 31 Lockheed Martin Project

As of December 31, 2015

#### Project Overview

Hurricane Irene (2011) and Hurricane Sandy (2012) delivered some of the most challenging weather events Iberdrola USA has ever encountered. These events led the utility industry to recognize a need for improved storm response operations.

In 2013 State of New York Public Service Commission created CASE 13-E-0140 defining a scorecard to assess utility response to significant outages. Over 20% of the scoring criteria are tied directly to a utility's ability to perform damage assessment and communicate Estimated Time of Restoration information within 24 hours. However, after significant weather events, damage assessment can require several days using current methods due to widespread impassable roadways and inefficient methods of aggregating information.

This Innovative project will deliver an Integrated Aerial Damage Assessment System developed by Lockheed Martin. The solution will utilize LiDAR sensor data collected by a piloted helicopter transferred to the solution's database. The system's algorithms will produce automated damage assessment and provide a user interface for additional analysis. The end product will be a dashboard view of damage and detailed damage reports. These reports will be used to expedite power restoration by identifying materials and resources needed. The solution will contribute to faster damage assessment and restoration for our customers.

#### Project Activities / Key Accomplishments in 2015

Proof of Concept completed

#### Project Activities Planned for 2016

- Continuted collaboration with IUSA, NYSERDA and Lockheed Martin
- · Continue collecting sensor data and assessments of this data

AVANGRID / INVESTMENT PLANNING





# 32 Mechanicville Reinforcement Project

As of December 31, 2015

### Project Overview

The Mechanicville Reinforcement Project includes constructing a new 115-34.5kV substation and four 34.5kV distribution lines to provide a second source of supply to the Mechanicville Division and to accommodate anticipated load growth related to the Luther Forest Industrial Park.

### Project Activities / Key Accomplishments in 2015

- Completed the detailed design with the 115kV service from National Grid.
- Completed the installation of the protection and control equipment.
- Extended the height of the communications tower at the substation.
- Began testing and commissioning the new substation.

### **Project Activities Planned for 2016**

- Complete the testing and commissioning the new substation
- Energize the new substation
- Complete the connection of the two 34.5kV distribution circuits

AVANGRID / INVESTMENT PLANNING





# 33 Mobile Radio Project

As of December 31, 2015

#### Project Overview

Replacement of the legacy NYSEG radio system with a new high-band digital trunked system. This project has been ongoing for several years.

### Project Activities / Key Accomplishments in 2015

- Completed remedial work for the Region 4 microwave systems
- Documented key data for asset reconciliation and future use.
- Project completed

### **Project Activities Planned for 2016**

• No activities planned for 2016

**AVANGRID / INVESTMENT PLANNING** 







## 34 Marcy South Series Compensation Project

As of December 31, 2015

### Project Overview

The Marcy South Series Compensation Project (MSSC) was outlined in order to support the New York Energy Highway Blueprint released by Governor Andrew Cuomo to address three objectives. First, to improve power transfer capacity across New York to allow access of upstate generation to downstate loads. Second, to address reliability concerns associated with potential downstate generation retirement, such as Indian Point Center. Each of these objectives will be achieved while accomplishing the third objective, minimizing land requirements and having a low environmental impact. Overall, the MSSC project involves the installation of three series capacitor banks and associated upgrades to the involved 345kV transmission lines. The capacitor banks will be connected to Marcy-Coopers Corners, Edic-Fraser and Fraser-Coopers Corners. The IUSA-NYSEG portion of the project involves the installation of a 240 MVAR, 25% compensation fixed series capacitor bank on this circuit near the Fraser substation. Two other capacitor banks will be installed by the New York Power Authority. The second IUSA-NYSEG portion includes reconductoring approximately 22 miles of the 47 mile 345kV circuit, FCC-33. The existing FCC-33 line is 47 miles long and was built in 1971 using H-Frame wood pole structures and is comprised of 3 sections, each with a different type of conductor. One of these sections will be reconductored.

As a whole, the two portions of the project will serve to improve network stability and allow further access to upstate power generation. In addition, the new conductor will eliminate the existing bottleneck in the FCC-33 line. The new conductor chosen for reconductoring also has greater transfer capacity and causes minimal modifications to original structures. This will minimize environmental impacts in the project area that includes New York State Catskill State Park. Series compensation allows for larger power transfer capability, improvement in network stability and reduction in the losses and voltage drop seen over the line.

#### Project Activities / Key Accomplishments in 2015

- Finalize transmission line detail engineering
- Finalize series compensation detail engineering
- · Procurement of high capacity low sag conductor
- Start construction of transmission line reconductoring
- Start construction of series capacitor
- Procurement of conceptual and detail engineering for substation upgrades
- Procurement of long lead items.

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#### **Project Activities Planned for 2016**

- Section 70 by the NYS PSC
- Complete SC Bank In-ground work: March 2016

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Take care of the environment.



- SC Bank Mechanical Completion: April 2016
- SC Bank Commissioning : April-May 2016
- Energize SC Bank: June 2016
- Complete Detailed Engineering for Substations Upgrades: May 2016
- Complete Upgrade and energize of eight line terminals at Fraser, Coopers Corners and Oakdale substations: May 2016
- Complete construction of FCC-33 Transmission line Reconductoring: May 2016
- Project In-Service-Date: June 2016
- Project Close Out: August 2016

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## 35 NY SPCC Program - NYSEG

As of December 31, 2015

### Project Overview

An SPCC plan must be updated for all facilities subject to regulation according to the SPCC Rule 40 CFR 112- Oil Pollution Prevention. This plan is to help prevent any discharge of oil into navigable waters or adjoining shorelines. Many of the plans for NYSEG and RG&E need an update and need to be certified by a Professional Engineer in order to comply correctly with these requirements. There are approximately 437 stations for NYSEG. Following the development of the plans additional spill prevention measures may need to be installed and implemented at the facilities. The amount of additional measures will be determined after the completion of the plans.

### Project Activities / Key Accomplishments in 2015

• Engineered and constructed, as required, Spill Prevention, Control and Countermeasures (SPCC) containment systems for 212 substations throughout NYSEG's territory. This involved adding liner, barrier boom, catch basins with Hydro Carbon Flow Filters, Oil Minder Pumps, thresholds, etc.

#### Project Activities Planned for 2016

• Update SPCC Plan, as-builts and project closeout

**AVANGRID / INVESTMENT PLANNING** 





# 36 NYSEG – Substation Flo Breaker Replacement

As of December 31, 2015

### Project Overview

The General Electric FLO Breakers were installed in NYSEG Substations between 1947 and 1958 (most of them in 1950). They have been in service for 60 years, and are being replaced due to safety concerns over their long period in service.

### Project Activities / Key Accomplishments in 2015

- All (46) the circuit breakers were ordered.
- The engineering of all the breakers started in 2015.
  - The engineering of 18 breakers was completed.
  - The engineering of 28 breakers was completed.
- 17 circuit breakers were replaced in 2015.

### Project Activities Planned for 2016

- Complete the design of the 18 remaining breakers.
- Replace the 29 remaining breakers.

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## 37 NYSEG Distributed Outage Management

As of December 31, 2015

### Project Overview

The Distributed Outage Management and Reporting system (DOMRS) project is the implementation of the Spectrum OMS system, the ICDS system, the Gired system and associated IT/OT integration. These implementations have been determined to be of critical importance to Operations as it pertains to outage management and reporting. They comprise the complete integrated Outage Management system solution providing: regulatory reliability and outage summary reporting; more efficient management of crews assignments through a common user interface; and planned outage scheduling and tracking all of which are vital to our core business operations.

### Project Activities / Key Accomplishments in 2015

- Design, development, test of the Spectrum OMS user interface (core) for delivery 1
- Unit test of the Spectrum OMS interface with IT systems (SAP, GIS)
- Design, development, test of the iCDS Outage Management System and the Spectrum OMS interface with iCDS, delivery 1.
- Design, development, test of a Click web service interfacing the Click mobile system with the Spectrum OMS system
- · Design, development, test of the iCDS interface with the ERA system
- Design, development, test of GIS inventory data process

### **Project Activities Planned for 2016**

- Integration testing, production implementation (RGE) of the Spectrum OMS system for delivery 1
- Integration testing, production implementation (RGE) of the Spectrum OMS interface with IT systems (SAP, GIS)
- Integration testing, production implementation (RGE) of the iCDS Outage Management System and the Spectrum OMS interface with iCDS for delivery 1
- Integration testing, production implementation (RGE) of a Click web service interfacing the Click mobile system with the Spectrum OMS system
- Integration testing, production implementation (RGE) of the iCDS interface with the ERA system
- Integration testing, production implementation (RGE) of GIS inventory data process



# 38 Perry Center Area Install New 34.5kV Substation

As of December 31, 2015

### Project Overview

The Perry Center project will build a four-breaker 34.5 kV switching station and bring in all three sections of the 591 line, and close the normally open switch. The Perry Center area serves approximately 20MW of load which is 5,469 customers. During high-load periods, loss of the 591 line in the area results in low voltages and overloads above Short Term Emergency (STE) on the 590 line. This would result in

shedding all 5MW of load in the area. This project will reduce overloads and low voltage conditions in the area and improve reliability.

The following Line 591 structures will be modified: 128,5, 129, 130 and 198.

### Project Activities / Key Accomplishments in 2015

- Completed detailed engineering
- Completed permitting for modification of Line 591
- Completed procurement for materials and construction contractor for modifications on Line 591
- Completed substation above ground
- Completed commissioning and energize the assets

#### Project Activities Planned for 2016

• Project close-out

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# **39** Raylinski Tap to Coons Crossing Rebuild – Line 601

As of December 31, 2015

### Project Overview

This project will upgrade the last remaining section of 34.5kV transmission Line 601 to larger 477 MCM conductors. Line 601 currently feeds the Coons Crossing Substation and the Raylinski Tap, which services approximately 7,000 customers. An upgrade of the line will allow 3 MVA of additional capacity to meet future demand in this growing area. This upgrade will also be crucial in creating a 34.5kV loop from the Luther Forest Technology Park to Coons Crossing Substation, lessening the Division's dependency on the Mulberry Substation. With this transmission relocation/rebuild, there are also 4 sections of distribution facilities affected which will also be required to be rebuilt / relocated.

### Project Activities / Key Accomplishments in 2015

- Completed the Eastern Half construction of the transmission line and the distribution line on Elizabeth St
- Completed the Western Half engineering design and release work orders and acquire material to be ready for construction in 2016.
- Completed construction of distribution line on the western half

### **Project Activities Planned for 2016**

• Construct western half of transmission line

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## 40 Silver Creek Substation Rebuild

As of December 31, 2014

#### Project Overview

Install new 115/12.5kV transformer for a new 12.5kV source. Add fans to upgrade rating to 10/12.5 (14) MVA. New prefab Control House for one relay panel. Install UG cable to connect the transformer to the existing Circuit #179 line position.

## Project Activities / Key Accomplishments in 2015

- Issued contract for detailed engineering
- Completed 50% of distribution up-rate design
- Began ordering major materials (breaker, CCVT's, switches)

### **Project Activities Planned for 2016**

- Construct remaining 50% of distribution line
- Finalize detailed engineering
- Finalize distribution line engineering
- Finalize major material procurement
- Initiate construction contracts

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## 41 Stephentown Substation New Transformer

As of December 31, 2015

### Project Overview

The Stephentown Project will install a new 115/34.5 kV, 20/26/33(37) MVA, LTC transformer to operate in parallel with the existing transformer. Sub-marginal voltages appear in areas served from the Berlin, Stephentown, W. Lebanon, Cannan and SAW+DI substations upon loss of the Stephentown 115/34.5KV transformer. The summer season exposure is 1,750 hours/year. Presently, this contingency causes 5,333 customers (with 14.2 MW of summer load and 22.1 MW of winter load) to be dropped.

### Project Activities / Key Accomplishments in 2015

- Completed detailed engineering through SPC 2
- Completed procurement of transmission line construction contractor
- Started construction of pre outage in ground and above ground work

### **Project Activities Planned for 2016**

- Complete detailed engineering phase
- Complete procurement of commissioning contractor.
- Complete procurement of wiring construction contractor
- Complete construction.
- Commission, test and energize new equipment

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## 42 Tom Miller Road New Substation

As of December 31, 2015

### Project Overview

The Tom Miller Road project will build a new 46-12.5 kV distribution substation on company owned property along Tom Miller Road. The substation will include a 12/16/20 MVA transformer and three distribution circuits. Hammond Lane Substation is a single bank 46-12.5 kV 12/16/20 MVA substation with three distribution feeders. The summer peak load to date was 22,021KVA or 98% of the bank's planned life beyond nameplate (PLBN) rating.

The Tom Miller Road Substation will serve the Hammond Lane distribution load eliminating the overload.

#### Project Activities / Key Accomplishments in 2015

- Completed detailed engineering phase
- Completed substation above ground
- Completed commissioning and energize the assets

#### Project Activities Planned for 2016

Project close-out

**AVANGRID / INVESTMENT PLANNING** 





# 43 Transit Street Substation – Relocate 12kV Circuits MGP

As of December 31, 2015

### Project Overview

The Transit Street substation sits atop a site that was formerly a manufactured gas plant (MGP) site which is subject to an Order on Consent with the New York State Department of Environmental Conservation (DEC). DEC requires that the MGP site be remediated which requires some components of the substation be relocated to allow the environmental remediation to proceed.

One bank of 12 kV equipment must be relocated and the existing control house must be demolished and replaced with a new one at a different location within the station.

The project also requires the orchestrated switching of electric circuits to allow environmental remediation work to proceed at locations throughout the station that do not require permanent electrical equipment relocation.

### Project Activities / Key Accomplishments in 2015

- Completed SPC engineering
- Completed construction of new control house
- Completed construction of in-ground and above-ground electrical packages
- Completed testing, commissioning, and energization of new equipment

#### **Project Activities Planned for 2016**

Complete environmental remediation work





# 44 Watercure Rd Sub-Install 2nd 345kV Transformer

As of December 31, 2015

### Project Overview

Install a second 400 MVA 360/240/36.2 kV, LTC transformer at the Watercure Substation. Install three 345 kV circuit breakers and four 230 kV circuit breakers to connect the new transformer in parallel with the existing bank #1.

## Project Activities / Key Accomplishments in 2015

- Finalized project scope for conceptual engineering
- Procured conceptual engineering contractor
- Continue conceptual engineering

## Project Activities Planned for 2016

- Complete conceptual engineering
- Procure detailed engineering contractor
- Start major material procurements

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# 45 Westover (Goudey) New Transformer Bank

As of December 31, 2015

### Project Overview

Add a 30/40/50 MVA LTC transformer at Goudey (Westover). Install the following switched capacitors: 102MVAR on the 115kV bus at Goudey, 12.6MVAR on the 115kV bus at Robble Avenue, 13.2MVAR on the 34.5kV bus at Noyes Island, 7.2MVAR on the 34.5kV bus at Oakdale, 2.4MVAR on the 34.5kV bus at Whitney Avenue, 2.4MVAR on the 34.5kV bus at Bevier Street.

#### Project Activities / Key Accomplishments in 2015

- Began detailed engineering for four capacitor bank sites (Bevier, Conklin, Whitney & Noyes)
- Completed purchase order for capacitor bank
- Received delivery of some of the capacitor bank

#### **Project Activities Planned for 2016**

- Complete detailed engineering for all the sites
- Delivery of the remaining capacitor bank
- Begin procurement of construction

**AVANGRID / INVESTMENT PLANNING** 





# 46 NY Energy Control Center

As of December 31, 2015

### Project Overview

The Energy Control Center Project ("ECC Project") is the staged replacement of the RG&E control SCADA system, the NYSEG Energy Management System ("EMS") and the integration of the current Outage Management System ("OMS") all onto the Siemens Spectrum 4.75 System. The ECC Project has also constructed a new Transmission and Substation Geographic Information System ("GIS"), and built the interface program to update the Spectrum System with electrical models for transmission, substation, and distribution on a daily basis.

#### Project Activities / Key Accomplishments in 2015

- The RG&E SCADA System went on-line July 2015.
- The NYSEG SCADA System went on-line December 2015.

#### Project Activities Planned for 2016

- Integrate advanced EMS applications for both utilities.
- Complete remaining OMS performance testing
- Launch initial release on Spectrum OMS

**AVANGRID / INVESTMENT PLANNING** 





## 47 Leak Prone Main Replacement Program

As of December 31, 2015

### Project Overview

A minimum of 24 miles of leak prone mains were required to be retired / replaced to meet the Order requirements (noted below), including mains replaced due to condition and municipal projects. The leak prone gas main work was prioritized based upon leak history, main condition, inspection reports, and various risk factors.

This is a requirement of RG&E Order 09-G-0718 and NYSEG Order 09-G-0716.

#### Project Activities / Key Accomplishments in 2015

- RG&E
  - Actual mileage completed: 25.1 miles
- NYSEG
  - Actual mileage completed: 26.01 miles

#### **Project Activities Planned for 2016**

- RG&E
  - Retire (cut dead) a minimum of 26 miles of leak prone mains
- NYSEG
  - Retire (cut dead) a minimum of 26 miles of leak prone mains

**AVANGRID / INVESTMENT PLANNING** 





# 48 Leak Prone Services Replacement Program

As of December 31, 2015

### Project Overview

A minimum of 1,000 leak prone services (RG&E) and 1,200 services (NYSEG) per year were required to be retired to meet the Order requirements (noted below).

Replace existing services associated with municipal projects, leak prone services program, and other projects.

As required by Regulation replace gas services in conflict with street reconstruction projects in accordance with terms and conditions to occupy public rights-of-way, RG&E Order 09-G-0718 and NYSEG Order 09-G-0716, and tariff or leaks.

### Project Activities / Key Accomplishments in 2015

- RG&E
  - Actual number of leak prone services completed: 1,745
- NYSEG
  - Actual number of leak prone services completed: 2,051

### Project Activities Planned for 2016

- RG&E & NYSEG
  - The program continues in 2016 as part of the Distribution Integrity Management Program. Annual investment is between NYSEG and RG&E is expected to be about \$7.3 M





## 49 Gas Meters Program

As of December 31, 2015

### Project Overview

This is a blanket work item to purchase new gas meters for services. It is required by tariff for new meters and replacement programs.

Purchase of gas meters to replace existing, aged meters as they are removed from service as well as for new installations. Gas meters are exchanged for annual PSC required programs including statistical sampling and remediation programs and for other various reasons including relocation, load increases, meter damaged, special testing, replace non-TC meters.

#### Project Activities / Key Accomplishments in 2015

- RG&E
  - New gas meters purchased: 6,047
- NYSEG
  - New gas meters purchased: 3,850

#### Project Activities Planned for 2016

- RG&E
  - Purchase new gas meters for services. Estimate: 5,200
- NYSEG
  - Purchase new gas meters for services. Estimate: 8,500





# **50** Gas Regulator Modernization and Automation Program

As of December 31, 2015

### Project Overview

This scope includes improvements to regulator and gate stations within the gas system. Typical upgrades included replacement of regulators, filters, chart recorder, valves, inlet and outlet piping and enclosures with standardized equipment, piping and associated fittings, including corrosion protection for equipment and piping. Replace equipment that is obsolete, corroded, or in poor operating condition such as regulators, filters, chart recorders, valves, inlet and outlet piping, enclosures, associated fittings, and corrosion protection. Program includes RTUs and other automation improvements.

These improvements enhance system reliability associated with corroded piping, fittings and aging equipment. The programs included replacement of obsolete equipment for which there are no repair parts available.

Program improves system reliability, reduces maintenance costs, reduces potential outages due equipment failures, and improves equipment standardization and safety.

### Project Activities / Key Accomplishments in 2015

- RG&E
  - Five projects were completed in 2015
- NYSEG
  - 16 projects were completed in 2015

### **Project Activities Planned for 2016**

- RG&E
  - 17 projects are expected to be complete in 2016
- NYSEG
  - 23 projects are expected to be complete in 2016



# 51 Distribution Main Replacement Program, Replace Gas Mains

As of December 31, 2015

## Project Overview

The scope of the program includes gas main replacements.

Replacement of gas mains is due to a number of factors including; poor conditions, conflicts with existing or proposed structures, and other miscellaneous field conditions discovered as part of normal operations or other construction and inspection activities.

### Project Activities / Key Accomplishments in 2015

- RG&E
  - Main extensions and replacements
- NYSEG
  - Main extensions and replacements

### Project Activities Planned for 2016

- RG&E
  - Replace or extend gas mains affected by main condition (immediate safety), conflicts, code violations, and other field conditions discovered as part of normal operations or other construction and inspection activities.
- NYSEG
  - Replace or extend gas mains affected by main condition (immediate safety), conflicts, code violations, and other field conditions discovered as part of normal operations or other construction and inspection activities.





# 52 Minor Distribution Mains Program, Install Gas Mains

As of December 31, 2015

### Project Overview

Install distribution mains for new commercial and residential customers. RG&E is required to provide 100 feet of gas main extension free of charge to new customers. Most main extensions are installed to provide gas service in new residential developments.

### Project Activities / Key Accomplishments in 2015

- RG&E
  - Installation of new gas mains for system improvements or customer requests providing new service to customers.
- NYSEG
  - Installation of new gas mains for system improvements or customer requests providing new service to customers.

## **Project Activities Planned for 2016**

- RG&E
  - Install gas mains affected by main condition (immediate safety), conflicts, code violations, and other field conditions discovered during normal operation and maintenance of the gas distribution system.
- NYSEG
  - Install gas mains affected by main condition (immediate safety), conflicts, code violations, and other field conditions discovered during normal operation and maintenance of the gas distribution system.





# 53 Minor New Residential Services Program, Install Gas Services

As of December 31, 2015

### Project Overview

Install new gas services to new customers in accordance with tariff and replace gas services in conflict with street reconstruction projects in accordance with terms and conditions to occupy public rights-of-way.

### Project Activities / Key Accomplishments in 2015

- RG&E
  - Installation of new residential services and renewals/ tie-ins not classified as leak prone.
- NYSEG
  - Installation of new residential services and renewals/ tie-ins not classified as leak prone.

### **Project Activities Planned for 2016**

- RG&E
  - Install new gas services to new customers in accordance with tariff, replace in conflict with street reconstruction projects, and renewals/ tieins not classified as leak prone.
- NYSEG
  - Install new gas services to new customers in accordance with tariff, replace in conflict with street reconstruction projects, and renewals/ tieins not classified as leak prone.





# 54 Minor Government Jobs Program, Replace Gas Mains

As of December 31, 2015

### Project Overview

Replace gas mains in conflict with street reconstruction projects in accordance with terms and conditions to occupy public rights-of-way.

Government agencies complete various highway improvement projects which require the relocation of existing gas mains. Regulations and terms of highway access permits allow NYSEG and RG&E facilities to be located within municipal rights-of-way, but mandate relocation of those facilities when it conflicts with street or highway reconstruction projects.

Relocation of our facilities prior to the start of construction reduces the potential for damage to company facilities and prevents unscheduled interruption of service to our customers in the affected surrounding area.

### Project Activities / Key Accomplishments in 2015

- RG&E
  - Relocation of existing gas mains
- NYSEG
  - Relocation of existing gas mains

### **Project Activities Planned for 2016**

- RG&E
  - Replace gas mains in conflict with street reconstruction projects in accordance with terms and conditions to occupy public rights-of-way.
- NYSEG
  - Replace gas mains in conflict with street reconstruction projects in accordance with terms and conditions to occupy public rights-of-way.





## 55 Chemung Leak Prone Service Replacements

As of December 31, 2015

### Project Overview

The Chemung County gas service replacements initiative is an extension of the Lucius Pitkin study done in the Horseheads exploratory projects in 2013-2014. The project consists of approximately 2,000 medium pressure 1" to 1 ¼" services that directly cross another utility line (water, sewer, etc.) and will be replaced by the end of 2016. The leak survey will be conducted by survey contractor upon bid award which will identify any leaks within the distribution system.

### Project Activities / Key Accomplishments in 2015

• Approximately 900 services were completed during 2015

#### **Project Activities Planned for 2016**

• Approximately 1,100 services will be replaced in 2016

**AVANGRID / INVESTMENT PLANNING** 





## 56 Mechanicville Compressed Natural Gas Project

As of December 31, 2015

### Project Overview

The Mechanicville Compressed Natural Gas Project was initiated due to the steady growth in the area over the last several years, which put NYSEG at its contractual limitations. NYSEG proposed the addition of a Compressed Natural Gas (CNG) system to increase their limitations. This CNG system is to be used during the heating season (November 1 – March 31) during peak heating times. The addition of this CNG system has allowed NYSEG to lift the moratorium placed on the Mechanicville area which allows for future growth and development. The project resulted in the installation of a first-of-its-kind, CNG unloading station and decompression skid. Also included was the construction of a new steel building to house pressure regulation systems and distribution piping. Commissioning was complete and included both environmental remediation and the demolition of one former regulator station/building.

### Project Activities / Key Accomplishments in 2015

- Main Project Activities:
  - Obtain permits & approvals
  - Start Site Construction
- Key Accomplishments:
  - Station put in service

### **Project Activities Planned for 2016**

• No activities planned for 2016

**AVANGRID / INVESTMENT PLANNING** 





# 20 NYS Route 281, Cortland

As of December 31, 2015

### Project Overview

The purpose of this project was to perform main replacements on the leak prone bare steel main on Route 281/West Rd in Cortland, NY.

### Project Activities / Key Accomplishments in 2015

- Installed 13,813 feet of gas mains
- 6,289 feet of Leak Prone main was retired on 10/29/15

#### **Project Activities Planned for 2016**

• No activities planned for 2016

**AVANGRID / INVESTMENT PLANNING** 





## 57 Plattsburgh Gas Franchise Expansion

As of December 31, 2015

### Project Overview

The Plattsburgh Gas Franchise Expansion Project was initiated due to an Order from the PSC (Case 12-G-0499). NYSEG was required to construct the gas mains and services as outlined in the Department of Public Service Staff Modified Build-out Plan. In 2015, the plan required that new mains and services be constructed in the Cumberland Head area of the Town of Plattsburgh. In addition, the Plan required the construction of gas services to customers who had requested service in the Build-out area.

#### Project Activities / Key Accomplishments in 2015

- Gas Main Extension Installed:
  - Approx. 19,900 feet of 6" PE main
  - 8,300 feet of 4" PE main
  - 48,000 feet of 2" PE main
- All main was energized by October 16, 2015
- 230 services installed

#### **Project Activities Planned for 2016**

- Construct approx. 10,200 feet of 2" and 4" PE main
- Provide an estimated 200 services to customers who request service

**AVANGRID / INVESTMENT PLANNING** 





# 58 Robinson Road Gate Station Rebuild, Lockport

As of December 31, 2015

## **Project Overview**

The Robinson Road Gate Station Rebuild Project consisted of a full rebuild of the site with: the appropriate SCADA signals; regulation equipment upgrade; new piping; installation of two Bruest catalytic heaters; new building construction; and demolition of the former facilities. In addition, due to the age of the Station, environmental mitigation and remediation tasks were performed throughout the project in order to adhere to Federal, State, and Company regulations.

The project began in 2012 and went into service in 2015.

### Project Activities / Key Accomplishments in 2015

- Prefabrication and installation of Gate Station 34 (GS 34) piping and layout
- Construction of GS 34 monitor and control buildings
- Construction of Regulator Station 35 (RS 35) piping and layout
- Construction of RS 35 building
- Installation of Odorizer in GS 34
- Rehabilitation of existing RTU building
- Installation of new RTU control computer
- Construction of new electrical system (conduit pathways, wiring, etc.)
- Asbestos abatement in both building materials and regulated materials
- Demolition of retired piping and buildings
- Tie-in to three (3) distribution and five (5) transmission lines
- Site restoration
- Station put in service on September 15, 2015

#### **Project Activities Planned for 2016**

• No activities planned for 2016



# 59 Buffalo Road Regulator Station Upgrade

As of December 31, 2015

### Project Overview

Rochester Gas & Electric (RG&E) intends to make significant improvements to the existing station located on the north side of Buffalo Road (NYS Route 33) just west of the Erie Canal in the Town of Gates. The successful completion of this project will improve system reliability and capacity for the MF120 Western Monroe and MF99 distribution networks. It will replace fifty-year-old regulator equipment and piping that handles 25% of RG&E's total gas load.

### Project Activities / Key Accomplishments in 2015

- Obtained permits and approvals
- Started site construction
- Completed installation of 16" tie from CM-1 to 14" Cabot Line

### **Project Activities Planned for 2016**

- Installation of new regulator building doors
- Installation of new inlet and distribution piping system
- Rebuild of Regulator Station 290
- Rebuild of Regulator Station 343
- Rebuild of Regulator Station 504
- Elimination of Regulator Station 291
- Complete site restoration
- Project is scheduled to be in service by October 2016





# 60 Inner Loop Project

As of December 31, 2015

### Project Overview

The purpose of this project was to remove conflicts generated by the Inner Loop East Transformation Project.

### Project Activities / Key Accomplishments in 2015

- Relocated and replaced 196 feet of 24" WRST with 265 feet of 16" WRST
- Relocated and replaced 118 feet of 16" WRST and 250 feet of 12" WRST with 186 feet of 12" WRST and 247 feet of 8" PE
- 24" pipe was put in service September 2015
- 16" pipe was put in service October 2015

### **Project Activities Planned for 2016**

• No activities planned for 2016

**AVANGRID / INVESTMENT PLANNING** 





# 61 New Empire West Gate Station, Build New Gate Station

As of December 31, 2015

## Project Overview

Rochester Gas & Electric (RG&E) constructed a new gate station on the west side of Scottsville-Chili Road (NYS Route 386) in the Town of Chili. The new gate station tapped the 24" Empire Pipeline owned and operated by National Fuel Gas Company (NFG). The project included constructing five new utility buildings and installing the required equipment to transfer natural gas from the NFG transmission pipeline to the RG&E distribution network.

The project began in 2011, and went into service in November 2015.

## Project Activities / Key Accomplishments in 2015

- The scope of work included the following:
  - Site development, including a new access drive, stormwater management, perimeter fencing and landscaping;
  - Construction of new Gate Station 16 building;
  - Construction of new Regulator Station 500 building;
  - Installation of (2) new water bath heaters;
  - Construction of new RG&E RTU Building;
  - Installation of new piping, regulator equipment, and control equipment;
  - New electric service and wiring to Site and equipment;
  - Installation of new 1,500 gallon odorant aboveground storage tank, and
  - Installation of new odorant supply cabinet
- Project was put in service on November 2015

### **Project Activities Planned for 2016**

• No activities planned for 2016





# 62 CM4 Gas In-line Inspection Equipment Project

As of December 31, 2015

### Project Overview

In the fall of 2014, Technical Services made a recommendation to inspect the entire length of the CM-4 pipeline internally for potential pipeline wall loss and integrity issues. This inspection will use Smart pig technology and was performed in September 2015. Special fittings will need to be installed at 2 locations on the CM-4 pipeline which will be used to insert the smart pig.

### Project Activities / Key Accomplishments in 2015

• Installed and tapped two 24" Stopple Fittings on CM4 pipeline

### Project Activities Planned for 2016.

• No activities planned for 2016

AVANGRID / INVESTMENT PLANNING




# New York State Electric & Gas Corporation Rochester Gas and Electric Corporation Annual Capital Investment Report Schedule C

**AVANGRID / INVESTMENT PLANNING** 



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NYSEG - Electric Capital Investment (\$000s) December Results								
YTD YTD Project Actuals Plan YTD Variance Variance Explanation - ± 10% of Annual Plan							In Service Date	
Projects in Appendix L								2010
Line 807, Convert to 115kv Operation	\$	4,273	\$	1,500	\$	2,773	For 2015 there was more work completed than originally planned.	Aug-17
Klinekill-Valkin-Const New 115kV TL CCTP	\$	631	\$	6,147	\$	(5,515)	For 2015 there was less work completed than originally planned, due to Article VII process.	Mar-18
Stephentown Substation New Transformer	\$	2,807	\$	1,690	\$	1,117	For 2015 there was more work completed than originally planned.	Oct-16
Tom Miller New Substation	\$	2,178	\$	1,103	\$	1,075	Construction activities moved into 2015 due to prior year delays in project schedule.	Jun-15
Harris Lake - Diesel Generator Upgrade	\$	3,706	\$	5,934	\$	(2,229)	For 2015 there was less work completed than originally planned.	Feb-16
Silver Creek Substation Rebuild	\$	497	\$	1,480	\$	(983)	For 2015 there was less work completed than originally planned.	Sep-17
Transit Street SS MGP Remediation	\$	3,907	\$	1,770	\$	2,137	For 2015 there was more work completed than originally planned.	Oct-15
Auburn Transmission Project	\$	4,179	\$	15,796	\$	(11,616)	For 2015 less work has been done than originally planned, due to Article VII process.	Aug-17
Eelpot, Add 2nd 115-34.5kV Trans	\$	2,223	\$	4,376	\$	(2,153)	For 2015 there was less work completed than originally planned.	Nov-16
Perry Center SS Upgrade	\$	2,960	\$	2,235	\$	725	For 2015 there was more work completed than originally planned.	Aug-15
Westover (Goudey) New Transformer Bank	\$	1,473	\$	1,700	\$	(227)	For 2015 there was less work completed than originally planned.	Mar-18

NYSEG - Electric Capital Investment (\$000s) December Results								
Project	A	YTD Actuals		YTD Plan	YTD Variance		Variance Explanation - ± 10% of Annual Plan	In Service Date
Mobile Radio Project - Electric Portion	\$	442	\$	2,310	\$	(1,868)	Variance is due to rejection of key frequency applications by Industry Canada.	Dec-15
NYSEG ECC	\$	4,774	\$	2,865	\$	1,909	For 2015 there was more work completed than originally planned.	Staged 14-15
Programs included in Appendix L								
Transmission Distribution Infrastructure Reliability Program (TDIRP)	\$	14,215	\$	19,995	\$	(5,779)	Less work to be done on this program to allow for carryover work to be done on other projects.	Various
NYSEG Security Projects - Electric Portion	\$	3,607	\$	1,293	\$	2,315	More work on System Cutover in 2015 than planned to offset RG&E 89 East Ave lobby project schedule change	Various
Fleet - Electric Portion	\$	6,895	\$	2,793	\$	4,102	Additional Light Duty Vehicles purchased in 2015.	Various
Division Projects - Minors See Schedule C-3	\$	57,376	\$	36,380	\$	20,995	More work completed than planned, catch-up of overhead allocation.	Various
Projects/Programs Supplemental to Appendix L								
Raylinski Tap to Coons Crossing Rbld - Line 601	\$	1,663	\$	1,630	\$	33		Jul-16
Keuka Transformer Replacement	\$	1,551	\$	250	\$	1,301	For 2015 there was more work completed than originally planned, and extended in-service date.	Jun-15
Jennison S/S - Separation from AES Plant	\$	2,139	\$	200	\$	1,939	Construction activities moved into 2015 due to delays in project schedule.	Mar-15
Watercure Rd Sub-Install 2nd 345kV Xfmr	\$	585	\$	1,500	\$	(915)	For 2015 there was less work completed than originally planned.	Apr-18
Mechanicville Reinforcement Project	\$	1,541	\$	960	\$	581	For 2015 there was more work completed than originally planned.	Feb-16

NYSEG - Electric Capital Investment (\$000s) December Results								
Desised		YTD	YTD				Venimes Fundamentian - 40% of Annual Plan	In Service
Hickling S/S - Separation from AES Plant	\$	2,312	\$	<b>Plan</b> 300	\$ \$	2,012	Construction activities and closeout work carried over into 2015 due to delays in project schedule.	Jan-15
Greenidge S/S - Separation from AES Plant	\$	2,150	\$	200	\$	1,950	Construction activities and closeout work carried over into 2015 due to delays in project schedule.	Jun-15
Goudey S/S - Separation from AES Plant	\$	6,179	\$	2,562	\$	3,618	Construction activities moved into 2015 due to delays in project schedule.	May-16
Marcy South Series Compensation Project	\$	28,901	\$	19,294	\$	9,607	For 2015 there was more work completed than originally planned.	Jun-16
IEC 61850 Servers - NYSEG	\$	382	\$	2,500	\$	(2,118)	The variance is due to delays in contract execution.	Apr-16
NY SPCC PROGRAM - NYSEG	\$	10,514	\$	2,000	\$	8,514	At the time the plan was developed the actual cost estimate was not available.	Dec-15
Stolle Transmission 520/552 Line Upgrade	\$	39	\$	-	\$	39	2014 Carryover Project not in the Plan.	Dec-15
NYSEG Flo Breaker Replacement Program - 2015	\$	2,691	\$	-	\$	2,691	New program not in the plan to address equipment & safety issues.	Various
Distributed Outage Mngmt and Rpt System	\$	907	\$	1,434	\$	(527)	For 2015 there was less work completed than originally planned.	Various
Lockheed Martin	\$	473	\$	1,000	\$	(527)	For 2015 there was less work completed than originally planned.	Sep-16
Smarter Workplace - Electric Portion	\$	2,776	\$	1,115	\$	1,661	Additional scope added.	Dec-15
IT SAP Unification - Electric Portion	\$	1,983	\$	1,332	\$	651	Labor costs higher than planned.	Sep-15
Other Common Projects - Electric allocation See Schedule C-1	\$	7,162	\$	7,848	\$	(686)	Less work done in IT and General Services vs. plan.	Various
Other Electric projects See Schedule C-2	\$	11,313	\$	11,060	\$	253		Various
Generation projects See Schedule C-4	\$	4,787	\$	3,320	\$	1,467	More work completed in 2015 than planned.	Various
Total	\$	206,191	\$	167,871	\$	38,320		

RG&E - Electric Capital Investment (\$000s) December Results									
Project		YTD Actuals		YTD Plan	v	YTD /ariance	Variance Explanation - ±10% of Annual Plan	In Service Date	
Projects in Appendix L							·		
Station 23 New Downtown 115kV Source	\$	10,380	\$	9,994	\$	386		Nov-18	
Station 218 to Clyde New 34.5kV Transmission Line	\$	7,996	\$	6,122	\$	1,875	Schedule accelerated to put first phase of project in service sooner than planned.	Oct-16	
Station 262 New 115kV /34.5kV Substation	\$	2,811	\$	4,105	\$	(1,294)	Project schedule for 2015 adjusted to compensate for scope changes.	Dec-20	
Rochester Area Reliability Project	\$	5,539	\$	38,324	\$	(32,786)	Progressing according to modified schedule	Mar-20	
U of R New 115 /34.5kV Substation	\$	1,397	\$	(200)	\$	1,597	Additional scope extended project completion from 2014 to 2015 which resulted in additional contractor charges.	Mar-15	
Energy Control Center	\$	3,204	\$	970	\$	2,234	For 2015, there was more work than originally planned.	Staged 14-15	
Station 56 - Additional 12kV Source	\$	3,146	\$	4,024	\$	(878)	For 2015 less work was completed than orginally planned.	Jun-16	
<u>Programs in Appendix L</u> Transmission, distribution infrastructure reliability program (TDIRP)	\$	6,427	\$	15,128	\$	(8,701)	Less work to be done on this program to allow for carryover work to be done on other projects.	Various	
Fleet - Electric Portion	\$	2,610	\$	3,084	\$	(474)	Variance is due to delays in light duty vehicle purchases.	Various	
Security - Electric Portion	\$	1,674	\$	3,201	\$	(1,528)	Less work on System Cutover in 2015 than planned due to due to 89 East Ave lobby project schedule change	Various	
Division Projects See Schedule C-3	\$	19,793	\$	16,945	\$	2,848	Catch-up of overhead allocation.	Various	
Projects/Programs Supplemental to Appendix L									
Station 210 Modernization	\$	1,016	\$	1,210	\$	(195)	For 2015 less work was completed than orginally planned.	Nov-17	

RG&E - Electric Capital Investment (\$000s) December Results									
Project		YTD Actuals		YTD Plan		YTD ariance	Variance Explanation - ±10% of Annual Plan	In Service Date	
Station 23 - Transformer and 11kV Switchgear	\$	1,439	\$	1,800	\$	(361)	For 2015 less work was completed than orginally planned.	Nov-18	
FERC Bright Line Compliance Project	\$	2,708	\$	2,015	\$	694	Fore 2015, more work was completed than originially planned.	Various	
Station 168 Service Area Reinforcements	\$	207	\$	1,061	\$	(854)	Projected investment reflects current timetable	Jan-19	
Rochester - Sectionalize and Reconductor 115kV Circuit 917 (S7 - S418)	\$	1,931	\$	1,490	\$	441	Project ahead of schedule.	Jan-18	
Station 38 Refurbishment	\$	3,464	\$	3,200	\$	264		Feb-17	
Station 49 Transformer Addition	\$	588	\$	1,003	\$	(416)	Project schedule adjusted to meet needs.	May-18	
Station 5 Substation Modernization Project	\$	1,318	\$	1,250	\$	68		Jul-17	
Ginna Retirement Transmission Alternative	\$	23,332	\$	200	\$	23,132	Scope being finalized when budget originally developed. Investment according to current timetable while RARP in-service timing delayed	Dec-16	
Winton Rd Highway Relocation	\$	1,066	\$	-	\$	1,066	Highway project originally planned under division minors.	Sep-15	
Inner Loop Highway Relocation	\$	2,173	\$	-	\$	2,173	Highway project originally planned under division minors.	Jun-16	
Station 95	\$	2,285	\$	940	\$	1,345	Above ground construction cost was understimated	May-15	
Mobile Substations #3 and #5	\$	1,997	\$	1,408	\$	588	Projected investment reflects adjustment in project timetable for earlier delivery.	Feb-16	
SPCC Program	\$	1,979	\$	2,000	\$	(21)		Dec-15	
Scottsville Rd 2nd Floor - Engineering Office Reconfiguration	\$	1,447	\$	-	\$	1,477	Project not originally planned for 2015.	Dec-15	
Smarter Workplace	\$	1,226	\$	484	\$	742	Additional scope added.	Various	

R	G&E -	Electri Dece	с ( (\$0	Capital <sup>00s)</sup> er Resul	l <b>In</b> ts	vestme	ent	
Project		YTD Actuals		YTD Plan	v	YTD ariance	Variance Explanation - ±10% of Annual Plan	In Service Date
Other Common Projects - Electric allocation See Schedule C-1	\$	5,206	\$	5,489	\$	(283)		Various
All Other Electric Projects See Schedule C-2	\$	6,371	\$	4,047	\$	1,654	Carryover work not planned, projects accomplished more than planned, emergent projects, highway projects planned under division minors	Various
Generation Projects See Schedule C-4	\$	4,320	\$	3,095	\$	(312)	Less work completed in 2015	Various
Total	\$	129,047	\$	132,390	\$	(3,343)		

#### 2015 Electric Common NYSEG Electric (\$000)

Project	Actuals	Plan
IT PROJECTS - OTHER	\$ 2,318	\$ 3,766
FACILITES - MINOR PROJECTS	\$ 1,102	\$ 523
PLATTSBURGH - HEATING FUEL CONVERSION	\$ 940	\$ 624
IUSA GLOBAL NETWORKS SAP PH2	\$ 520	\$ -
IUSA_13_APP_SAP WMS MAM REPLACEMENT	\$ 495	\$ 209
NYSEG Console/Server Enhancement	\$ 326	\$ -
NTS Project	\$ 193	\$ 263
KGO East Roof Replacement	\$ 188	\$ -
IUSA_15 NY REGULATORY MANDATES	\$ 173	\$ 844
NYSEG ECS Infrastrucutre	\$ 157	\$ -
IUSA-VOIP 2015-NYSEG	\$ 151	\$ 166
IT-USA CYBER SECURITY	\$ 124	\$ -
NYSEG Telecom Automation	\$ 106	\$ 104
All Other Common Projects Less Than \$100K	\$ 368	\$ 1,349
Total	\$ 7,162	\$ 7,848

#### 2015 Electric Common RG&E Electric (\$000)

Project	2015 Actuals	2015 Plan
IT PROJECTS - OTHER	\$1,277	\$1,986
FACILITES - MINOR PROJECTS	\$973	\$657
CORP SAP Project	\$675	\$548
RGE Telecom Automation	\$528	\$520
RGE - FILLMORE ROOF	\$325	\$0
EAST AVE - UPGRADE CHILLER	\$319	\$270
IUSA GLOBAL NETWORKS SAP PH2	\$225	\$0
IUSA_13_APP_SAP WMS MAM REPLACEMENT	\$203	\$85
CORP SAP Project	\$160	\$0
Other Common Project less than \$100k	\$523	\$1,424
Total	\$5,206	\$5,489

#### 2015 Other Electric Projects NYSEG Electric (\$000)

Project	Actuals	Plan
South Perry New Substation	\$ 1,205	\$ 741
Willet Substation New Transformer	\$ 1,190	\$ 976
Croton Falls Shaft 11 New Circuit	\$ 1,030	\$ -
Robinson Rd. 230kV Xformer Rplc Proj	\$ 912	\$ 100
NYSEG General Equipment Electric Distribution	\$ 820	\$ -
Meyer Substation New Transformer	\$ 769	\$ 800
FERC Bright Line Compliance Proj.	\$ 722	\$ 377
Glenwood - Replace Transformers	\$ 707	\$ 450
Brewster Transmission Line 990/994 Structure Replacement	\$ 705	\$ -
Flat Street SS New Transformer	\$ 669	\$ 650
Relocation Clyde 201 Distribution Facilities	\$ 586	\$ -
Line-813 Transmission Structure Replacement	\$ 563	\$ -
NYSEG Project Carryforward 2015	\$ 525	\$ -
Oakdale Fraser Substation	\$ 499	\$ 120
Binghamton - Broome County Landfill Sewe	\$ 423	\$ -
Five Mile-Stolle Rd Substa Project	\$ 393	\$ -
51 - Western New York Project	\$ 307	\$ -
Windham Substation Cap Bank Addition	\$ 273	\$ 550
Clark MGP	\$ 257	\$ 600
Kelly Bridge Development - URD	\$ 234	\$ -
Cemetary Road Circuit 491 Load Relief	\$ 221	\$ -
Spaulding Greens URD - Phase 6	\$ 173	\$ -
Coddington Add LTC 115/34.5 Xfmr	\$ 171	\$ 100
NYSEG Storm 2014 Carry Forward	\$ 166	\$ -
Dingle Ridge - 2nd Bank and 13.2kV Conv	\$ 158	\$ 500
48 - Coopers Corners-3rd 345/115Kv Tfrm	\$ 149	\$ -
51 - Gardenville Substation Rebuild	\$ 143	\$ -
Maint Engr Tools for NYSEG	\$ 123	\$ 190
Fraser SS - Add Second 345kV Transformer	\$ 110	\$ 200
Sackett Lake Replace Transformer	\$ 108	\$ 200
Cantitoe Substation New 13.2 kV Circuit - 498	\$ 101	\$ -
Brewster Castagna Park Project - URD Phase-1	\$ (143)	\$ -
61 - Marsh Hill Wind Farm-Reimb	\$ (190)	\$ -
55 - Yahoo Substation - 2014-Reimb	\$ (276)	\$ -
Mech - Loves Truck Stop New Service	\$ (287)	\$ -
DOE- Capacitor Banks NYSEG	\$ (308)	\$ -
Oneonta - Davenport- new sawmill	\$ (312)	\$ -
IPP Interconnections - NYSEG	\$ (509)	\$ -
70 - Cayuga Marketing - 100% Reimb	\$ (1,716)	\$ -
Other Electric Projects Less Than \$100K	\$ 638	\$ 4,505
Total	\$ 11,313	\$ 11,060

Note 1 - First three projects listed were Authorized for under \$1M and not listed as a major project on monthly report, went over in December because of overhead allocation adjustments.

#### 2015 Other Electric Projects RG&E Electric (\$000)

Project	2015 Actuals	2015 Plan
Replace DC Pilot Wire System	\$733	\$700
Station 178 - 34kV Cap banks	\$508	\$0
Mobile Switchgear #4 34.5/12kV	\$498	\$800
Station 33 Spare Transformer	\$404	\$350
Empire Blvd (Southpointe Cove), Hwy Relocate Electric Facilities	\$382	\$0
RGE General Equipment Electric Distribution	\$369	\$0
NYSDOT I390 Interchange @ Rt 15A	\$347	\$0
Stations 67 to 418 - New 115 kV Transmission Line	\$331	\$0
RGE Distributed Outage Mgmt	\$305	\$466
765 Circuit Automation	\$241	\$0
Station 419 Extend 2 Circuits	\$227	\$0
Breaker Prog RGE	\$201	\$0
Substation Modernization- Station 174	\$174	\$0
RGE Project Carryforward 2015	\$165	\$0
Station 180 115kV Cap Bank	\$164	\$0
Network Monitor, Oper, Security RGE	\$158	\$223
RGE - IEC 61850	\$141	\$855
Station 69 New 115kV Capacitor (formerly Station 71)	\$137	\$0
Lake Ave (Merrill St to 600' S of Burley St). Relocate Electric Facilities	\$134	\$0
Southpoint Cove Apartments, Phase 1	\$132	\$0
Substation Modernization- Station 37	\$119	\$202
Station 180 34.5kV Cap Bank	\$106	\$0
Other Electric Projects Less Than \$100K	\$396	\$1,060
Total	\$6,371	\$4,655

2015 Divison Projects NYSEG Electric (\$000)

Projects	Actuals	Plan
NYSEG - Dist line	\$ 12,317	\$ -
NYSEG - Subst Better	\$ 11,974	\$ 5,163
NYSEG - Electric Operations	\$ 9,286	\$ 8,128
NYSEG - Res Line	\$ 7,085	\$ 6,254
NYSEG - Trans line	\$ 4,991	\$ 1,402
NYSEG - Serv Conn	\$ 4,273	\$ 3,867
NYSEG - Ind/Comm	\$ 2,657	\$ 1,577
NYSEG - Gov't HW	\$ 2,360	\$ 4,211
NYSEG CAPEX Meter Services	\$ 1,232	\$ 2,611
NYSEG - Street Lght	\$ 945	\$ 1,030
NYSEG STORMS ELECTRIC	\$ 236	\$ 2,138
NYSEG - Red Circuit	\$ 20	\$ -
RGE - Elec Better	\$ 1	\$ -
Total	\$ 57,376	\$ 36,380

#### 2015 Divison Projects RG&E Electric (\$000)

Project	2015 Actual	2015 Plan
Distribution Line	\$4,581	\$0
Distribution Line Inspection	\$0	\$0
Government Highway Minor	\$0	\$0
Government Highway Major	\$1,410	\$8,645
Industrial/Commercial	\$1,697	\$1,300
Residential Line Extensions	\$1,871	\$1,949
Service Connects	\$2,125	\$649
Storm	\$77	\$519
Street Lighting	\$557	\$743
Substations	\$5,968	\$1,400
Transformer, Meters, Regulators and Capacitors	\$225	\$1,289
Transmission Line	\$1,079	\$450
Electric Operations	\$203	\$0
Total	\$19,793	\$16,945

#### 2015 Hydro-Generation Projects NYSEG Electric (\$000)

Project	Actuals	Plan
Rainbow Falls Restoration - Hurricane Irene Storm Related (2I.HS002)	\$ 3,512	\$ -
Kents Falls Racks and Rackraker	\$ 699	\$ -
NYSEG Production	\$ 266	\$ 3,320
Mechanicville New EM Back Up Generator	\$ 142	\$ -
Other Generation Proejcts less than \$100K	\$ 167	\$ -
Total	\$ 4,787	\$ 3,320

#### 2015 Hydro-Generation Projects RG&E Electric (\$000)

Project	2015 Actual	2015 Plan
Beebee	\$2,610	\$0
Station 5 - Unit 2 New Generator Field Pole Project (Un-planned 2014)	\$653	\$0
Station 5 Gate 2 Seal Replacement	\$427	\$0
Station 2 - Unit 1 11kV DC Controls	\$251	\$0
Station 2 CAD Communications & Control Bldg	\$226	\$0
Station 5 Security and Site Improvements	\$192	\$0
RG&E Fossil HYDRO Operations - CAPEX Minor projects	\$149	\$0
Other Generation Projects Less Than \$100K	\$83	\$0
RG&E Fossil Hydro Operatns - CAPEX	\$0	\$0
Station 26 Draft Tube Stop Gate	\$0	\$0
Station 2 Modernization	\$0	\$0
RGE Production	-\$271	\$3,095
Total	\$4,320	\$3,095



# New York State Electric & Gas Corporation Rochester Gas and Electric Corporation Annual Capital Investment Report Schedule D

**AVANGRID / INVESTMENT PLANNING** 



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NYSEG - Gas Capital Investment (\$000s) Decmber Results											
Project	A	YTD Actuals	YTD Plan		D an YTD V		Variance Explanation - ± 10% of Annual Plan	In Service Date			
NYSEG Leak Prone Main Repl Program	\$	16,094	\$	11,486	\$	4,607	Program cost higher than planned	Dec-15			
NYSEG Leak Prone Srv Repl Program	\$	4,278	\$	6,854	\$	(2,576)	Variance is due to market-wide material shortages that caused delays in progression of work	Dec-15			
NYSEG Government Jobs	\$	976	\$	762	\$	214	Municipal driven work higher than planned.	Various			
NYSEG New Services	\$	5,807	\$	4,594	\$	1,214	Customer driven service work demand was greater than planned.	Dec-15			
NYSEG Dist Main Replacement	\$	2,144	\$	651	\$	1,493	Municipal work higher than planned.	Various			
NYSEG Dist Mains New Business	\$	1,654	\$	2,537	\$	(883)	Customer driven projects less than plan	Dec-15			
NYSEG Reg Mod & Auto Pgm	\$	562	\$	318	\$	244	Safety related projects emerged during 2015.	Various			
Mchncvll Comprsd Ntrl Gas Sta&Facilities	\$	3,802	\$	1,632	\$	2,171	Procurement of equipment and materials ahead of schedule and regulator station replacement added to scope	Nov-15			
Plattsburg Franchise Expansion	\$	4,986	\$	4,729	\$	257		Dec-17			
Robinson Rd Gate St Rebuild	\$	2,808	\$	2	\$	2,806	Project schedule was accelerated.	Oct-15			
Lansing Freeville Reinforcement	\$	100	\$	6,185	\$	(6,085)	Project delayed - working on community outreach and potential eminent domain proceedings	Dec-17			

NYSEG - Gas Capital Investment (\$000s) Decmber Results											
Project	A	YTD ctuals		YTD Plan	YTD	Variance	Variance Explanation - ± 10% of Annual Plan	In Service Date			
NYS Rte 281 Gas Main Relocate-CortInd	\$	591	\$	1,215	\$	(624)	Project costs less than planned	Dec-15			
Chemung County Gas Srvce Replcmnts Proj	\$	4,792	\$	-	\$	4,792	Emergent / unplanned mandated program	Oct-16			
NYSEG CAPEX Meter Services	\$	816	\$	4,239	\$	(3,423)	Portion of meter installations were drawn from stock that was capitalized in 2014	Dec-15			
NYSEG Gas Operations Departmental	\$	765	\$	500	\$	265	More tools required for Gas Operations projects than planned	Dec-15			
Other Gas Projects See Schedule D-2	\$	1,592	\$	487	\$	519	Additional funds spent on emergent projects.	Various			
Mobile Radio Project - Gas Portion	\$	117	\$	610	\$	(494)	Variance is due to rejection of key frequency applications by Industry Canada.	Dec-15			
Fleet - Gas Portion	\$	1,822	\$	738	\$	1,084	Additional Light Duty vehicles purchased in 2015	Various			
Smarter Workplace - Gas Portion	\$	800	\$	295	\$	505	Additional scope added	Dec-15			
IT SAP Unification - Gas Portion	\$	524	\$	352	\$	172	Labor costs higher than planned.	Sep-15			
Security - Gas Portion	\$	953	\$	342	\$	612	More work on System Cutover in 2015 than planned to offset RG&E 89 East Ave lobby project schedule	Various			
Other Common Projects - Gas Allocation See Schedule D-1	\$	1,889	\$	2,074	\$	(251)	Less work done in IT and General Services vs. plan.	Various			
Total	\$	57,219	\$	50,599	\$	6,619					

RG&E - Gas Capital Investment (\$000s) December Results											
Project		YTD Actuals		YTD Plan	YT	) Variance	Variance Explanation - ± 10% of Annual Plan	In Service Date			
RG&E Leak Prone Main Repl Program	\$	13,987	\$	10,843	\$	3,144	Costs per main replacement higher than planned	Dec-15			
RG&E Leak Prone Srv Repl Program	\$	1,643	\$	2,174	\$	(531)	Variance is due to market-wide material shortages that caused delays in progression of work	Dec-15			
RGE Government Jobs	\$	430	\$	667	\$	(236)	Fewer required municipal jobs than anticipated in 2015	Dec-15			
RGE New Services	\$	6,076	\$	3,144	\$	2,932	More work than planned.	Dec-15			
RGE Dist Mains New Business	\$	1,614	\$	2,033	\$	(419)	Fewer required customer driven main jobs than anticipated for year.	Dec-15			
Empire West \ Chili Gate Station	\$	5,439	\$	5,895	\$	(457)		Nov-15			
Buffalo Rd RS Rebuild	\$	673	\$	415	\$	258	Higher costs were incurred for additional inspection services, tapping and stop-off services, additional engineering and additional materials costs	Dec-15			
Inner Loop Project	\$	826	\$	980	\$	(154)	Project costs less than planned.	Dec-15			
CM4 Gas In-line Insp Equip Proj	\$	508	\$	-	\$	508	Emergent pipeline inspection not included in plan.	Dec-15			

RG&E - Gas Capital Investment (\$000s) December Results											
RGE CAPEX Meter Services	\$	1,655	\$	3,122	\$	(1,467)	Portion of meter installations were drawn from stock that was capitalized in 2014	Dec-15			
Other Gas Projects See Schedule D-2	\$	2,118	\$	1,429	\$	689	Acceleration of projects relative to plan	Various			
Security - Gas Portion	\$	901	\$	1,724	\$	(823)	Less work on System Cutover in 2015 than planned due to 89 East Ave lobby project schedule change	Various			
Fleet - Gas Portion	\$	1,405	\$	1,660	\$	(255)	Variance is due to delays in light duty vehicle purchases.	Various			
Smarter Workplace - Gas Portion	\$	660	\$	261	\$	399	Additional scope added	Dec-15			
Scottsville Rd 2nd Floor - Engineering Office Reconfiguration	\$	779	\$	-	\$	779	Project not in original capital investment plan.	Dec-15			
Other Common Projects - Gas Allocation See Schedule D-1	\$	2,803	\$	2,956	\$	(136)		Various			
Total	\$	41,534	\$	37,303	\$	4,232					

### Schedule D-1 2015 Gas Common NYSEG Gas

### (\$000)

Project	2015 Actuals			2015 Plan
IT PROJECTS - OTHER	\$	613	\$	995
FACILITES - MINOR PROJECTS	\$	291	\$	138
PLATTSBURGH - HEATING FUEL CONVERSION	\$	248	\$	165
Global Network SAP PH2	\$	137	\$	-
IUSA_13_APP_SAP WMS MAM REPLACEMENT	\$	131	\$	55
Other Common Projects less than \$100K - Gas Allocation	\$	469	\$	-
Total	\$	1,889	\$	1,353

### Schedule D-1 2015 Gas Common RG&E Gas

#### (\$000)

Project	2	015 Actuals	2015 Plan
IT PROJECTS - OTHER	\$	688	\$ 1,069
FACILITES - MINOR PROJECTS	\$	524	\$ 354
UNIFIED SAP PROJECTS	\$	450	\$ 295
REG Telecom Automation	\$	284	\$ 280
RGE - FILLMORE ROOF	\$	175	\$ -
EAST AVE - UPGRADE CHILLER	\$	172	\$ 145
Global Network SAP PH2	\$	121	\$ -
IUSA_13_APP_SAP WMS MAM REPLACEMENT	\$	109	\$ 46
Other Common Projects less than \$100K - Gas Allocation	\$	282	\$ 767
Total	\$	2,803	\$ 2,956

#### 2015 Other Gas Projects NYSEG Gas (\$000)

Project	2015	Actuals	201	5 Plan
Broome County Airport-Gas Main and Service Extension	\$	365	\$	-
Replace Croton River Crossing	\$	207	\$	230
NYSEG - Elec Better	\$	132	\$	-
NYSEG Non LP Srv Repl Program	\$	130	\$	-
Gas Tracking System(GTS) to Global SAP Interface - NYSEG	\$	116	\$	-
Other Gas Projects Less than \$100K	\$	643	\$	257
Total	\$	1,592	\$	487

#### 2015 Other Gas Projects RG&E Gas (\$000)

Project	2	015 Actuals	2015 Plan
RGE Dist Main Replacement	\$	731	\$ 350
RGE Reg Mod & Auto Pgm	\$	343	\$ 100
RGE Gas Operations Departmental	\$	265	\$ 120
CM5 Pipeline	\$	252	\$ -
MF60 Southeast, Collett Rd, Roch	\$	191	\$ 350
MF60 Southeast, New Michigan Rd, Roch	\$	187	\$ 270
Gas Tracking System(GTS) to Global SAP Interface - RG&E	\$	101	\$ -
Other Gas Projects Less Than \$100K	\$	48	\$ 239
Total	\$	2,118	\$ 1,429



# New York State Electric & Gas Corporation Rochester Gas and Electric Corporation Annual Capital Investment Report Schedule E

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# STATUS OF THE AUBURN TRANSMISSION PROJECT

NYSEG, in collaboration with National Grid (NGRID), has jointly filed a supplemental application for an Article VII Certificate of Environmental Compatibility and Public Need for the Auburn Transmission Project (the "Project") - a new 14 mile, 115kV line from Elbridge Substation (National Grid) to State Street Substation (NYSEG) - in November 2013.

Conceptual engineering packages have been completed. Currently detailed engineering is being developed for transmission line and substations. This will be completed by June 2016.

NYSEG plans to procure materials and supplies for the Project that will allow for construction to begin in compliance with an Article VII Certificate issued by the NY PSC, effective February 25, 2016.

NYSEG and National Grid have determined that the NYISO requirements for a System Impact Study do not apply to the Project due to its low impact on power transfers. The Project will be included in NYSEG's Local Transmission Plan for any studies that include the proposed in-service date of June 2016.

NYSEG continues to work with DPS Staff, NYISO Planning, and National Grid to analyze and review long-term transmission options that resolve the on-going Cayuga Generation Mothball issues, over and above the original scope for the Project. Additional NYSEG and/or National Grid transmission option scope associated with the Cayuga Generation Mothball issue may increase the cost and scope of the supplemental Article VII application.

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