March 1, 2012

**VIA ELECTRONIC SERVICE**

Honorable Jaclyn A. Brilling
Secretary
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 Brilling:

Pursuant to Section X.B of the Joint Proposal approved by the New York State Public Service Commission's Order Establishing Rate Plan, 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 607.762.8710.

Respectfully submitted,

Lori A. Cole
Manager - Regulatory & Tariffs
Rates and Regulatory Economics

Attachment

# New York State Electric & Gas Corporation

# Rochester Gas and Electric Corporation

# 2011

# Annual Capital Expenditures Report

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

March 1, 2012

This report is in response to the requirements set forth on page 20 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."*

Attached are the following schedules that include the required information for calendar year 2011:

- 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;

- Schedule B provides a detailed status report for each Electric and Gas project listed on Schedule A;

- Schedule C is the December 2011 Variance Report with capital expenditures during 2011 and showing Electric project variances as well as listing Electric projects that were added to or removed from those listed on Appendix L. The report differs slightly from that previously provided to Staff as we have given visibility to some additional projects;

- Schedule D is in a similar format to Schedule C and provides the variance explanations for Gas projects that meet the requested criteria. The report differs slightly from that previously provided to Staff as we have given visibility to some additional projects; and

- Schedule E provides a status for the Auburn 345kV Source project.

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

**New York State Electric & Gas Corporation**
**Rochester Gas and Electric Corporation**
**Annual Capital Expenditures Report**
**Schedule A**
**March 1, 2012**

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

**Electric projects with actual investment greater than $1M**

**RG&E:**

1 - Cablecure
2 - Distribution Pole Replacement Program (DPRP)
3 - DC Pilot Wire System
4 - East Ridge Road Electric Facilities Relocation
5 - Jefferson Avenue Electric Facilities Relocation
6 - New 115kV Transmission Line (Station 13A to Station 135)
7 - New Station 137
8 - Station 424 - New Line
9 - New Downtown 115kV Source – Station 23
10 - Rochester Area Reliability Project (345kV Source and 115kV Transmission Line)
11 - RTU Program
12 - Station 124 New Phase Shifter Transformer
13- Station 124 Static VAR Compensator
14 - Station 80 Replace 1T and 3T Transformers
15 - Sectionalizer Replacement Program
16 - Substation Breaker Replacement Program
17 - University Avenue (Union – Goodman) – Electric Facilities Relocation
18 - Security Projects
19- Station 23 – New Transformer and 11kV Swithgear
20- Station 5 - Units 1,2, 3 Upgrades
21 - Station 5 Tunnel Relining Project

**NYSEG:**

22 - Line 807 Conversion to 115kV
23- Ithaca Reinforcement Project
24- Security
25- Corning Valley Upgrade
26- Replace Failed Bank #1 at Watercure Road Substation
27- Moraine Road - Add two 115kV Breakers
28- Bulk Spare Transformer
29- DOE Stimulus Program-Capacitor Banks
30- Mechanicville Reinforcement Project
31- Watercure Road Substation - Install 2nd 345kV Transformer
32 - South Perry New 230kV Transformer
33 - Brewster RTU Project
34 - Greenidge Substation Grounding Bank
35 - Distribution Pole Replacement Program
36 - Sectionalizer Replacement Program

37 - Mobile Radio Project
38 - OMS / GIS Project
39 - Energy Control Center Map Board Replacement
40- Rainbow Falls Fish Bypass and Trash Rack Project

**NYSEG / RG&E**
41 - Energy Control Center

**Gas projects with actual investment greater than $500,000**.

**RG&E:**
42- Southwest 60 System Improvement
43- Andrews Street and University Avenue Gas Main Replacement
44- Ridgeway Avenue Highway Improvement
45- Transmission Casing Replacement Program
46- Winton Road South at Route 590 – Install 20" Main
47- Leak Prone Main Replacement Programs
48- Gas Regulator Station Replacement Program
49- Byron Bergen CSD New Gate Station

**NYSEG:**
50- Canandaigua Cast Iron Main Replacement
51- Canandaigua to Rushville Gas Main Installation
52- Seneca West Pipeline Interconnect to Elmira
53- Leak Prone Main Replacement and Services Replacement Programs
54- Transmission Casing Replacement Program
55- SCADA System Migration Project

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

March 1, 2012

# 1 - CableCure

As of December 31, 2011

## Project Overview

This work involves injecting an insulating fluid into the stranding of aged XLP URD primary distribution cables that permeates into the insulation. These cables were installed between 1970 and 1985 and have since experienced a high frequency of premature insulation failures. All cables identified for treatment reside within the RG&E Central District (predominately in the Monroe County NY area).

The objective of this project is to extend the useful life of the XLP cables at least 20 years. The most tangible benefit derived from this program is the 20 year life extension. An added benefit contained within the time extension is it allows for the planning of a systematic XLP cable replacement program and spreading the related cable replacement costs over time. A further benefit is to reduce the frequency of cable faults in the treated cable, thereby improving reliability.

## Project Activities / Key Accomplishments in 2011

- From July 19, 2011 thru December 31, 2011, CableCure evaluated 278,900 ft. of XLP URD cable and successfully treated 235,200 ft. of XLP URD cable.
- Capital investment was $1.8 million.

## Project Activities Planned for 2012

- Continue work on priority XLP URD cable.
- Successfully treat approx 250,000 ft of XLP URD cable.

# 2 – Distribution Pole Replacement Program (DPRP)

As of December 31, 2011

**Project Overview**

Replace distribution poles 60 years old and older.

RG&E has approximately 226,000 wood distribution poles and of this number, about 21,000 are greater than 60 years old. It has been shown that after a pole reaches 60 years old, the probability of it being defective rises significantly. This statistic is supported not only by industry data but also by actual inspection results from programs such as past inspect and treat programs at NYSEG and RG&E and the recent inspection data from Central Maine Power Company.

**Project Activities / Key Accomplishments in 2011**

- Replaced 350 poles
- Capital investment was $1.3 million.

**Project Activities Planned for 2012**

- Spend $2,000,000 to replace poles across RG&E's territory under this program. Approximately 1,000 poles, assuming replacement cost of $1,855.

# 3 – DC Pilot Wire System

As of December 31, 2011

**Project Overview**

The purpose of this project is to begin implementation of a prioritized, sequential, multi-year replacement of the pilot wire cables. State of the art fiber optic cable and associated multiplexing equipment will be substituted for the copper pilot wire equipment. The traditional electromechanical pilot wire relays (HCB and CPD) will be replaced with fiber optic interface compatible equivalents. The fiber optic cable installations will also facilitate further communications enhancements for inter-substation communications purposes.

RG&E's pilot wire system is 60-70 years old, and consists of approximately 100 separate pilot wire routes which interconnect many critical substations. The City of Rochester's entire downtown electrical network depends upon the pilot wires to provide safe and reliable service. The main purpose of the pilot wire system is to provide reliable, high speed communications paths to activate pilot wire relays in order to rapidly clear faults. The existing paper insulated copper cables have been steadily deteriorating to the point where several of the pilot wire loops have been placed out of service. These pilot wire relays are electromechanical and do not contain event recording that modern microprocessor have so RG&E has no downloadable information from these relays to assist in system event analysis. These relays are also obsolete so spare parts are not available. Under these conditions the reliability of these relays is very poor.

**Project Activities / Key Accomplishments in 2011**

- Conceptual Engineering development started in June 2011 to identify substations containing electromechanical relays, specify microprocessor solid state relay replacements and specify fiber optic communications equipment for replacement.
- Conceptual Engineering packages were developed containing Engineering Notes, SPR, circuit drawings, demolition drawings, panel drawings, single line diagrams, and communications drawings as a basis for the preparation of an RFP to procure the Design Engineering for substation relay replacement with the addition of communications equipment for 26 pilot wire substations. Remainder of pilot wire substations will be addressed by other projects. Fiber optic cable installation will be addressed by other projects.
- Capital investment was $1.0 million.

**Project Activities Planned for 2012**

- Complete Conceptual Engineering
- Issue RFP and award contract for Design Engineering
- Design Engineering estimated to be completed in 18 months.

# 4 – East Ridge Road Electric Facilities Relocation

As of December 31, 2011

**Project Overview**

The Monroe county and the Town of Irondequoit are planning on improving Ridge Road East between Culver Road and East City Line (Seneca Road) by full reconstruction of the highway and intersections.

RG&E's underground and overhead electric facilities are in conflict with the improvements. RG&E must relocate approximately 30 poles affecting six 4kV circuits with equipment, transfer and install new overhead primary and secondary conductors, transfer duct system with cables to new poles. Install new duct, rebuild six manholes, handholes, install a 12 way, nine way and six way 5" duct systems, remove abandon duct, replacing head end cables while installing 40,000 feet of distribution and 11,000 feet of transmission cables with equipment. Relocate and remove street lighting facilities.

**Project Activities / Key Accomplishments in 2011**

- Installed 2/3rds of the 2.5 mile duct system and manhole work.
- Installed underground cables for: two 34kV, one 11kV & eight 4kV circuits in new duct system from Station 103.
- Completed pole line rebuild and transfer of circuit conductors.
- Capital investment was $1.9 million.

**Project Activities Planned for 2012**

- Complete the circuit replacements for Station 103
- Complete the 17 additional circuits at Stations 81 & 40.
- RG&E subway will complete their work by August of 2012 and removals by December of 2012.
- RG&E underground will then have all circuits in and running as well as removals from all three stations in the limits of the project.
- There are seven cable pole transfers that will be coordinated with this phase of construction.

# 5 - Jefferson Avenue Electric Facilities Relocation

As of December 31, 2011

**Project Overview**

The City of Rochester is undergoing several improvements to Jefferson Avenue from Plymouth Avenue North to Main Street.

RG&E's underground and overhead electric facilities are in conflict with the improvements. A new 10-way 5" conduit system is being added to an existing system on the west side of Jefferson Avenue along with 15 manholes on the side streets, and the shallow and old conduit system in the middle of the street is being removed or abandoned. 45 poles are being relocated for sidewalk and curb adjustments. 17 poles will be eliminated due to the City of Rochester's purchase of the street lighting system.

**Project Activities / Key Accomplishments in 2011**

- In 2011 the new conduit system, with manholes was installed. All the new poles were installed, and cable work was completed, with the exception of circuit shutdowns.
- Capital investment was $2.3 million.

**Project Activities Planned for 2012**

- Complete required circuit shutdowns by March 2012
- Complete required manhole removals and conduit abandonments by April 2012.
- Complete 100% of project by April 2012.

# 6 - New 115kV Transmission Line – Station 13A to Station 135

As of December 31, 2011

**Project Overview**

Certain double contingency outages at Station 13A will result in Line 909 being overloaded. The scope of work includes installing a new bay at Station 135, utilization of an existing bay at Station 13A, the installation of a new breaker, and constructing a new 115kV transmission line between the 2 substations.

**Project Activities / Key Accomplishments in 2011**

- Work was completed June 2011
- Capital investment was $1.3M

**Project Activities Planned for 2012**

- Project completed in 2011

# 7 - New Station 137

As of December 31, 2011

**Project Overview**

This project relocates the 11kV and 34kV equipment from the Station 3 switch house and the current 34kV switchyard to the prepared site.

**Project Activities / Key Accomplishments in 2011**

- Completed all project work and placed station in-service November, 2011
- Capital investment was $3.2 million

**Project Activities Planned for 2012**

- Project completed in 2011

# 8 - Station 424 - New Line

As of December 31, 2011

**Project Overview**

This project will provide a redundant transmission source at Station 424 and four surrounding distribution substations and will support load growth.

This project encompasses work at two substations and 115kV and 34.5kV transmission work. Two 100 MVA LTC transformers, four 2000 A breakers, and a new 115kV line terminal are being installed at Station 424. Station 135 will be expanded for a new 115kV line terminal designated Line 936 as well as converting two existing bays to breaker and a half schemes. 34.5kV Circuit 789 was originally constructed for 115kV construction and will be converted to provide a new 115kV line between Station 135 and Station 424. Circuit 789 will be rebuilt on an existing ROW.

**Project Activities / Key Accomplishments in 2011**

- Work was completed December 2011
- Capital investment was $3.6M million

**Project Activities Planned for 2012**

- Project completed in 2011

# 9 - New Downtown 115kV Source – Station 23

As of December 31, 2011

**Project Overview**

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. Swap lines 901 and 902 from Station 82 to Station 33 so that the Line 901 comes out of Station 82 and Line 902 comes out of Mortimer Station. Re-conductor Line 901 to 400MVA. Add a phase-shifting transformer on Line 920 at Station 42. Relocate 11kV phase-shifting transformer from Station 23 to new Station 137.

Add two 115-34.5kV transformers at Station 23. Run a 34.5kV from each new transformer to feed the bus at new Station 137.

**Project Activities / Key Accomplishments in 2011**

- Completed Conceptual Engineering
- Ordered GIS for 115kV, 34.5kV and 11.5kV
- Ordered transformers for 115/11.5kV and 115/34.5kV
- Continued with Detailed Engineering for 901/902 swap work
- Completed Detailed Engineering for Station 42 PST Foundation and Oil Containment
- Started construction on Station 42 PST Foundation and Oil Containment
- Capital investment was $5.6 million.

**Project Activities Planned for 2012**

- Issue RFP for Overall Detailed Engineering
- Complete Detailed Engineering
- Complete Construction on Station 42 PST Foundation and Oil Containment
- Install and assemble new 115kV PST at Station 42
- Engineer and Construct Control House Expansion at Station 42
- Engineer Fiber Optic Network
- Complete Detailed Engineering for 901/902 swap work
- Order and install equipment for 901/902 swap work
- Relocate 11kV PST from Station 23 to Station 137
- Install one 115/11.5kV power transformer at Station 23
- Install 11.5kV GIS at Station 23

# 10 – Rochester Area Reliability Project (345kV Source and 115kV Transmission Line)

As of December 31, 2011

**Project Overview**

Add new 345kV breaker and a half substation with two 250MVA 345/115kV transformers with LTC, one 115kV 300/350MVA line from new station to Station 418, and one 115kV 300/350MVA line to Station 3 115kV.

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 #34, 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 condition.

**Project Activities / Key Accomplishments in 2011**

- Developed & filed Article VII Application (filing date 9/30/11)
- Identified needed property rights
- Held pre-application filing meetings with the DPS and Staffs of the NYDEC and Agriculture and Markets
- Held project introductory meetings with the local government officials and open house meetings for the public in the City of Rochester and the Towns of Henrietta, Greece and Gates
- Capital investment was $1.8 million

**Project Activities Planned for 2012**

- Support efforts to allow for PSC Approval of the Article VII
- Finalize Facilities Study and negotiate Interconnection Agreement with NYPA
- Progress detailed design sufficient to file EM&CP's in 4$^{th}$ quarter
- Purchase options on needed property rights
- Procurement of long lead time equipment

# 11 –RTU Program

As of December 31, 2011

**Project Overview**

Purchase & install Remote Terminal Units (RTU) at multiple RG&E substations to expand RG&E's supervisory control and data acquisition.

Currently RG&E's radio controlled RTU's are exceeding band width capacity. This directly impacts the ability to expand SCADA functionality within its system and the ability to perform the NYISO directed automatic 5% voltage reduction.

**Project Activities / Key Accomplishments in 2011**

- Detailed project scope definition and project estimation work completed for the 12 stations in the RTU program.
- Backhaul and supporting fiber optic work required for the upgraded RTU system identified and detailed scopes completed.
- Preliminary engineering completed for all 12 stations.
- Material procurement for relays and other communication equipment completed.
- Capital investment was $2.7 million.

**Project Activities Planned for 2012**

- Complete all remaining material procurement activities.
- Complete detail engineering.
- Create a detailed outage schedule.
- Obtain all building permits.
- Start installation for RTU upgrades.

# 12 - Station 124 –
# New Phase Shifter Transformer

As of December 31, 2011

**Project Overview**

Install a +/-20% phase shifter on each of 115kV Circuits 911 and 932 at Station 124 to control power flow and limit the amperage on these circuits to below their capacity ratings.

Due to system source increases, such as that from increasing Ginna Station's output from 500MW to 600MW, power flow on Circuits 911 and 932 continues to increase to levels which may compromise the integrity of the underground pipe cables. The installation of the phase shifters will provide a control mechanism to force the flow of energy away from Circuits 911 and 932 and onto other circuits which have the necessary capacity margin.

**Project Activities / Key Accomplishments in 2011**

- Continued detailed engineering for Station 124 expansion/ phase shifting transformers installation and for remote station locations.
- Submitted Army Core of Engineers (ACOE) and Department of Environmental Conservation (DEC-NY) permit applications for approvals.
- Submitted Town of Penfield Planning and Zoning permits.
- Continued major material procurement (i.e. breakers, disconnect switches etc)
- Capital investment was $5.7 million.

**Project Activities Planned for 2012**

- Complete engineering for Station 124 and remote station locations.
- Complete material procurement.
- Obtain all necessary easements.
- Start project construction.
- Install phase shifting transformers.

# 13 - Station 124 – Static VAR Compensator

As of December 31, 2011

**Project Overview**

Add a +200 -100MVAR Static VAR Compensator (SVC) on the 115kV bus.

Station 42 uses approximately 60 MVAR of reactive supply and is a low point for voltage in the Rochester area. Dynamic voltage support is required for voltage transient stability for large contingencies which includes the tripping of Ginna Nuclear Power plant.

Adding the dynamic support where it is needed (Station 124) will provide significant voltage stability to the entire Rochester area.

**Project Activities / Key Accomplishments in 2011**

- Awarded contract for the Static Var Compensator (SVC).
- Started engineering for the SVC major equipment.
- Capital investment was $8.5 million.

**Project Activities Planned for 2012**

- Complete engineering for SVC
- Start site construction for the SVC and associated equipment.

# 14 - Station 80- Replace 1T and 3T 345kV Transformers

As of December 31, 2011

**Project Overview**

Replace transformers 1T and 3T with new 345-115kV autotransformers with LTC.

**Project Activities / Key Accomplishments in 2011**

- Completed Conceptual Engineering
- Finalized transformer design with the vendor
- Capital investment was $3.4 million.

**Project Activities Planned for 2012**

- Complete Detailed Engineering
- Replace 3T transformer and associated bus section

# 15 – Sectionalizer Replacement Program

As of December 31, 2011

**Project Overview**

Replace all sectionalizers on the RG&E electric distribution system with new electronic reclosers and connect the reclosers to the ECC.

RG&E will be replacing 50 sectionalizers throughout RG&E's electric distribution system. These installations are primarily located on 12.5kV distribution circuits with high customer counts and long line exposures. As part of RG&E's initiatives to improve distribution system reliability, this project will replace the existing sectionalizers with electronically controlled reclosers. Every recloser installation is planned to include an RTU to provide monitoring and control capability to the RG&E ECC.

**Project Activities / Key Accomplishments in 2011**

- Completed engineering for the identified 50 locations to replace sectionalizers,
- Reclosers were purchased and delivered.
- Capital investment was $1.1 million.

**Project Activities Planned for 2012**

- Complete the replacement of all 50 sectionalizers with electronically controlled reclosers

# 16 – Substation Breaker Replacement Program

As of December 31, 2011

**Project Overview**

Replace 50 circuit breakers based on recently completed condition assessment.

When RG&E's 2011 circuit breaker replacements are completed, RG&E will have 1,550 circuit breakers in service. A condition assessment performed by the Asset Management group finds 99 circuit breakers to be in Very Poor health and 368 circuit breakers to be in Poor Health. Additionally, 120 circuit breakers are expected to transition from Fair Health to Poor / Very Poor Health over the next five years. Replacement of these Poor / Very Poor Health circuit breakers will improve electric delivery system reliability and safety.

**Project Activities / Key Accomplishments in 2011**

- Technical data sheets developed for fifty replacement breakers.
- Purchase Orders for the fifty breakers were issued.
- Capital investment was $1.2 million.

**Project Activities Planned for 2012**

- Develop Scope Definition for each breaker replacement
- Complete conceptual and detailed engineering
- Start Breaker installations

# 17 – University Avenue (Union – Goodman) – Electric Facilities Relocation

As of December 31, 2011

**Project Overview**

The City of Rochester is undergoing several improvements to University Avenue from Union Street to Goodman Street.

RG&E's underground and overhead electric facilities are in conflict with the improvements. RG&E will replace or relocate 17 manholes, 22 hand holes, and 15,000 feet of conduit. Four circuits (34,000 feet of cable) will be relocated into a newer and deeper conduit system.

**Project Activities / Key Accomplishments in 2011**

- Completed the replacement/relocation of all electric conduit, manhole and cable systems in conflict with the highway project with the exception of one manhole.
- Capital investment of $1.2 million.

**Project Activities Planned for 2012**

- Rebuild one electric manhole
- Adjust all manhole covers within the project limits to final pavement elevation.

# 18 – Security Projects

As of December 31, 2011

**Project Overview**

This project has multiple facets covering numerous aspects of security. Included are substation perimeter protection and fencing upgrades.

**Project Activities / Key Accomplishments in 2011**

- Install perimeter protection, fencing, video, and other security measures at various locations.
- Capital investment was $2.3 million.

**Project Activities Planned for 2012**

- Replacement of access control security systems providing standardization between NYSEG and RG&E.
- Upgrade of video alarming equipment.
- Upgraded cameras to include thermal capability at bulk power substations and other key critical infrastructure locations.
- Security system installation at Hydro Generating Facilities.
- Continued upgrades and replacement of physical barriers and fencing at key critical facilities.

# 19- Station 23 - New Transformer and 11kV Switchgear

As of December 31, 2011

**Project Overview**

Replace two 115kV transformers and four sections of 11.5kV switchgear

Transformer replacements are due to aging infrastructure, 1T and 2T transformers are leaking and are also reaching end of life. Two of the four bus sections of 11kV are overdutied and need to be upgraded for proper fault current ratings. There are six overdutied breakers on Bus 1 and six on Bus 2 (all are approximately 125% overdutied). Bus 3 and Bus 4 have all 11kV breakers at 96% of rated capacity.

**Project Activities / Key Accomplishments in 2011**

- Ordered GIS 11.5kV switchgear
- Ordered transformers for 115/11.5kV.
- Capital investment was $1.6 million

**Project Activities Planned for 2012**

- Install one 115/11.5kV power transformer
- Install 11.5kV GIS switchgear

# 20 - Station 5 – Units 1, 2, 3 Upgrades

As of December 31, 2011

**Project Overview**

Unit 1 and Unit 2 turbine generators at Station 5 were installed circa 1917 and Unit 3 was installed circa 1927. Except for the turbine runners that were replaced in the 1980's, the units are original plant equipment and need to be completely rebuilt to maintain expected efficiency, reliability and availability.

This project completely rebuilds the turbine-generating units. In general, each unit will be completely disassembled, all end-of-life components will be replaced with newly designed components and equipment such as wicket gates, greaseless stem bushings, turbine guide/shaft bearings, crown and curb seal rings and upper generator guide bearing that are designed, manufactured and installed according to specifications. Upon re-assembly and when the Station returns to service, the completely rebuilt turbine generator assemblies will be tested and performance verified.

This project is necessary to return the units to safe and reliable service and for providing an estimated 219,000 MWhrs/year of renewable energy for the direct benefit of RG&E customers.

**Project Activities / Key Accomplishments in 2011:**

Unit 1 Turbine Generator Assembly

1. Reassembled turbine generator
2. Machined embedded turbine (steel) components;
3. Received new/rebuilt turbine components;
4. Machined stay vanes;
5. Reassembled unit with new components (wicket gates, bushings, bearings, etc);

Unit 2 and Unit 3 Turbine Generator Assemblies

1. Evaluated bids and awarded contract for disassembly, major rebuild, new turbine components (wickets, bearings, bushings, shafts, etc) and reassembly;
2. Mobilized contractor:
3. Disassembled units;
4. Shipped turbine components off site for assessment, overhaul and manufacture of new components;
5. Completed Unit 2 turbine component assessment;
6. Ordered new turbine shaft for Unit 2 (radial cracking);
7. Ordered new wicket gates for Unit 2;
8. Machined Unit 2 turbine components; and
9. Began Unit 2 new component design.

- Capital investment was $4.6 million

**Project Activities Planned for 2012:**

1. Complete machining of Unit 2 turbine components incorporating new component design and prepare for reassembly;
2. Complete assessment of Unit 3 turbine components;
3. Design and manufacture Unit 2 upper generator guide bearing;
4. Design and manufacture Unit 3 thrust bearing with rotor lift capability;
5. Design and manufacture wicket gates for Unit 3;

6. Fabricate and install generator sole plates;
7. Machine Unit 3 turbine components incorporating new component design and prepare for reassembly;
8. Machine embedded turbine components on Unit 2 and Unit 3;
9. Machine Unit 2 and Unit 3 stay vanes for improved water flow and efficiency;
10. Install new Unit 3 turbine generator sole plates;
11. Rebuild or overhaul Unit 2 and Unit 3 stator, field and exciter;
12. Complete reassembly or align Unit 2 and Unit 3 in preparation for Station 5 return to service in January 2013.
13. Upon return to service, test and verify performance of each unit; and
14. Complete project documentation and closeout project.

# 21 - Station 5 - Tunnel Relining Project

As of December 31, 2011

**Project Overview**

The Station 5 Tunnel Relining Project installs a new lining system inside the existing system to replace deteriorated and end of life areas of the tunnel/water conveyance system that was originally installed in 1917.

This betterment project was originally planned to be completed in three phases beginning in 2007. During the initial tunnel entry in August 2007, a 125 foot long partial liner collapse was found in a section of the tunnel. As a result, the entire underground water conveyance system was inspected and made secure for safe entry and construction. The partial liner collapse area was then stabilized and prepared for tunnel relining. In addition, a series of 16 engineer/safety inspections of the tunnel system were performed which identified additional deteriorated spots in the existing liner.

Due to the construction being performed in a confined space approximately 130 feet below grade, as well as the existing contamination impacts that have been in the rock strata since the early 1900s and entering the tunnel through cracks in the existing liner, this project requires special construction techniques and safety procedures, processes and personal protective equipment (PPE) such as:

- protective clothing (Level C protection per OSHA) and other specialized PPE such as respirators;
- full time on site response/rescue personnel;
- continuous air monitoring;
- continuous water monitoring and treatment;
- limiting the number of personnel in tunnel during certain operations; and
- limiting the amount of time personnel can work in the tunnel.

The current project scope generally includes relining the entire tunnel/water conveyance system along with numerous structural reinforcements to assure the long term integrity of the tunnel. The project is necessary to return the station to safe and reliable service and for providing an estimated 219,000 MWhrs/year of renewable energy for the direct benefit of RG&E customers.

**Project Activities / Key Accomplishments in 2011:**

1. Completed interim construction support including preparation of Station 5 tunnel system. Work included but not limited to RG&E and contractor performing detailed liner inspection, tunnel infrastructure/support system commissioning and liner installation preparation;
2. Completed construction re-bidding and awarded contract on 6/22/2011 to new contractor (low bidder);
3. Constructed a 30 foot power tunnel mock-up on-ground for tunnel relining contractor to perform test pour and confirm safety and construction processes;
4. Engineer of Record performed regular/detailed inspections of tunnel system;
5. Previous contractor demobilized and new contractor mobilized project site and tunnel system;
6. Performed regular structural monitoring of power tunnel (for safety of personnel working in tunnel system);
7. Prepared power tunnel slip form surfaces for use in the underground environment;
8. Completed testing of temporary rock bolts in power tunnel;

9. Started demolition of existing intake elbow to allow for installation of new intake elbow design;
10. Installed approximately 720 linear feet (432 tons) of re-steel in power tunnel section;
11. Constructed and installed approximately 600 linear feet (out of 1,335 feet) of new concrete tunnel invert;
12. Demolished Unit 2 and Unit 3 existing penstock transition zone (PTZ) invert and completed preparation for new designed steel re-enforced concrete inverts;
13. Installed rock anchors in Unit 2 and Unit 3 PTZ; and
14. Performed on-going inspection and observation of construction activities by contractor to confirm new tunnel lining system is installed per Engineer of Record design.

- Capital investment was $20.3 million

**Project Activities Planned for 2012:**

1. Perform on-going inspections and observations of construction activities by contractor to confirm new tunnel lining system is installed per Engineer of Record (designer);
2. Install new steel re-enforced shotcrete intake shaft lining;
3. Complete demolition of intake elbow and installation of new steel reinforced concrete intake elbow;
4. Complete installation of re-steel in power tunnel, approximately 615 feet;
5. Complete installation of new power tunnel liner invert, approximately 735 feet;
6. Place and assemble two 30 foot slip forms in power tunnel for use in placing / installing upper half of concrete liner in power tunnel;
7. Construct steel re-enforced concrete power tunnel liner (upper half);
8. Perform consolidation grouting of new liner to existing overhead rock strata;
9. Construct steel re-enforced lining system in Tunnel Transition Area (TTA);
10. Construct steel re-enforced Surge Tank Riser Shaft (STRS) liner;
11. Construct new Power Transition Zone (PTZ) liner;
12. Reline Units 1, 2 and 3 penstock sections;
13. Begin demobilization of equipment, material and support infrastructure in the tunnel system and prepare to re-water tunnel for operation/plant return to service in January 2013.
14. Complete project documentation and closeout project;

# 22 - Line 807 Conversion to 115kV

As of December 31, 2011

**Project Overview**

Convert 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 2011**

- The project is currently under construction and is approximately 50% complete.
- Relay construction work progressed at Wood Street.
- POs for relay panels for Katonah and Wood Street were released.
- Capital investment was $1.45 million.

**Project Activities Planned for 2012**

- Perform work at Carmel Substation.
- Issue an RFP for Conceptual and Detailed Engineering by end of February.

# 23 - Ithaca Reinforcement Project

As of December 31, 2011

**Project Overview**

The project consisted of constructing a new 345/115kV substation in the vicinity of the existing Lapeer Switching Station. The new substation, named Clarks Corners Road Substation, consists of two 345/115 kV, 200 MVA, Load Tap Changers (LTC) transformers, a 345 kV ring bus, and a 115 kV bus arranged as a breaker and 1/2. The 345 kV ring bus connects to the existing 345 kV line #36 between Oakdale and Layette. The existing 115 kV line #947 between Etna and the new Clarks Corners Road substation has been rebuilt/reconductored and connected to the 115 kV bus.

A new 15-mile, 115 kV line has been constructed from Etna to the new Clarks Corners Road Substation and connected to the 115 kV bus.

**Project Activities / Key Accomplishments in 2011**

- Environmental Remediation per the Environmental Management & Construction Plan.
- Capital investment was $1.52 million.

**Project Activities Planned for 2012**

- Continued environmental assessment per the Environmental Management & Construction Plan.

# 24––NYSEG Security

As of December 31, 2011

**Project Overview**

This project had multiple facets covering numerous aspects of security. Included were substation perimeter protection and fencing upgrades.

**Project Activities / Key Accomplishments in 2011**

- Install perimeter protection, fencing, video, and other security measures at various locations.
- Capital investment was $3.0 million.

**Project Activities Planned for 2012**

- Replacement of access control security systems providing standardization between NYSEG and RG&E.
- Upgrade of video alarming equipment.
- Upgraded cameras to include thermal capability at bulk power substations and other key critical infrastructure locations.
- Security system installation at Hydro Generating Facilities.
- Continued upgrades and replacement of physical barriers and fencing at key critical facilities.

# 25 - Corning Valley Upgrade

As of December 31, 2011

**Project Overview**

This project consists of constructing and modifying the following:

- Build a new 230kV/115 kV substation (tentatively named "Stoney Ridge Substation") at the 230kV Line 68 (Meyer – Hillside).
- Build a new 9.6-mile overhead 115 kV line from Stoney Ridge Substation to West Erie Avenue Substation. The new line will consist of two primary sections:
  - 6.4 miles of single circuit overhead 115 kV line from Stoney Ridge Substation to Sullivan Park
  - 3.2 miles from Sullivan Park to West Erie Avenue Substation. This portion of the line will be double circuited with the 34.5 kV Line 561 (renumbered from 532) to a point east of the Tioga River. From this point the 115 kV line will be single circuit to the West Erie Ave Sub.
- Replace the existing Science Park 34.5kV/12.5kV Substation with a new 115kV/12.5kV substation at Sullivan Park on property provided by Corning, Inc.
  - Replacement of the two 34.5 kV to 480 volt transformers with two 12.5 kV to 480 volt transformers
  - The new 115kV/12.5kV substation at Sullivan Park will have redundant circuits from separate 12.5 kV busses
  - The two feeds from the new 115 kV line will be constructed underground to the new substation location.
- The elimination of the Sullivan Park 34.5kV/12.5kV Substation eliminates the existing terminal points for Lines 532 and 561. Therefore, two new 38 kV circuit breakers will be installed at Campbell Substation; one will terminate the existing Line 532 (Campbell – Bath) and the other will become the new termination point of Line 561 (Campbell – Canada Road/West Erie Ave). The existing 34.5 kV line will continue past the new substation.
- At West Erie Avenue Substation, the new 115 kV transmission line will be terminated on a new substation dead-end structure. Enhancements at West Erie Avenue Substation will be made to accommodate the new 115 kV line.
- Additionally, the increase in 115 kV system short circuits will over-duty two 115 kV oil circuit breakers at Hickling Substation and one at Hillside Substation. These three breakers will be replaced.

**Project Activities / Key Accomplishments in 2011**

- The project was completed and placed in service during 2011.
- Capital investment was $19.4 million.

**Project Activities Planned for 2012**

- Project was completed in 2011.

# 26 - Replace Failed Bank #1 at Watercure Road Substation

As of December 31, 2011

**Project Overview**

Emergency Replacement of Bank #1 at the Watercure Road Substation, as the Bank failed on February 1, 2008. Install a 400MVA, 360-240-36.2kV, LTC transformer at Watercure Road Substation. Remove existing Bank #1.

**Project Activities / Key Accomplishments in 2011**

- Project was complete in prior years.
- Final negotiated milestone payments 5 and 6 were made.
- Insurance proceeds accrual was adjusted.
- Capital investment was $3.0 million.

**Project Activities Planned for 2012**

- Project is complete.

# 27 - Moraine Road - Add Two 115kV Breakers

As of December 31, 2011

**Project Overview**

Convert the 115kV Line 966 terminal at Moraine Road from a single tap of the transmission line to an in and out arrangement with two circuit breakers.

**Project Activities / Key Accomplishments in 2011**

- Completed detailed substation and transmission engineering and design.
- Completed orders and receipt of all substation, transmission, and system protection equipment.
- Completed in-ground construction.
- Completed 80% of above-ground construction.
- Capital investment was $2.4 million.

**Project Activities Planned for 2012**

- Complete substation above-ground, transmission, and SP&C construction and commission substation.
- Place in service in June.

# 28 - Bulk Spare Transformer

As of December 31, 2011

**Project Overview**

Purchase one spare transformer rated 345-115kV, 400MVA.

**Project Activities / Key Accomplishments in 2011**

- Completed Detailed Engineering on the transformer foundation and oil containment system.
- Completed Construction of the transformer foundation and oil containment system.
- Delivered and installed the new HICO transformer onto the new foundation, without fully assembling the unit.
- Capital investment was $1.8 million.

**Project Activities Planned for 2012**

- Fully assemble and Test & Commission the new HICO transformer.
- Close out all project-related activities.

# 29 - DOE Stimulus Program-Capacitor Banks

As of December 31, 2011

**Project Overview**

Install 115KV Capacitor Banks at the following stations: Ashley Rd., three 50 MVAR; Morgan Rd., two 25 MVAR; Ridge Road, two 25 MVAR; Mountaindale, two 25 MVAR; Amawalk, two 30 MVAR; and Big Tree, two 25 MVAR.

**Project Activities / Key Accomplishments in 2011**

- Completed equipment specifications, solicited competitive bids and purchased all Capacitor Bank, Circuit Breaker and Motor Operated Disconnect Switch equipment
- Performed site visits, revised installation locations due to site conflicts and restrictions and advanced detailed engineering for all projects
- Capital investment was $1.5 million.

**Project Activities Planned for 2012**

- Finalize detail engineering for all project locations and issue final drawings for construction.
- Prepare detailed material specifications and procure remaining project equipment including control house, relay protection, steel structure and design material equipment.
- Develop Construction Contract documentation, solicit and award construction contracts, complete all construction activities and place all equipment in-service.

# 30 - Mechanicville Reinforcement Project

As of December 31, 2011

**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 related to the Luther Forest Industrial Park.

**Project Activities / Key Accomplishments in 2011**

- The substation work is in detailed engineering.
- Some major equipment has been purchased, including transformers and 115kV breakers.
- Steel structure RFP was issued, bids received, and a PO will be issued shortly.
- Control house and construction contract RFPs are in process.
- Division Field Engineering is designing the 10 mile double circuit 34.5kV distribution line.
- Capital investment was $1.5 million.

**Project Activities Planned for 2012**

- Issue purchase orders for material and services to begin construction.
- Construct substation and distribution lines.

# 31 - Watercure Road Subtation - Install 2nd 345kV Transformer

As of December 31, 2011

**Project Overview**

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

**Project Activities / Key Accomplishments in 2011**

- Completed Conceptual Engineering and Transformer Foundation Design.
- Capital investment was $1.9 million.

**Project Activities Planned for 2012**

Install transformer foundation and oil spill containment

# 32 - South Perry New 230kV Transformer Project

As of December 31, 2011

**Project Overview**

South Perry Substation is an existing 115/69/34 kV substation. At 115 kV, one 115/34.5kV 33MVA transformer is connected to the 34.5 kV bus. A second transformer at 115/69kV with tertiary 34.5 kV is also connected to the existing 34.5 kV bus. The 69 kV is connected to a breaker which is connected to the Retsoff circuit that is kept closed for National Grid. General scope is to replace existing three single phase transformers with 115/34,5, 56 MVA transformers and add a second 115/34.5 kV transformer. Part of the scope is also to add a new 230/115 kV 225 MVA transformer by forming a three breaker ring bus and connect to Lines 85 and 87.

**Project Activities / Key Accomplishments in 2011**

- Scope definition.
- Capital investment was $1.1 million.

**Project Activities Planned for 2012**

- Complete conceptual engineering.
- Complete Detail Engineering.
- Award long lead items.
- Build foundation pads for transformer.

# 33 – Brewster RTU Project

As of December 31, 2011

**Project Overview**

The Brewster Division has been identified as having poor equipment that is affecting system reliability and operational performance which has resulted in poor CAIDI and SAIFI results. The objective of this project is to replace or upgrade equipment and move from manual operation to automated control via the Energy Control Centre. The project will improve technical performance, system reliability and operational control.

There are 11 substations involved that will have remote control operation achieved by addition of motors to existing or new 46kV disconnect switches which will be controlled through new SMP-16 RTUs. The existing relaying of the 13.2kV and 4.8kV feeders will be upgraded to SEL-451S relays. The communication modules for the Transformer Load Tap Changers (LTC) and Capacitor Banks will be upgraded. In addition, a pre-wired Control Building will house the following equipment: SMP-16 RTU, 48VDC Battery Bank, 48VDC Battery Charger, 48VDC fused distribution panel, 240/120VAC, Power Distribution Panel, Metering Cabinet, Motor-Operated Disconnect Switch (MOD) Control Cabinets, LTC controls and a termination cabinet for field wiring.

**Project Activities / Key Accomplishments in 2011**

- Detailed Engineering design underway since July 2011.
- Most major materials were ordered (Control Buildings, Circuit Breakers, Instrument Transformers, Motor Operators and Disconnect Switches).
- Capital investment was $2.7M. Brewster represents most of the $3.2 million total RTU Program spend in 2011.

**Project Activities Planned for 2012**

- Complete detailed engineering.
- Order remaining materials required (structural steel and all minor materials).
- Monitor and expedite critical material deliveries.
- Award construction contract for below grade and above grade construction.
- Complete construction on three of the stations in 2012.

# 34 – Greenidge Substation Grounding Bank

As of December 31, 2011

**Project Overview**

Install a new 115/34.5 kV, 20 MVA, 5% impedance grounding transformer at Greenidge Substation. Currently, an outage of the Greenidge Generation Unit #3 coupled with the retirement of the Greenidge Generating Unit #4 will result in an insufficient ground source on the 115 kV bus at Greenidge and relay coordination problems on the 115 kV system in the Geneva Division. When insufficient grounding exists on the Geneva 115 kV system, a ground fault may cause costly damage to both customer-owned and utility-owned electrical equipment on the surrounding electrical system. The installation of the proposed transformer will provide an adequate ground source on the Greenidge 115 kV bus and will ensure that sufficient grounding and proper relay coordination can be maintained.

**Project Activities / Key Accomplishments in 2011**

- Installed two grounding banks.
- Energized the first bank, which met the requirements of the project.
- Progressed the installation of the second bank.
- Capital investment was $2.2 million.

**Project Activities Planned for 2012**

- Complete the installation of the second bank and energize to provide redundancy.

# 35 – Distribution Pole Replacement Program

As of December 31, 2011

**Project Overview**

NYSEG has approximately 850,000 wood distribution poles and of this number, about 23,000 are greater than 75 years old. It has been shown that after a pole reaches 60 years old, the probability of it being defective rises significantly. This statistic is supported not only by industry data but also by actual inspection results from programs such as past inspect and treat programs at NYSEG and RG&E and the recent inspection data from Central Maine Power Company.

This program is designed to systematically replace all poles older than 75 years old that are scheduled to be inspected as part of the distribution line inspection program. This encompasses 6,250 poles per year in addition to 1,500 projected to be replaced without this program.

**Project Activities / Key Accomplishments in 2011**

- Poles replaced in 2011: 809
- Capital investment was $3.2 million.

**Project Activities Planned for 2012**

- Spend $7,450,000 to replace poles across NYSEG territory under this program. Approximately 4,000 poles, assuming replacement cost of $1,855.

# 36 – Sectionalizer Replacement Program

As of December 31, 2011

**Project Overview**

116 sectionalizers installed statewide on NYSEG's electric distribution system will be replaced with electronically controlled reclosers, as part of initiatives to improve distribution system reliability.

**Project Activities / Key Accomplishments in 2011**

- Purchased and received 50 reclosers to replace the 35kV sectionalizers installed on NYSEG's Distribution System.
- Began installing reclosers.
- Capital investment was $1.0 million.

**Project Activities Planned for 2012**

- Compete the installation of the 50 units purchased.
- Evaluate the remaining 66 sectionalizers on the system for replacement.

# 37 - Mobile Radio Project

As of December 31, 2011

**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 2011**

- Frequency applications were submitted to Canada and supported with on-air testing and other activities.
- Frequencies were approved through Canada and through the FCC for a number of tower sites in the Hornell, Lancaster, and Lockport divisions.
- Agreements were completed with Essex Co. and NYSP for a joint multi-user microwave communication system.
- Capital investment was $1.2 million.

**Project Activities Planned for 2012**

- Complete acquisition of remaining frequencies required for Hornell division.
- Convert the Hornell, Lancaster, and Lockport divisions to the new radio system.
- Continue to work with Canada on frequency applications for Plattsburgh and continue design and permitting activity for the Plattsburgh Division.

# 38 – OMS/GIS Project

As of December 31, 2011

**Project Overview**

Complete replacement of the existing GIS platform in NY and enhance the existing Outage Analysis System.

1. NY PSC is requiring map-based outage information be presented via the web to customers. Existing Outage Management System limits the type of outage information presented to customers on the web.
2. The existing system lacks the flexibility to model real world restoration events, e.g. dynamic modeling and cut-ins. As a result, in many storm situations, the existing system over predicts which customers are out.
   - manual intervention is required to determine more accurate outage levels.
3. Until the integrity of outage predictions are improved, providing accurate outage information on the web is constrained.
4. The tools used to develop Smartmap are old and no longer supported by vendors.

**Project Activities / Key Accomplishments in 2011**

- Implementation of Public Facing Outage Viewer which provides map based outage information for external customers.
- Progressed towards implementation of new Electric Distribution GIS platform which occurred in early 2012.
- Capital investment was $1.6 million.

**Project Activities Planned for 2012**

- Implementation of new internal web based user interface called SM Web with expanded functionality:

  - SM Web will provide data integration with the new ESRI/Telvent back-end system for mapping and electrical model data.
  - Provide dynamic switching of circuitry to track partial restoration activity.
  - Provide a single, integrated distribution model for NYSEG and RGE outage analysis and display.
  - Provide detailed customer Off /On outage data history in a new SQL Server outage database. This allows comparison of OMS customer outage data with SAP customer outage data to validate the OMS database.

# 39 - Energy Control Center Map Board Replacement

As of December 31, 2011

**Project Overview**

Replace NYSEG control room mosaic tile map board with video wall projection.

**Project Activities / Key Accomplishments in 2011**

- Awarded integration and construction contract in August.
- Construction began in September and the dynamic video wall was placed in service on December 23rd.
- Capital investment was $2.0 million

**Project Activities Planned for 2012**

- Project was completed in 2011

# 40 - Rainbow Falls Fish Bypass and Trash rack Project

As of December 31, 2011

**Project Overview**

Under License Article 407 of the FERC license order issued on August 18, 2004, NYSEG is required to develop a downstream fish passage plan to addresses downstream fish passage installation, operation and maintenance. This project, which has been developed in consultation with the DEC, FWS, and the New York State Historic Preservation Office, will be completed in two Phases: Phase 1 – install fish bypass pipe; Phase 2 – install trash racks, rack raker, bypass gate and plunge pools, and conduct a fish effectiveness monitoring study.

**Project Plan Summary: The project workscope generally consists of:**

1. Develop Phase 1 and Phase 2 designs, specifications and related procedures;
2. Install a 24" HDPE (plastic/PVC) fish conveyance pipe from the plunge pools at the rack house to the discharge location at the powerhouse tailrace;
3. Install a new fish way bypass gate upstream of the racks that allows entrance to the fish plunge pools;
4. Install a trash bypass gate at the rack house;
5. Install two concrete plunge pools constructed off the rack house foundation adjacent to the cliff edge;
6. Install 0.75 inch spaced HDPE (plastic) racks;
7. Install a new rack raker;
8. Upgrade electrical service to rack house and install associated controls systems;
9. Test and commission the new systems;
10. Develop project documentation (as-built drawings, procedures, correspondence, etc); and
11. Develop and implement a fish effectiveness monitoring plan.

**Project Activities / Key Accomplishments in 2011:**

1. Completed final documentation of Phase 1 work;
2. Completed design of Phase 2 activities;
3. Received FERC approval of Phase 2 design/plan;
4. Competitively bid Phase 2 construction/equipment
5. Purchased and received rack raker;
6. Purchased and received new gate structures;
7. Competitively bid fish effectiveness monitoring plan; and
8. Mobilized and completed approximately 75% of Phase 2 construction;

- Capital investment was $1.1 million.

**Project Activities Planned for 2012:**

1. Complete Phase 2 construction;
2. Demobilize the General Contractor;
3. Commission and test new fish bypass, gates and rack raker;
4. Complete final documentation of Phase 2 work and closeout project; and
5. Perform a fish effectiveness monitoring plan (likely in mid 2013 after Station returns to service upon completion of required powerhouse restoration due to Hurricane Irene).

# 41 - Energy Control Center

As of December 31, 2011

**Project Overview**

The design and installation of a fully integrated EMS/SCADA/DMS/OMS system that replaces the existing EMS/SCADA systems and combines the NYSEG and RG&E Control Centers into a single transmission center. A new distribution dispatch center will also resolve trouble and outage calls for both utilities. Install new infrastructure that facilitates increased automation on the transmission and distribution system while providing a robust foundation for additional automation of the system.

**Project Activities / Key Accomplishments in 2011**

- Siemens Spectrum 4.75 was chosen as the new EMS/SCADA/DMS/OMS Vendor. The Statement of Work was finalized and the contract executed for $12M.
- The Public Facing Outage Viewer was deployed on the intranet for all customers, regulators, and civic officials to monitor electrical outages.
- The Distribution GIS that drives the current Outage Management System was redesigned to combine the RG&E and NYSEG databases. This new GIS will be the foundation for the Siemens OMS and expanded to contain the transmission and substation assets.
- The Product Enhancements required for the Siemens Spectrum System were defined and the specifications were finalized.
- Capital investment was $3 million ($1.8 million - NYSEG and $1.2 million - RG&E)

**Project Activities Planned for 2012**

- The Spectrum Development System to be installed and configured to allow the NYSEG and RG&E databases to be built and tested.
- Esri was chosen to expand the Distribution GIS to include Transmission and Substation assets. The Statement of Work was finalized and the contracts executed for $2.7M
- Define the Spectrum/Esri interface for daily GIS changes to be automatically updated in the Spectrum SCADA and OMS databases.
- Esri deploys the new corporate GIS data structure and the application development platform goes on-line.
- The entire NYSEG and RG&E one-line schematics are drawn in the GIS.

# 42- Southwest 60 System Improvement

As of December 31, 2011

**Program Overview**

Livingston County has experienced significant residential, commercial and industrial growth in the past few years and this growth is expected to continue. The municipalities of Mt. Morris and Perry are currently at capacity. The Avon Gate Station has exceeded the gas supply maximum daily usage on several occasions in the past few years due to increased demand in the Southwest 60 psi (pounds per square inch) system. Failure of the Avon or Perry Gate Station will result in significant outages. The project involves installing six miles of 12 inch wrapped steel pipe and one new distribution regulator station. This project will increase capacity to support on-going industrial growth and improve system reliability to the Southwest 60 psi system.

**Project Activities / Key Accomplishments in 2011**

- Completed design and permitting for the six miles of 12" wrapped steel main.
- Project was bid and construction began in August.
- Installation of the main was completed in December.
- Capital investment was $3.8 Million.

**Project Activities Planned for 2012**

- The six miles of 12" wrapped steel will be tied in and activated.
- Work at the Greigsville Station.

# 43 - Andrews Street & University Avenue Gas Main Replacement

As of December 31, 2011

**Program Overview**

Replace approximately 700' of 24" cast iron main with 700' of 16" wrapped steel. An additional 1,900' of 24" cast iron will be cut dead that was not cut dead under the University Ave (North to Main) project.

The project began in 2010 and involved tie ins that required stopping off the 12 psi gas flow using fittings installed on 24" cast iron mains. Due to concerns with these tie ins, the project was redesigned to enable the tie ins (and cut dead of the remaining 24" cast iron) to be made using steel pipe and the fittings and equipment for steel pipe. This involves installing additional 16" wrapped steel main.

**Project Activities / Key Accomplishments in 2011**

- Design was completed and permitted.
- Project was bid.
- Construction began in August and was completed in September.
- Capital investment was $0.5 million

**Project Activities Planned for 2012**

The project was completed in 2011.

# 44 - Ridgeway Avenue Highway Improvement

As of December 31, 2011

**Program Overview**

The City of Rochester will be reconstructing approximately a one mile stretch of Ridgeway Avenue. RGE's work will included removing portions of the existing wrapped steel gas main in conflict with proposed improvements. To accommodate the City's construction schedule and the amount of proposed RG&E gas work, this work needs to be completed ahead of city's construction. Therefore, our work began in the spring of 2010. The 20" railroad crossings was delayed until 2011 due to the length of time necessary to obtain two separate railroad permits. 3205 ft of 4" plastic and 4321 ft of 2" Plastic was installed in 2010.

**Project Activities / Key Accomplishments in 2011**

- Received two required separate railroad permits in late October of 2011.\
- Replacement of the 16” wrapped steel main and 20” casing began in November of 2011.
- Capital investment was $0.6 million.

**Project Activities Planned for 2012**

- Complete installation of 521’ of 16” wrapped steel and 225’ of 20” casing.

# 45 - Transmission Casing Replacement Program

As of December 31, 2011

**Program Overview**

Replace three casings: 1) 88' long 24" steel cased crossing at NYS Route 31 (250 psi, CM2CCM3); 2) 39' long 20" steel cased crossing on Bailey Rd (350 psi, CM2BCM1); and 3) 41' long 20" on John St (350 pis, CM2BCM1). These crossings are classified as High Consequence Areas (HCAs) as defined by the Transmission Integrity Management Program (IMP). Replacement piping will be designed to eliminate the HCA designation. Federal and New York State IMP regulations require that cased crossings within HCAs are inspected to assess their condition. There are no reliable inspection tools available to accurately assess the condition of these cased pipelines other than digging and inspecting.

**Project Activities / Key Accomplishments in 2011**

- Three casings were planned to be completed in 2011. The casings were bid as two projects. Additional work on Pittsford Palmyra Rd was required due to complications with inserting pipe inside existing casing. As a result John St and Bailey Rd casing replacements were put on hold and will be completed in 2012.
- Material for 2012 casing replacements was received in 2011.
- The casing on Pittsford Palmyra Rd was completed in November.
- Capital investment was $1.3 million

**Project Activities Planned for 2012**

Replace 7 casings:

1. John Street, Town of Henrietta, CM2-B-CM1 – Replace 148 feet of 20” steel, 350 psi MAOP main; Remove 41 feet of 24” steel casing.
2. Bailey Road, Town of Henrietta, CM2-B-CM1 – Replace 128 feet of 20” steel, 350 psi MAOP main; Maintain existing casing.
3. Lehigh Station Road, Town of Henrietta, CM2 – Replace 122 feet of 24” steel, 250 psi MAOP main; Remove 82 feet of 30” steel casing.
4. Macedon Center Road, Town of Perinton, CM2-C-CM3 – Replace 114 feet of 24” steel, 250 psi MAOP main; Extend existing 30” steel casing by 15 feet.
5. Erie Station Road, Town of Henrietta, CM2 – Replace 117 feet of 24” steel, 350 psi MAOP main; Maintain existing casing.
6. Pinnacle Road, Town of Henrietta, CM2 – Replace 1,100 feet of 24” steel, 250 psi MAOP main; Abandon (1) 280 feet of 30” steel casing and (2) 80 feet of 30” steel casing.
7. Ballantyne Road, Town of Chili, CM2-B-CM1 – Install 50 feet of 20” and 24” main to connect CM-1 to CM-4 and leave stub for future CM-5. Abandon approximately 1000 feet of 20” main and existing 124 foot 24” steel casing.

# 46 - Winton Road at Route 590 - 20” Main

As of December 31, 2011

**Program Overview**

New York State Department of Transportation (NYSDOT) is reconstructing the northbound ramp to Route 590 from Winton Road as well as reconfiguring the traffic patterns of all north and southbound lanes in 2011. RG&E had to replace approximately 4,000 feet – 20 inch wrapped steel pipe within the southbound driving lane.

**Project Activities / Key Accomplishments in 2011**

- Engineered project.
- Bid and awarded construction
- Completed construction.
- Capital investment was $1.3 Million.

**Project Activities Planned for 2012**

Project completed in 2011

# 47 - Leak Prone Mains Replacement Programs

As of December 31, 2011

**Program Overview**

The scope of this program for 2011 included the replacement of a minimum of 24 miles of leak prone gas main to meet the Rate Plan requirements. The leak prone gas main works was selected based upon leak history, condition, inspection reports, and various risk factors. The actual mileage completed was 31.77.

In addition, a minimum of 1000 leak prone services were required to be replaced or retired to meet the Rate Plan requirements. The actual number of leak prone services completed was 1,331.

**Project Activities / Key Accomplishments in 2011**

- 167,757 feet (31.77 miles) of leak prone ST/CI main were replaced and 1,331 unprotected steel services were replaced.
- Capital investment was $8.3 million

**Project Activities Planned for 2012**

- In December 2011 36.97 miles of leak prone main and 502 leak prone services were released to construction for 2012.
- 2012 requirements under the Rate Plan remain as in 2011 - replace 24 miles of leak prone main and 1,000 leak prone services.

# 48 - Gas Regulator Station Replacement Program

As of December 31, 2011

**Project Overview**

This scope includes improvements to more than 10 regulator/gate stations within the RG&E 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.

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.

**Project Activities / Key Accomplishments in 2011**

2011 Regulator Program Accomplishments

- Replaced Regulator Station 301 with new Regulator Station 487
- Replaced Regulator Station 366 with new Regulator Station 488
- Replaced Regulator Station 382 with new Regulator Station 489
- Installed new Regulator Station 494 to replace Regulator Station 413 (which will be cut dead as part of the Erie Station Rd Transmission Casing Replacement project)
- Replaced the relief valve assembly for Regulator Station 187
- Replaced the recorder for Regulator Station 851
- Replaced the recorder for Regulator Station 446
- Replaced the recorder for Regulator Station 731
- Replaced the recorder for Regulator Station 813/814
- Replaced Regulator Station 14 with new Regulator Station 474
- Purchased replacement material for Regulator Station 214
- Purchased replacement material for Regulator Station 362
- Purchased replacement material for Regulator Station 26
- Purchased replacement material for Regulator Station 360
- Purchased replacement material for Regulator Station 369
- Purchased replacement material for Regulator Station 389
- Purchased replacement material for Regulator Station 335
- Purchased replacement material for Regulator Station 318
- Purchased replacement material for Regulator Station 342
- Purchased replacement material for Regulator Station 773

Capital investment was $0.8 million

**Project Activities Planned for 2012**

- Rebuild Regulator Station 780
- Replace Regulator Station 316 with new Regulator Station 498
- Replace relief valve assembly piping for Regulator Station 355
- Replace Regulator Station 289 with new Regulator Station 501
- Replace Regulator Station 360 with new Regulator Station 493
- Replace the regulators in Regulator Station 336
- Replace Regulator Station 389 with new Regulator Station 496
- Replace relief valve assembly for Regulator Station 4026

- Replace the regulator and filter and cut dead one of the two relief valves in Regulator Station 362
- Rebuild Regulator Station 369
- Replace relief valve assembly for Regulator Station 175
- Cut dead Regulator Station 413
- Replace the regulator in Regulator Station 857
- Rebuild Regulator Station 797
- Rebuild Regulator Station 26
- Replace the regulators and block valves in Regulator Station 358
- Replace the regulators in Regulator Station 214
- Cut dead Regulator Station 315
- Replace the inlet valve to Regulator Station 306
- Replace the recorder for Regulator Station 490
- Replace the odorant tank relief valve for Gate Station 5
- Replace the recorder for Regulator Station 404
- Install a recorder for Regulator Station 770
- Replace the recorder for Regulator Station 154

# 49 - Byron Bergen CSD Gate Station

As of December 31, 2011

**Program Overview**

This project involves installing a new gate station and main extension with services for the Byron Bergen Central School District campus in the Town of Bergen, Genesee County, which includes high, middle and elementary schools, bus garage, pool and co-generation facility. Total new connected load is approximately 24,301 cfh (cubic feet/hour) with a potential future connected load of approximately 32,751 cfh. The new gate station is located on West Bergen Road in Bergen and will be connected to the Empire Pipeline.

The customer has agreed to a 20-year contract. The customer will make an upfront payment to cover a portion of the capital costs of the project and will pay an annual fee for the operating and maintenance costs of the new gate station and distribution piping. The annual payment includes delivery of 30,000 DT/year (dekatherms). Any consumption beyond this will be billed at $2.00/ DT.

**Project Activities / Key Accomplishments in 2011**

- Completed site design and permitting
- Designed new station and equipment.
- Completed site work and construction of the station.
- Designed and constructed mains and services to the school.
- The new station was activated in November of 2011
- Capital investment was $0.5 million

**Project Activities Planned for 2012**

Project completed in 2011. Will receive an additional customer contribution of $320,000.

# 50 - Canandaigua Cast Iron Main Replacement

As of December 31, 2011

**Program Overview**

This project replaces approximately 1,300 feet of four inch and 1,000 feet of six inch cast iron gas main and 200 feet of bare steel gas main in the downtown business district of the City of Canandaigua with approximately 2,500 feet of six inch plastic pipe and the replacement of approximately 50 existing gas services. This gas main replacement eliminates the last remaining section of cast iron gas main in the NYSEG distribution system. This 1920 vintage cast iron gas main was experiencing leaks within the year prior to the project.

**Project Activities / Key Accomplishments in 2011**

- Construction completed.
- Capital investment was $0.9 million

**Project Activities Planned for 2012**

- Site restoration

# 51 - Canandaigua to Rushville Gas Main Installation

As of December 31, 2011

**Program Overview**

This project includes the installation of approximately 15,900 feet of plastic main which will originate at the northern end of NYSEG's existing gas distribution system located in the Village of Rushville and interconnect with the existing distribution system in Canandaigua. This second feed into the Canandaigua area will reinforce the existing Canandaigua Gas Distribution System and increase the total gas supply capacity which will significantly improve the gas system reliability. Completion of this project will accommodate the ongoing and steady expansion of natural gas customers in the Canandaigua area. Expansion is being driven by several new projects developed both within the City of Canandaigua and along the top one third of the eastern and western shores of Canandaigua Lake. This project brings additional natural gas to the area from an alternate transmission source and provides for adequate operating pressures as gas use expansion occurs.

**Project Activities / Key Accomplishments in 2011**

- Initiated project construction.
- Capital investment was $0.7 million.

**Project Activities Planned for 2012**

- Complete construction mid-year.

# 52 – Seneca West Pipeline Interconnect to Elmira

As of December 31, 2011

**Project Overview**

The scope of this project includes 4.9 miles of natural gas transmission pipeline that will connect to Inergy's Seneca West Lake Storage Facility West Pipeline. This is an Article VII application project. The project includes a meter and regulator station at the interconnection with Inergy that will reduce gas pressure to 1100 psi. The 4.9 miles of natural gas transmission pipeline will operate at 1100 psi. A second, downstream regulator station will connect the new 4.9 miles of NYSEG gas transmission pipeline to NYSEG's Elmira gas distribution system and reduce gas pressure to 60 psi.

**Project Activities / Key Accomplishments in 2011**

- The draft Article VII application was submitted to the Public Service Commission (PSC) on November 29, 2011. The PSC did not accept NYSEG's application as complete. NYSEG is responding to PSC comments and PSC identified deficiencies and questions.
- A portion of the easements were obtained and 25% of the project length may go to condemnation proceedings (approximately half of the pipeline length is located on existing NYSEG electric right-of-way). Condemnation proceedings and pubic objections to the project were not anticipated.
- Capital investment was $1.2 million

**Project Activities Planned for 2012**

- Complete the Article VII application process including a public hearing and condemnation proceedings in 2012.
- Begin construction in the summer of 2012 and be substantially complete by the end of 2012.
- The public hearing and condemnation process may delay the project and extend construction into 2013.

# 53 - Leak Prone Mains and Services Replacement Programs

As of December 31, 2011

**Project Overview**

The scope of this program for 2011 included the replacement of a minimum of 24 miles of leak prone gas main. The leak prone gas main work was selected based on leak history, condition, inspection reports, and various risk factors. In addition, a minimum of 1200 leak prone services were replaced or cut dead.

**Project Activities/Key Accomplishments in 2011**

- Replaced 166,108 feet (31.46 miles) of leak prone main
- Replaced 2,055 unprotected steel services.
- Capital investment was $20.6 million.

**Project Activities Planned for 2012**

- 70% of 2012 work was engineered and ready for construction.
- 2012 requirements under the current rate plan continue to be to replace 24 miles of leak prone main and 1,200 leak prone services.

# 54 - Transmission Casing Replacement Program

**Program Overview**

This program will replace transmission casings. These casings are located in areas classified as High Consequence Areas (HCA) as defined by the Transmission Integrity Management Program (IMP). Replacement piping will be designed to eliminate the HCA designation. Federal and New York State IMP regulations require that cased crossings within an HCA are inspected to assess their condition. There are no reliable inspection tools available to accurately assess the condition of these cased pipelines other than digging and inspecting.

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**Project Activities / Key Accomplishments in 2011**

- Removed three casings.
- Capital investment was $0.9 million.

**Project Activities Planned for 2012**

- Additional transmission casings will be constructed in 2012.

# 55-SCADA System Migration Project

As of December 31, 2011

**Project Overview**

The Gas Supervisory Control and Data Acquisition (SCADA) system is a high availability control system which provides 24x7 monitoring and control of the gas transmission and distribution system. This project is to replace the current Gas SCADA System in Binghamton. The project includes replacement of servers, workstations, hardware, software and operating systems.

The system is critical to safe and reliable gas operations and needs to be replaced due to the following:

- The current system was installed in 1999. It is well beyond its expected eight-year lifespan and has been experiencing an increasing number of hardware failures.
- The current server hardware, operating systems, software and security patches are unavailable because they are no longer manufactured or supported by their respective manufacturers.

**Project Activities/Key Accomplishments in 2011**

- Awarded contract.
- Hardware delivered to Telvent's factory
- Design documents approved.
- Capital investment was $0.7 million.

**Project Activities Planned for 2012**

- Complete a baseline demonstration, final factory site and system acceptances and a 30-day operation.

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

# NYSEG - Electric Capital Investment
**($000s)**
**December Results**

| Project | YTD Actuals | YTD Forecast | YTD Variance | Variance Explanation +/- 10% | In Service Date |
|---|---|---|---|---|---|
| **Projects in Appendix L** | | | | | |
| **Corning Valley Upgrade** | $ 19,389 | $ 20,464 | $ (1,076) | | Jul-11 |
| **Ithaca Reinforcement** | 1,518 | 210 | 1,308 | Due to the unseasonably poor weather, including major rain events and flooding, project rights-of-way and other disturbed areas required far greater environmental remediation expenditures and more frequent inspections than anticipated in order to remain in compliance with the PSC mandated requirements. | Jun-10 |
| **Moraine Road Substation Breaker Addition** | 2,423 | 750 | 1,673 | The Moraine Road Breaker Addition Project construction sequence plan had to be integrated with the Howard Windfarm schedule, which accelerated the project. Additionally Labor and Transmission Materials came in higher than estimated. | Jun-12 |
| **345kV Bulk Transformer Spare** | 1,795 | 4,644 | (2,849) | Late start. | Jan-12 |
| **Line #807 115kV Conversion** | 1,446 | 2,887 | (1,441) | Delay of construction start due to weather and flooding at Katonah which deferred construction for Jan-April | Dec-12 |
| **Watercure Rd Sub Transformer Replacement** | 3,003 | 1,000 | 2,003 | Adjustment to expected insurance reimbursement of $1,275K. | Mar-11 |
| **Seneca Ordnance/Depot Electric Upgrade (7500KVA Transformer and Convert Circuit 203 to 12.5 KV). (This project will cost $1.5M but is fully reimbursable)** | (113) | - | (113) | Project is 100% reimbursable, at year end CIAC accruals were done to reflect the work completed to date. CIAC accruals will be trued up as actuals are known and billings for work completed are done. | Apr-12 |
| **Circuit 426 (Katelville Tap _ Chenango Brdg) Upgrade Conductor Binghamton** | 473 | 1,178 | (705) | Delay in project start; forecast assumed that design and material order would be completed in 2010 which did not occur. | May-12 |
| **New Mobile Substation #22** | 839 | 1,800 | (961) | Delay in PO release affected timing of milestone payments. | Mar-12 |
| **Total DOE Stimulus projects (Capacitor Banks)** | 1,473 | 628 | 845 | Engineering has started; Cap banks and circuit breakers ordered. | Dec-12 |
| **South Perry New 230kV Transformer** | 1,087 | 1,260 | (173) | Project scope had changed, the new scope was completed by SLI broken down into 2 phases. | Dec-12 |
| **Mobile Radio Project** | 1,172 | 936 | 236 | Additional funds were needed to accelerate the infrastructure & microwave connectivity for the Plattsburgh division. This funding is coming from future years and will not affect the total. | Sep-12 |
| **Biogas 34.5kV Collector System** | 122 | 1,000 | (878) | Working with IPP and division engineering to finalize scope. | Dec-13 |
| **Tom Miller Road Substation** | 22 | - | 22 | Project added during year | |
| **Capacitor Additions - Energy Efficiency Initiative** | 584 | 1,351 | (767) | Change in scope. | Various |
| **Programs included in Appendix L** | | | | | |
| **Transmission, distribution infrastructure reliability program (TDIRP)** **(Schedule C-3)** | 38,984 | 25,000 | 13,984 | Additional amount authorized for reliability enhancement projects. | Various |
| **Electric System Security** | 2,976 | 2,406 | 570 | Rebidding RFP for security vendor. | Various |
| **Fleet - Electric Portion** | 5,520 | 6,197 | (677) | Vehicles that were order not received or invoiced in 2011. | Various |

# NYSEG - Electric Capital Investment
($000s)
December Results

| Project | YTD Actuals | YTD Forecast | YTD Variance | Variance Explanation +/- 10% | In Service Date |
|---|---|---|---|---|---|
| **Division Projects (Schedule C-4)** | 45,048 | 39,000 | 6,048 | Additional amount authorized for reliability enhancement projects. | Various |
| **Projects/Programs Supplemental to Appendix L** | | | | | |
| **The Mechanicville Reinforcement Project** | 1,496 | 7,000 | (5,504) | Forecasted expenditures for construction start were delayed while awaiting National Grid approval of substation design. | Jul-12 |
| **RTU Program** | 3,182 | 6,137 | (2,955) | Timing of RFP. | Various |
| **Distribution Pole Replacement Program** | 3,207 | - | 3,207 | Asset replacement recommendation. | Various |
| **Battery Replacement Program** | 164 | - | 164 | Asset replacement recommendation. | Various |
| **Sectionalizer Replacement Program** | 1,001 | - | 1,001 | Asset replacement recommendation. | Various |
| **Substation Breaker Replacement Program** | 852 | - | 852 | Asset replacement recommendation. | Various |
| **Greenidge Grounding Banks** | 2,182 | 2,701 | (519) | Construction delayed due to storm restoration work. | Dec-11 |
| **Fallbrook World Kitchen - Substation (NYSEG share)** | 812 | 900 | (88) | Timing of an Economic Development contribution on the project occurring sooner than originally planned. | Sep-11 |
| **Dansville MGP radio tower and equipment relocation** | 826 | 1,600 | (774) | Work delayed while quotes are being obtained from suppliers. | Oct-12 |
| **Bedford Hills - Replace Bank #2 - Elec - Brewster** | 413 | 1,513 | (1,100) | Project delayed due to multiple storm damage recovery work in Brewster Division. | Jun-12 |
| **ECC Map Board Replacement** | 2,040 | 1,500 | 540 | Project higher than planned due to additional integration and construction. | Dec-11 |
| **MTA - New Circuits - Electric - Brewster (This project will cost $1M but is fully reimbursable).** | 67 | - | 67 | 100% reimbursable project, accruals for CIAC at year end will be trued up when billing to customer is done. | Apr-14 |
| **Agro Farma Circuit 12.5kV Conversion** | 145 | - | 145 | Growth project for customer load not in original budget. | Dec-12 |
| **Watercure Rd. - 2nd 345 kV Transformer** | 1,950 | 2,195 | (245) | The transformer progress payment did not get paid as projected due to delays in the factory and by NYSEG schedule for factory inspection. | Dec-12 |
| **Energy Control Center (include OMS/GIS project)** | 3,376 | 6,552 | (3,176) | Delay in awarding of purchase order | Oct-13 |
| **Substation Modernization** | 221 | - | 221 | Program added during the year | Various |
| **Glenwood - Repl. Substation Transformer** | 100 | - | 100 | Infrastructure project approved late 2010 after 2011 budget was developed. | Dec-12 |

# NYSEG - Electric Capital Investment
**($000s)**
**December Results**

| Project | YTD Actuals | YTD Forecast | YTD Variance | Variance Explanation +/- 10% | In Service Date |
|---|---|---|---|---|---|
| **Other Common Projects - Electric allocation (Schedule C-1)** | 11,002 | 7,771 | 3,231 | Includes costs for SAP Re-architecture Project added during the year and additional facilities and customer service projects. | Various |
| **Other Electric projects (Schedule C-2)** | 14,647 | 13,012 | 1,635 | Projects accelerated or implemented earlier than planned: Flat St SS New Transformer; Stephentown SS New Transformer; Meyer SS New Transformer; Eelpot new transformer, Coddington LTCC Capacity transformer; various highway relocation projects | Various |
| **Generation projects** | 3,880 | 3,685 | 195 | | Various |
| **Total** | $ 179,328 | $ 165,278 | $ 14,050 | | |
| **Unassigned Projects** | - | 8,910 | (8,910) | | |
| **Total** | $ 179,328 | $ 174,188 | 5,140 | | |

# RG&E - Electric Capital Investment
**($000s)**
**December Results**

| Project | YTD Actuals | YTD Forecast | YTD Variance | Variance Explanation - +/- 10% | In Service Date |
|---|---|---|---|---|---|
| **Projects in Appendix L** | | | | | |
| **Station 5 Tunnel Relining** | $ 20,291 | $ 26,750 | $ (6,459) | PO issued to Delaney later than expected; construction delayed. Construction now in process. | Dec-12 |
| **Sta. 23 New Downtown 115kV Source** | 5,613 | 10,000 | (4,387) | Delays in finalizing preliminary eng. design due to expanded scope and changes from Air Insulated to Gas Insulated Substation (GIS). | Dec-14 |
| **Station 124 New SVC** | 8,477 | 8,000 | 477 | | May-13 |
| **Station 5 Wicket Gate Upgrades** | 4,573 | 4,084 | 489 | Project was accelerated | Dec-12 |
| **New Station 137** | 3,222 | 3,530 | (308) | | Nov-11 |
| **Station 424 New Line** | 3,616 | 3,176 | 440 | Completed in 2011 | Dec-11 |
| **Webster East New 12 kV Source** | 898 | 3,100 | (2,202) | Delay in PO release affected timing of milestone payments. | Jun-12 |
| **Rochester Area Reliability Project** | 1,832 | 2,500 | (668) | Project delayed due to change in scope | Dec-14 |
| **Stations 180 and 128 New Capacitors** | 582 | 1,837 | (1,255) | Adjustments to Cap Bank equipment specs, revisions to equipment requirements after issuing cap bank RFP, station layout conflicts and availability of equipment arrangements has slowed the advancement of this project. | Dec-12 |
| **New 115kV Transmission Line (Sta.13A to Sta.135)** | 1,330 | 1,826 | (496) | Project under due to construction bid costs coming in substantially lower than estimates for the line work and the breaker/buswork install. | Jun-11 |
| **Jefferson Ave Electric Facilities Relocation** | 2,311 | 1,650 | 661 | Shallow rock driving cost up. | Apr-12 |
| **Midtown Electric Facilities Relocation** | 15 | 1,197 | (1,182) | Coordination with municipality | Dec-13 |
| **Station 56 Replace Transformer** | 984 | - | 984 | Project added during year. | Dec-12 |
| **Station 56 - Additional 12kV Source** | 115 | - | 115 | Project added during year. | Dec-13 |
| **Station 124 New Phase Shifter Transformer** | 5,659 | 13,000 | (7,341) | Delays in finalizing preliminary engineering design due additional design changes. | Dec-12 |
| **Programs in Appendix L** | | | | | |

# RG&E - Electric Capital Investment
($000s)
December Results

| Project | YTD Actuals | YTD Forecast | YTD Variance | Variance Explanation - +/- 10% | In Service Date |
|---|---|---|---|---|---|
| **Transmission, distribution infrastructure reliability program (TDIRP) (Schedule C-3)** | 20,802 | 15,000 | 5,802 | Additional amount authorized for reliability enhancement projects. | Various |
| **Electric System Security** | 2,309 | 1,427 | 882 | Rebidding RFP for security vendor. | Various |
| **Generation Minor Projects** | 298 | 2,600 | (2,302) | Moved dollars from minor projects to major projects | Various |
| **Fleet - Electric Portion** | 2,066 | 1,878 | 188 | | Various |
| **Division Projects (Schedule C-4)** | 15,731 | 17,000 | (1,269) | | Various |
| **Projects/Programs Supplemental to Appendix L** | | | | | |
| **Station 42 - Replace 115-11kV 4T Transformer** | 203 | 3,042 | (2,839) | Spend reflects engineering only. | Jun-12 |
| **Station 42 - Replace 34.5-11.5kV 3T Transformer** | 266 | 1,329 | (1,063) | Spend reflects engineering only. | May-12 |
| **Station 80 - Replace 1T and 3T Transformers** | 3,386 | 3,000 | 386 | Increase amount for design changes and expedited conceptual design package. | Apr-13 |
| **Sta. 23 Transformer & 11kV Switchgear** | 1,625 | - | 1,625 | Project added during year. | Sep-13 |
| **East Ridge Rd.Hwy Reloc** | 1,912 | 1,600 | 312 | Project accelerated | Jun-12 |
| **Line 926 - Upgrade 115kV Line - Rochester** | 204 | 634 | (430) | Permitting delay. | Dec-12 |
| **RTU Program** | 2,684 | 2,000 | 684 | Preliminary engineering and material procurement ahead of schedule. | Various |
| **RTU Communication Projects** | 705 | - | 705 | Project added during year. | Various |
| **Distribution Pole Replacement Program** | 1,332 | - | 1,332 | Asset replacement recommendation | Various |
| **Substation Breaker Replacement Program** | 1,217 | - | 1,217 | Asset replacement recommendation | Various |
| **Sectionalizer Replacement Program** | 1,087 | - | 1,087 | Asset replacement recommendation | Various |
| **Energy Control Center** | 2,073 | 3,045 | (972) | Delay in awarding PO | Oct-13 |
| **Portland Ave. Highway Relocations** | - | 1,230 | (1,230) | Coordination with municipality, project moved into 2012. | Jun-12 |
| **CableCure Program** | 1,822 | 1,850 | (28) | | Various |
| **Broad Street (Court St - Chestnut St) - Relocate Electric Facilities - Rochester** | 228 | 1,178 | (950) | Coordination with municipality | Jun-12 |
| **University Avenue (Union - Goodman) Highway Relocation)** | 1,219 | - | 1,219 | Carryover project from last year and change in scope due to change in municipality changes. | Dec-11 |

# RG&E - Electric Capital Investment
**($000s)**
**December Results**

| Project | YTD Actuals | YTD Forecast | YTD Variance | Variance Explanation - +/- 10% | In Service Date |
|---|---|---|---|---|---|
| **Westfall Rd. Highway Relocation** | 597 | 1,035 | (438) | Work orders in process. | Jun-12 |
| **Station 38 Modernization** | 179 | - | 179 | Project added during year | Dec-12 |
| **Replace DC Pilot Wire System** | 1,022 | - | 1,022 | Project added during year. | Various |
| **Sta 2 Browns Race Excavation for Unit 1** | 325 | 1,173 | (848) | Construction delayed due to no easement granted from the city of Rochester; cannot begin work until received. | Dec-12 |
| **Other Common Projects - Electric allocation (Schedule C-1)** | 7,232 | 2,809 | 4,423 | Includes costs for SAP Re-architecture Project added during the year and additional facilities and customer service projects. | Various |
| **All Other Electric Projects (Shedule C-2)** | 10,164 | 5,203 | 4,961 | Projects were accelerated or implemented; Sta. 127, 128, 125, 173,17,218 new capacitors; Battery replacement program; highway relocation projects. | Various |
| **All Other Generation Projects** | 11,806 | 10,514 | 1,292 | Projects were accelerated | Various |
| **Project cost reductions** | - | | - | | |
| | - | - | - | | |
| **Total** | $ 152,014 | $ 158,197 | $ (6,184) | | |
| **Unassigned Projects** | - | 13,300 | (13,300) | | |
| **Total** | $ 152,014 | $ 171,497 | $ (19,484) | | |

Schedule C-1
Electric Common

NYSEG

| Project Title | 2011 Actuals | |
|---|---|---|
| NYSEG GENERAL EQUIPMENT BLANKET | $ | 2,127 |
| NYSEG GENERAL LAND AND STRUCTURE CORP - Minors | $ | 274 |
| NYSEG GENERAL LAND & STRUCT ELMIRA - Minors | $ | 227 |
| NYSEG GENERAL LAND & STRUCT BREWSTER - Minors | $ | 156 |
| NYSEG GENERAL LAND & STRUCT HORNELL - Minors | $ | 116 |
| NYSEG GENERAL LAND & STRUCT ONEONTA - Minors | $ | 91 |
| NYSEG GENERAL LAND & STRUCT CORTLAND - Minors | $ | 88 |
| NYSEG GENERAL LAND & STRUCT LANCASTER - Minors | $ | 87 |
| NYSEG GENERAL LAND & STRUCT BINGHAMTON - Minors | $ | 81 |
| NYSEG GENERAL LAND & STRUCT GENEVA - Minors | $ | 57 |
| NYSEG GENERAL LAND & STRUCT MECHANICVILL - Minors | $ | 51 |
| Other General Land & Structure Projects - Minors | $ | 47 |
| Elmira SC - Heating Fuel Conversion | $ | 423 |
| Purchase Lancaster Service Center | $ | 358 |
| Plattsburgh SC - Pavement Restoration | $ | 355 |
| Binghamton SC - Vehicle Access & Parking | $ | 293 |
| ECC - UPS 2 Replacement | $ | 259 |
| JC Training Yard Drive - Paving Reconstr | $ | 174 |
| Pawling Operations Building Renovations | $ | 164 |
| Elmira SC - Emergency Sump Pump System | $ | 158 |
| Ithaca - Chiller Replacement | $ | 157 |
| Kirkwood General Office - East Lighting | $ | 154 |
| Kirkwood Genl Ofc - Cooling Towers 3&4 | $ | 154 |
| NYSEG Ice Machine Upgrades | $ | 127 |
| Kirkwood Genl Ofc - Cafeteria Renovation | $ | 106 |
| Plattsburgh Service Center Lighting Upgr | $ | 84 |
| Mechanicville SC - Roof Replacement B&C | $ | 80 |
| NYSEG ECC Floor Covering Replacement | $ | 55 |
| Other Facilities Projects | $ | 53 |
| Ithaca Cooling Tower Replacement | $ | 53 |
| Other Major Facility Projects | $ | 40 |
| APPS-FIELD AUTOMATION | $ | 1,164 |
| APPS-SAP REARCHITECTURE PROJECT | $ | 486 |
| NYSEG 2011 PC Demand | $ | 185 |
| NYSEG PBX Replacement - Geneva | $ | 143 |
| NYSEG HARDWARE BLANKET | $ | 128 |
| Toughbook Refresh 2011 | $ | 64 |
| Other IT Projects | $ | 21 |
| NYSEG Virtual Call Platform | $ | 443 |
| NY Kiosks - NYSEG | $ | 285 |
| Binghamton ECC Console Replacement | $ | 105 |
| Rate Case Implementation - NYSEG | $ | 56 |
| Other Miscellaneous Common Projects | $ | 1,272 |
| **Total NYSEG Common - Electric** | $ | 11,002 |

Schedule C-1
Electric Common

RG&E

| Project Title | 2011 Actuals | |
|---|---|---|
| General Equipment & Tools | $ | 1,263 |
| West Ave - Call Center Upgrade | $ | 609 |
| RGE - STRUCTURES - MINOR BLANKETS | $ | 573 |
| 89 East Ave - Ceiling-Lightng-Furn Upgra | $ | 490 |
| 89 East Ave - 3rd Floor Renovation | $ | 407 |
| 89 East Ave - 4th Fl- Renovation | $ | 326 |
| 89 East Ave - 7th Fl - Renovation | $ | 187 |
| 89 East Ave - 8th Fl- Renovation | $ | 185 |
| 89 East Ave - Men's & Women's Showers | $ | 89 |
| Eastern Monroe - Plank Rd Paving | $ | 75 |
| Fillmore - Storage Warehouse Renovations | $ | 70 |
| 89 East Ave - DataCtr, AECC, CallCtr Upg | $ | 67 |
| Scottsville Rd - New Office Space | $ | 57 |
| 89 East Ave - 6th Fl Telepresence Room | $ | 53 |
| Other Miscellaneous Faciltiy projects | $ | 50 |
| OPS-2011 PC REFRESH-Hardware | $ | 208 |
| IT Minor Projects | $ | 21 |
| APPS-FIELD AUTOMATION REPL | $ | 490 |
| OPS-TOUGH BOOK LC REFRESH-HW | $ | 241 |
| INFR-OBS NETWORK EQUIP REPLC | $ | 229 |
| APPS-SAP REARCHITECTURE | $ | 200 |
| Other Miscellaneous IT Projects | $ | 5 |
| RGE ECC Radio Dispatch Console Upgrd-Ins | $ | 405 |
| RGE Virtual Call Platform | $ | 310 |
| NY Kiosks - RGE | $ | 235 |
| Other Common Projects | $ | 388 |
| **Total RG&E Common - Electric** | $ | 7,232 |

Schedule C-2
Other projects

NYSEG

| Project Title | 2011 Actuals |
|---|---|
| Coddington LTCCapacity 115-34.5kV Xfmr | $ 910 |
| Eelpot, Add 2nd 115-34.5kV Transformer | $ 803 |
| Laser NE Gathering 35kV 3Ph Conv & Serv | $ 707 |
| NYSEG Pole Rbld & System Upgr-Brewster | $ 672 |
| 812/813 Line Croton Falls - Peach Lake | $ 657 |
| Meyer Substation New Transformer | $ 651 |
| Willet Substation New Transformer | $ 627 |
| 115kv SPDC L963/978 Reloc I-86 Elmira | $ 624 |
| Flat Street Substation New Transformer | $ 612 |
| Richfield Springs Substa New Transformer | $ 593 |
| NYCDEP Cross River Shaft 13 Sub | $ 547 |
| Circuit 512 (Vestal-Goudey)-Upgr Cond | $ 541 |
| Stephentown Substation New Transformer | $ 528 |
| Westover (Goudey) New Xfmer Bank | $ 523 |
| NYSEG - SPCC Oil Containment Compliance | $ 522 |
| Roll Road Sub - Add 4th Circuit | $ 494 |
| S. Perry, Add 2nd 115-34.5kV Transformer | $ 492 |
| Meyer Sub - Add 115kV Capacitor Bank | $ 474 |
| South Park Sub - Bank Installation | $ 473 |
| Hillside Sub Transformer #3 Replacement | $ 441 |
| Sylvan Lake Transformer Replacement | $ 369 |
| Walden 69kV Transm Line Upgrade | $ 344 |
| Yawger Road Substation Project | $ 312 |
| Spencer Hill Windfarm Proj - Remove Ends | $ 305 |
| Haviland Hollow - Replace Bank #1 | $ 304 |
| Cold Springs Rd - Elec Relocation | $ 289 |
| 4th Street Sub UG Distribution | $ 278 |
| Klinekill-Valkin-Construct New 115kV TL | $ 273 |
| Davis Rd 4th Circuit | $ 269 |
| IBM TCE Mitigation Project | $ 243 |
| L442 and L511 New Taps into New BU Subst | $ 232 |
| Poundridge #1 Transf Repl - Brewster | $ 197 |
| Kattelville 115kv Ckt Switcher Addition | $ 191 |
| Cobb Hill Tap (Ckt 609) Conversion | $ 179 |
| Silver Creek Sub New Transformer | $ 174 |
| Afton Substation, Add New 34.5kV Ckt | $ 172 |
| Werhle Dr Replace Cable, Switch Gear | $ 148 |
| Cemetery Rd Bridge Dist Relocation | $ 137 |
| NERC Alert Program - NYSEG | $ 133 |
| Stonebreak Rd, Highway Relocation | $ 131 |
| DOE Stimulus Program - PMUs - NYSEG | $ 115 |
| Rolling Hills URD, Cary Rd, T/Halfmoon | $ 111 |
| 34.5kV Line 441 Transm Reloc for DOT | $ 107 |
| Cantitoe - Add 2nd 13.2kV Circuit | $ 103 |
| Transit St Sub - Relocate 12kV Ckts MGP | $ 102 |
| 115kV 911 Line Transm Line Relocation | $ 98 |

| Project Title | 2011 Actuals |
|---|---|
| Falcon Trace URD, Electric Line Ext | $ 93 |
| Bankert Rd Transformer Repl & New Ckt | $ 91 |
| New Fairview Sub Rplc Bath Muni #2 | $ 84 |
| Heather Woods PH III URD Lockport | $ 84 |
| Palmyra Sub Replace Bank #2 | $ 77 |
| Camphill Village Elec Line Ext, Mechvlle | $ 70 |
| Stone Crest Preserve URD, Elec Line Ext | $ 54 |
| Shelbourne Plastics-Tie Line & 12kv Conv | $ 52 |
| Route 67 Roundabout Hghwy Reloc - Mech | $ 50 |
| NYSDOT Hghwy Project - Rt 11 T/Ellenburg | $ (52) |
| Stephentown Sub Upgrd - Beacon Flywheel | $ (52) |
| Patnode Rd Electric Line Ext - Platts | $ (84) |
| I-99 Highway Relocation | $ (112) |
| LFTC 115kV Interconnection | $ (222) |
| L546 Transm Reloc NYSDOT Rt 15 Ph 3 | $ (250) |
| Elmira - Relocate OH to UG - C/Corning | $ (349) |
| Project Pilgrim 115kv Feed | $ (470) |
| L546 Transmission Relocation NYSDOT | $ (682) |
| | |
| Other Projects Summary | $ (945) |
| **Total** | **$ 14,647** |

Schedule C-2
Other projects

RG&E

| Project Title | 2011 Actuals |
|---|---|
| South Lincoln Rd - Relocate Electric Facilities - Rochester | $ 394 |
| Culver Rd - Relocate Electric Facilities - Rochester | $ 321 |
| Walmart Northgate Plaza Cir 5255 - Relocate Electric Facilities - Rochester | $ 250 |
| Salter Road - Relocate Electric Facilities - Rochester | $ 241 |
| Westfield Street (Chili - Brooks) - Relocate Electric Facilities - Rochester | $ 236 |
| Erie Sta & West Henrietta Rd Hwy Reloc | $ 208 |
| I-590 @ Winton Rd - Relocate Electric Facilities - Rochester | $ 202 |
| Mt Hope Ave (Elmwood - Rossiter) - Relocate Electric Facilities - Rochester | $ 159 |
| Broad Street Tunnel - Relocate Electric Facilities - Rochester | $ 79 |
| Carter St. - Relocate Electric Facilities - Rochester | $ 75 |
| Dorsey Road- Relocate Electric Facilities - Rochester | $ 60 |
| Jefferson Rd Ph 2 (Marketplce - Saginaw) - Relocate Electric Facilities - Rochester | $ 46 |
| Other Relocate Electric Facilities - Rochester projects | $ 70 |
| Station 45 Substation Modernization | $ 253 |
| Station 5 Substation Modernization | $ 59 |
| Sta. 37 Substation Modernization | $ 95 |
| Sta.34 Substation Modernization | $ 54 |
| Other Substation Modernizatoin Projects ( 7 Substations) | $ 118 |
| Sonet Ring Optics Upgrade | $ 743 |
| Station 121 & 168 New Capacitors - DOE (590600) | $ 670 |
| Station 42 New Capacitors | $ 590 |
| Station 13A - JMUX Core Network Build-Out | $ 434 |
| Station 125 - New 34.5kV Capacitors | $ 339 |
| Sta 42 Emergency Replacement of 2T Xfrmr | $ 276 |
| Fillmore Communications Reliability | $ 257 |
| Stations 127 New 34.5kV Capacitors | $ 240 |
| Station 194 - 34kV Cap Bank | $ 221 |
| New Bulk Transformer Spare (Station 80) | $ 221 |
| Station 37 - Repl Circuit Breakers | $ 220 |
| Station 180 - 34kV cap Bank | $ 215 |
| Stations 198 New 34.5kV Capacitors | $ 213 |
| Battery Replacement Program | $ 203 |
| Station 178 - 34kV Cap banks | $ 183 |
| Station 120 - New 34.5kV Capacitors | $ 180 |
| Sta 210. Replace oil breaker w/ recloser | $ 179 |
| RG&E Line 727 35 kV Cable Replacement | $ 167 |
| Station 181 - 34kv Cap bank | $ 160 |
| Station 218 - 34kV Cap Bank | $ 145 |
| Victor Area 5 RTU Connectivity Project | $ 133 |
| Sectionalize 115kV Circuit 917 (sta. 7 - Sta. 418) | $ 120 |
| Stations 173 New 34.5kV Capacitors | $ 105 |
| Sta 262 New 115 34.5 kV Substation | $ 95 |
| Geneseo Area RTU Connectivity Project | $ 103 |
| Station 168 Srvc Area Reinfrcmnts | $ 93 |
| RGE Oil Switch Replacements | $ 87 |
| Station 95 Transformer Addition | $ 69 |

| Project Title | 2011 Actuals | |
|---|---|---|
| FERC 'Bright Line' Compliance Prjct-RGE | $ | 65 |
| Station 49 Transformer Addition | $ | 63 |
| Station 136 - Add Transformer & 12kV Circuit | $ | 52 |
| Lines 911 - 932 - Add Oil Circulation to Pipe Cable - Rochester | $ | 60 |
| Fiber Optic Cable replacement for Stations 42, 124, 204 | $ | 47 |
| Circuit 430 - Rebuild and Convert to 12kV - Rochester | $ | 45 |
| Substation Transformer Oil Containment | $ | 45 |
| Other Substation Projects | $ | 114 |
| Other Transmission Projects | $ | 91 |
| **TOTAL RG&E Electric** | $ | 10,164 |

**New York State Electric & Gas Corporation**
**Rochester Gas and Electric Corporation**
**2011 TDIRP Investments**
**Schedule C-3**

March 1, 2012

# 2011 TDIRP Investments
## NYSEG Electric
## ($000)

NYSEG Distribution

| Category | Description | Actuals |
|---|---|---|
| Small conductor and aged poles | Replace outdated pole and small conductor | $25,565 |
| Recloser Installations | Install or replace reclosers | 805 |
| Electric Services | Replace open wire services | 2,157 |
| Group Operated Switches | Install or replace Group Operated Switches | 448 |
| Fault Indicator | Install at new locations for improved fault locating | 118 |
| Other Distribution Projects | Various | 380 |
| Subtotal | | **$29,473** |

NYSEG Substation

| Category | Description | Actuals |
|---|---|---|
| Circuit Breaker Replacements | Replace obsolete and unmaintainable substation breakers. | $1,338 |
| Transformer Replacements | Replace unmaintainable substation transformer. This project includes the Robinson Road 230kV transformer progress payment and engineering and design. | 1,168 |
| General Structure Replacements | Replace failed and unmaintainable substation structures. | 50 |
| Relay Replacements | Replace obsolete and unmaintainable substation relay equipment. | 203 |
| Animal Protection Additions | Install animal protective fences | 95 |
| Insulator & Switch Replacements | Replace obsolete and unmaintainable insulator and switches. | 1,917 |
| Digital Monitoring Equipment Replacements | Replace obsolete and unmaintainable substation digital and analog monitoring equipment | 743 |
| Battery System Replacements | Replace obsolete and unmaintainable substation battery systems. | 135 |
| Instrument Transformer Replacements | Replace obsolete and unmaintainable substation instrument transformers. This project includes coupling capacitor voltage transformers. | 118 |
| Subtotal | | **$5,767** |

NYSEG Transmission

| Project | Description | Actuals |
|---|---|---|
| Fleming - Venice Pole replacements | Replacement of deteriorated poles on the 521 34.5kv circuit in Auburn Division | $217 |
| Rebuild Porters Corners - Dundee (3.5 miles of 34.5kv) | Replacement of 3.5 miles of the 594 34.5kv circuit in Geneva Division | 1,208 |
| Structure change outs on 968 to support Greenidge | Replacement of deteriorated structures on the 968 115kv circuit in Geneva | 546 |
| Gowanda Transmission Pole Replacements | Replacement of deteriorated poles on the 501 34.5kv circuit in Lancaster Division | 14 |
| Other fixes to issues identified by division line inspections (switch, pole and insulator replacements) | Replacement of deteriorated poles, broken insulators and inoperable switches. | 1,759 |
| Subtotal | | **$ 3,744** |

| | | |
|---|---|---|
| **NYSEG TDIRP TOTAL** | | **38,984** |

# 2011 TDIRP Investments
# RG&E Electric
# ($000)

RG&E Distribution

| Category | Description | Actuals |
|---|---|---|
| Small conductor and aged poles | Replace outdated pole and small conductor | $8,349 |
| Recloser Installation | Install or replace reclosers | 1,012 |
| XLP cable | Replace XLP cable sections that could not be treated with Cable Cure due to numerous splices and faults. | 579 |
| Arc Series Lighting | Convert remaining Arc Series lights located in Brighton and Pittsford | 43 |
| Underground Distribution Lines | Replace Lead cable and miscellaneous equipment | 115 |
| Circuit 7703 | Provide 3 phase back-up source for circuit 7703 | 503 |
| Other Distribution Projects | Various | 765 |
| Subtotal | | **$11,366** |

RG&E Substation

| Category | Description | Actuals |
|---|---|---|
| Circuit Breaker Replacements | Replace obsolete and unmaintainable substation breakers. | $4,715 |
| Transformer Replacements | Transformer replacements and addition of Hydra monitoring systems for early detection of fault conditions via transformer oil gas monitoring | 919 |
| Relay Replacements | Replace obsolete and unmaintainable substation relay equipment. | 334 |
| Animal Protection Additions | Install animal protective fences. | 83 |
| Insulator & Switch Replacements | Reliability Improvement- Replace obsolete and unmaintainable substation insulators and switches. | 217 |
| Surge arrester Replacements | Replace obsolete and unmaintainable substation surge arresters. | 10 |
| Instrument Transformer Replacements | Replace obsolete and unmaintainable substation instrument transformers. | 42 |
| Subtotal | | **$6,320** |

RG&E Transmission

| Project | Description | Actuals |
|---|---|---|
| 34.5kV Gas Filled Cable Replacement Circuit 718 | Replace gas filled cable | $1,011 |
| 34.5kV Gas Filled Cable Replacement Circuit 759 | Replace gas filled cable | 412 |
| 34.5kV Gas Filled Cable Replacement Circuit 722 | Replace gas filled cable | 641 |
| 34.5kV Gas Filled Cable Replacement Circuit 723 | Replace gas filled cable | 234 |
| 34.5kV Gas Filled Cable Replacement Circuit 725 | Replace gas filled cable | 24 |
| Browns Race 11kv and 34kV Cable Replacement | Replace five cable circuits that were laying on the bottom of the 600' raceway in a bad physical condition. The cables were replaced with new EPR all di-electric cable and relocated in a concrete encasement along the side wall of the raceway | 29 |
| Replace woodpecker damaged poles on 728 34.5kV circuit | Replace deteriorated wood poles | 7 |
| Other fixes to issues identified by line inspections (switch, pole and insulator replacements) and miscellaneous projects | Replacement of deteriorated poles, broken insulators and inoperable switches | 758 |
| Subtotal | | **$3,116** |

| | | |
|---|---|---|
| **RG&E TDIRP TOTAL** | | **20,802** |

**New York State Electric & Gas Corporation**
**Rochester Gas and Electric Corporation**
**2011 Division Projects**
**Schedule C-4**

March 1, 2012

2011 Division Projects
NYSEG Electric
($000)

| NYSEG | 2011 Actual | 2011 Plan |
|---|---|---|
| | | |
| Substations | $1,047 | $977 |
| Transmission Line/Government Highway Major Projects | 1,387 | 544 |
| Distribution Line | 11,973 | 9,935 |
| Government Highway Minor | 1,121 | 468 |
| Industrial/Commercial | 1,249 | 779 |
| Residential Line Extensions | 2,331 | 2,340 |
| Service Connects | 1,978 | 2,263 |
| Street Lighting | 875 | 1,172 |
| Transformers, Meters, Regulators, Capacitors and Protection | 16,215 | 19,429 |
| Storm | 6,872 | 1,093 |
| **TOTAL** | **$45,048** | **$39,000** |

2011 Division Projects
RG&E Electric
($000)

| RGE | Dec 2011 Actual YTD | Dec 2011 Plan YTD |
|---|---|---|
| | | |
| Substations | $581 | $663 |
| Transmission Line/Government Highway Major Projects | 676 | 596 |
| Distribution Line | 4,812 | 5,878 |
| Government Highway Minor | 410 | 286 |
| Industrial/Commercial | 1,147 | 870 |
| Residential Line Extensions | 1,410 | 1,191 |
| Service Connects | 538 | 851 |
| Street Lighting | 265 | 816 |
| Transformers, Meters, Regulators, Capacitors and Protection | 5,622 | 5,679 |
| Storm | 270 | 170 |
| **TOTAL** | **$15,731** | **$17,000** |

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

# NYSEG - Gas Capital Investment
## ($000s)
## December Results

**Projects/Programs in Appendix L**

| Project | YTD Actuals | YTD Forecast | YTD Variance | Variance Explanation - +/-10% | In Service Date |
|---|---|---|---|---|---|
| **Canandaigua Cast Iron Main Replacement** | $ 855 | $ - | $ 855 | Project was initiated during 2011 when funding became available. | |
| **Rushville to Canandaigua Sys Reinf - Extend Ga** | $ 657 | $ 1,117 | $ (460) | Project is in construction. Schedule extended into 2012 to accommodate continuing acquisition of easements. | Jun-12 |
| **Seneca West-Pipeline Interconnect to Elmira** | 1,205 | 5,792 | (4,587) | Project permitting phase is taking longer than originally planned. | Oct-12 |
| **Leak Prone Main Replacement** | 15,362 | 9,200 | 6,162 | Additional leak prone main replacements undertaken | Various |
| **Service Renewal tied to Leak Prone Program** | 5,263 | 3,147 | 2,116 | Additional services replacements tied to additional leak prone main replacement projects | Various |
| **NYSEG Transmission Casing Replacement Program** | 876 | - | 876 | Program detail was developed during the year. Funding was originally included in other projects category. | |
| **SCADA System Migration Project** | 713 | 2,249 | (1,536) | Processing of the contract with vendor took longer than originally planned. The project schedule and budget will continue into 2012. | Dec-12 |
| **Services** | 5,652 | 3,176 | 2,476 | Customer requests for new services were more than planned. | Various |
| **Meter** | 5,630 | 5,000 | 630 | Purchased additional meters to accommodate flood damage repairs. | Various |
| **Dist. Mains New Bus.** | 1,469 | 1,400 | 69 | | Various |
| **Fleet** | 1,458 | 1,637 | (179) | Vehicles ordered were not received or invoiced in 2011. | Various |
| **Common Projects (Schedule D-1)** | 2,907 | 2,053 | 854 | Includes costs for SAP Re-architecture Project and additional facilities and customer service projects. | Various |
| **Other projects (Schedule D-2)** | 4,086 | 8,428 | (4,343) | Delays due to flood recovery. | Various |
| **Total** | $ 46,133 | $ 43,200 | $ 2,933 | | |
| **Unassigned Projects** | - | 2,000 | (2,000) | | |
| **Total** | $ 46,133 | $ 45,200 | $ 933 | | |

# RG&E - Gas Capital Investment
## ($000s)
## December Results

**Projects/Programs in Appendix L**

| Project | YTD Actuals | YTD Forecast | YTD Variance | Variance Explanation - +/- 10% | In Service Date |
|---|---|---|---|---|---|
| **Southwest 60 System Improvement** | 3,791 | 3,460 | 331 | The project was accelerated. | May-12 |
| **Andrews Street & University Avenue** | 527 | - | 527 | Project was identified by municipality in 2011. | |
| **Ridgeway Avenue Highway Improvement** | 630 | 250 | 380 | Project construction started ahead of original schedule due to earlier receipt of permits | |
| **Transmission Casing Repl Prgrm** | 1,344 | 1,430 | (86) | | Various |
| **Winton Road South @ Rt 590 20" Main** | 1,279 | 1,300 | (21) | | |
| **Leak Prone Main Replacements** | 8,344 | 8,940 | (596) | | Various |
| **Gas Regulator Station Replacement Program** | 766 | $ 795 | $ (29) | | Various |
| **Byron Bergen CSD New Gate Station** | 509 | 0 | 509 | Unplanned customer requested project | Various |
| **Services** | 6,849 | 6,480 | 369 | | Various |
| **Meters** | 2,979 | 2,915 | 64 | | Various |
| **Fleet** | 1,112 | 1,011 | 101 | Vehicles ordered were not received or invoiced in 2011. | Various |
| **Common Projects (Schedule D-1)** | 3,894 | 1,513 | 2,381 | Includes costs for SAP Re-architecture Project added during the year and additional facilities and customer service projects. | Various |
| **Other Projects (Schedule D-2)** | 6,011 | 6,309 | (298) | | |
| | $ 38,035 | $ 34,403 | $ 3,632 | | |

Schedule D-1
Gas Common

NYSEG

| Project Title | 2011 Actuals | |
|---|---|---|
| NYSEG GENERAL EQUIPMENT BLANKET | $ | 562 |
| NYSEG GENERAL LAND AND STRUCTURE CORP - Minors | $ | 72 |
| NYSEG GENERAL LAND & STRUCT ELMIRA - Minors | $ | 60 |
| NYSEG GENERAL LAND & STRUCT BREWSTER - Minors | $ | 41 |
| NYSEG GENERAL LAND & STRUCT HORNELL - Minors | $ | 31 |
| NYSEG GENERAL LAND & STRUCT ONEONTA - Minors | $ | 24 |
| NYSEG GENERAL LAND & STRUCT CORTLAND - Minors | $ | 23 |
| NYSEG GENERAL LAND & STRUCT LANCASTER - Minors | $ | 23 |
| NYSEG GENERAL LAND & STRUCT BINGHAMTON - Minors | $ | 21 |
| NYSEG GENERAL LAND & STRUCT GENEVA - Minors | $ | 15 |
| NYSEG GENERAL LAND & STRUCT MECHANICVILL - Minors | $ | 13 |
| Other General Land & Structure Projects - Minors | $ | 12 |
| Elmira SC - Heating Fuel Conversion | $ | 112 |
| Purchase Lancaster Service Center | $ | 95 |
| Plattsburgh SC - Pavement Restoration | $ | 94 |
| Binghamton SC - Vehicle Access & Parking | $ | 77 |
| ECC - UPS 2 Replacement | $ | 69 |
| JC Training Yard Drive - Paving Reconstr | $ | 46 |
| Pawling Operations Building Renovations | $ | 43 |
| Elmira SC - Emergency Sump Pump System | $ | 42 |
| Ithaca - Chiller Replacement | $ | 42 |
| Kirkwood General Office - East Lighting | $ | 41 |
| Kirkwood Genl Ofc - Cooling Towers 3&4 | $ | 41 |
| NYSEG Ice Machine Upgrades | $ | 34 |
| Kirkwood Genl Ofc - Cafeteria Renovation | $ | 28 |
| Plattsburgh Service Center Lighting Upgr | $ | 22 |
| Mechanicville SC - Roof Replacement B&C | $ | 21 |
| NYSEG ECC Floor Covering Replacement | $ | 15 |
| Other Facilities Projects | $ | 14 |
| Ithaca Cooling Tower Replacement | $ | 14 |
| Other Major Facility Projects | $ | 11 |
| APPS-FIELD AUTOMATION | $ | 307 |
| APPS-SAP REARCHITECTURE PROJECT | $ | 129 |
| NYSEG 2011 PC Demand | $ | 49 |
| NYSEG PBX Replacement - Geneva | $ | 38 |
| NYSEG HARDWARE BLANKET | $ | 34 |
| Toughbook Refresh 2011 | $ | 17 |
| Other IT Projects | $ | 6 |
| NYSEG Virtual Call Platform | $ | 117 |
| NY Kiosks - NYSEG | $ | 75 |
| Binghamton ECC Console Replacement | $ | 28 |
| Rate Case Implementation - NYSEG | $ | 15 |
| Other Miscellaneous Common Projects | $ | 336 |
| **Total NYSEG Common - Gas** | $ | 2,907 |

Schedule D-1
Gas Common

RG&E

| Project Title | 2011 Actuals | |
|---|---|---|
| General Equipment & Tools | $ | 680 |
| West Ave - Call Center Upgrade | $ | 328 |
| RGE - STRUCTURES - MINOR BLANKETS | $ | 308 |
| 89 East Ave - Ceiling-Lightng-Furn Upgra | $ | 264 |
| 89 East Ave - 3rd Floor Renovation | $ | 219 |
| 89 East Ave - 4th Fl- Renovation | $ | 176 |
| 89 East Ave - 7th Fl - Renovation | $ | 100 |
| 89 East Ave - 8th Fl- Renovation | $ | 100 |
| 89 East Ave - Men's & Women's Showers | $ | 48 |
| Eastern Monroe - Plank Rd Paving | $ | 40 |
| Fillmore - Storage Warehouse Renovations | $ | 38 |
| 89 East Ave - DataCtr, AECC, CallCtr Upg | $ | 36 |
| Scottsville Rd - New Office Space | $ | 30 |
| 89 East Ave - 6th Fl Telepresence Room | $ | 28 |
| Other Miscellaneous Faciltiy projects | $ | 27 |
| OPS-2011 PC REFRESH-Hardware | $ | 112 |
| IT Minor Projects | $ | 11 |
| APPS-FIELD AUTOMATION REPL | $ | 264 |
| OPS-TOUGH BOOK LC REFRESH-HW | $ | 130 |
| INFR-OBS NETWORK EQUIP REPLC | $ | 123 |
| APPS-SAP REARCHITECTURE | $ | 108 |
| Other Miscellaneous IT Projects | $ | 3 |
| RGE ECC Radio Dispatch Console Upgrd-Ins | $ | 218 |
| RGE Virtual Call Platform | $ | 167 |
| NY Kiosks - RGE | $ | 126 |
| Other Common Projects | $ | 209 |
| **Total RG&E Common - Gas** | $ | 3,894 |

Schedule D-2
Other projects

NYSEG

| Project Title | 2011 Actual |
|---|---|
| NYSEG DIST MAINS NEW BUS PLANNING BLANKE | 101 |
| NYSEG DIST MAINS REPLACE GENEVA | 61 |
| NYSEG DIST MAINS REPLACE ITHACA | 46 |
| NYSEG GOVERNMENT JOBS BLANKET | 169 |
| NYSEG Gas Service Regulators Blanket | 200 |
| Gas Const. & Maint: Transmission | 93 |
| NYSEG Reg. Station Program Upgrades | 378 |
| NYSEG Mains Replacement-Corporate | 287 |
| NYSEG Obsolete Regulator Repl Program | 68 |
| Gas Regulator Repl Prog - Reg Stations | 350 |
| Field Regulator Station Upgrade Program | 79 |
| Pendleton Reinforcement-Extend Gas Mains | 313 |
| Royalton Pipeline Launcher Receiver Inst | 169 |
| NYSEG Odorizer Replacement Program | 202 |
| Gas Reg Repl Prog - Regulator Stations | 133 |
| Champlain Station Heater Replacement | 332 |
| Gas Main Ext State Route 22 Plattsburgh | 213 |
| Chenango River Transmission Line Reloc | 412 |
| September 8, 2011 Flood Event - Gas | 396 |
| NYSEG Misc Gas Projects | 86 |
| **Total NYSEG Projects** | **4,087** |

Schedule D-2
Other projects

RG&E

| Project Title | 2011 Actual |
|---|---|
| RGE - DIST MAINS NEW BUS PLANNING | 111 |
| RGE - GAS REGULATORS | 107 |
| Gas Const. & Maint: Distribution | 101 |
| RGE - GOVERNMENT JOBS - CENTRAL | 361 |
| RGE - DIST MAINS REPL CENTRAL | 361 |
| Winton Rd @ Rt 590 Main & Reg Repl | 62 |
| Jefferson Ave - Perinton, Reloc Gas Main | 378 |
| NYS Route 19, Brockport | 69 |
| Cast Iron Main Replacment Program | 298 |
| University Ave 2009 City St Reconst | 277 |
| Rt 31F Bridge over Irond Crk - Relc Gas | 213 |
| Westfield Rd - Reloc Gas Mains | 72 |
| Mount Hope Ave, replace Gas Mains | 130 |
| Rte 36 Brdg Ovr Genesee Rvr-Reloc Gas Mn | 306 |
| Westfall Rd, Reloc Gas Mains | 292 |
| Church St Victor, Reloc Gas Mains | 96 |
| East River Road (Hen) - Systm Rnfrcment | 166 |
| Paul Rd & Jet View Drive, Extnd Gas Mn | 254 |
| Thruway Park Dr & Hendrix Repl Gas Main | 341 |
| Washington ST, Extend Gas Mains | 40 |
| Roch System RTU Replacement Prgrm | 55 |
| Salter Road - Rt 414 to Lasher Rd | 86 |
| Penfield Road, Install 16" Valve | 282 |
| New Empire West Gate Sta | 287 |
| Ridge Road East - Replace Gas Mains | 299 |
| Telephone Rd Gas Main Extension | 123 |
| Chili Riga Townline Rd Reg Sta | 159 |
| RGE - DIST MAINS NEW BUS CENTRAL | 650 |
| RGE Misc Gas Projects | 33 |
| **Total RGE Gas Projects** | **6,010** |

**New York State Electric & Gas Corporation**
**Rochester Gas and Electric Corporation**
**Annual Capital Expenditures Report**
**Schedule E**

## STATUS OF THE AUBURN 345 KV SOURCE PROJECT

- NYSEG plans to begin detailed engineering for the Auburn 345 kV Source Project (the "Project") in March 2012.
- NYSEG plans to file for an Article VII Certificate of Environmental Compatibility and Public Need in March 2013.
- The Project falls under the NYISO requirements for a System Impact Study. The Project will be included in NYSEG's Local Transmission Plan for any studies that include the proposed in-service date of December 31, 2016.
- NYSEG plans to procure materials and supplies for the Project beginning in September 2014.
- NYSEG plans to begin construction in April 2015.