



April 1, 2011

VIA ELECTRONIC MAIL

Honorable Jaclyn A. Brilling
Secretary
New York State Public Service Commission
Three Empire Plaza
Albany, New York 12223

Re: Case 07-M-0906 - New York State Electric & Gas Corporation and
Rochester Gas and Electric Corporation - Compliance Filing - Five-Year
Capital Expenditure Forecasts

Dear Secretary Brilling:

Pursuant to Appendix 2, Paragraph 2(d) of the New York State Public Service Commission's Order Authorizing Acquisition Subject to Conditions in Case 07-M-0906, New York State Electric & Gas Corporations ("NYSEG") and Rochester Gas and Electric Corporations ("RG&E") (together the "Companies") hereby file a Five Year Capital Investment Plan ("Plan") that contains respective five-year forecasts of their planned electric system and gas systems.¹ This Plan document presents a comprehensive capital investment plan for the electric transmission, distribution and generation and the gas transmission and distribution businesses of NYSEG and RG&E for the period 2011 through 2015. This Plan positions NYSEG and RG&E to continue to provide safe and reliable service to customers.

Because the attached report provides an assessment of the Companies' transmission and distribution system, including certain contingency situations, the Companies are concurrently submitting a request to the Record Access Officer of the State of New York Department of Public Service for trade secret protection for redacted data pursuant to 16 NYCRR XX 6-1.3.

¹The variance information requirement noted in Appendix 2, Paragraph 2(d) was fulfilled with the Companies March 1, 2011 filing in Cases 09-E-0715, 09-G-0716, 09-E-0717, 09-G-0718.

Honorable Jaclyn A. Brilling
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The Companies welcome the opportunity for dialogue with Staff on the contents of this Plan.

If you have any questions concerning this filing, please contact me at (607) 762-8710.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Lori A. Cole".

Lori A. Cole
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Enclosure

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**NYSEG and RG&E
CAPITAL INVESTMENT PLAN
2011-2015**

April 1, 2011



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EXECUTIVE SUMMARY

This document presents a comprehensive Capital Investment Plan for the electric transmission, distribution and generation and the gas transmission and distribution businesses of Iberdrola USA's New York operating companies, New York State Electric and Gas ("NYSEG") and Rochester Gas and Electric ("RG&E"), for the period 2011 through 2015 (the "Plan"). This Plan positions NYSEG and RG&E (the "Companies") to continue to provide safe and reliable service to customers. This Plan is consistent with the vision expressed in the Code of Ethics of Iberdrola and its group of companies and the mission of Iberdrola USA, as adopted by NYSEG and RG&E, both shown below:

Iberdrola Code of Ethics:

"We aspire to be the preferred global energy company because of our commitment to the creation of value, quality of life, the safety of people and of supply, the protection of the environment and customer focus."

Iberdrola USA Mission:

"Iberdrola USA is a team of dedicated individuals working as one to deliver value to our customers, employees and shareholders. By providing outstanding customer service and exceptional reliability, while holding safety and the environment in high regard, we aspire to be a world-class energy company."

This Plan is another step of towards becoming world-class energy companies. To that end, the Companies propose investing \$1.7 billion in the electric delivery system and in generation projects and \$0.4 billion in the gas delivery system over the five-year period.

The projects and programs proposed in this Plan are what the Companies determine today is needed to deliver safe and reliable service to customers. The Companies continually are reevaluating and reprioritizing projects, and the later years of this Plan will likely change as a result of this reevaluation and enhanced asset management competencies the Companies are building. The electric projects reduce the risk of service outages in the event of contingency situations. The gas projects continue on the path of replacing leak prone mains and services. In addition, there are several projects that begin the process of bringing the electric and gas delivery systems up to modern day standards by employing software, IT platforms and expanded automation of systems.

The Plan is for a five year period and contains projects that will help achieve the following strategic objectives of NYSEG and RG&E:

- Meet the electrical and natural gas needs of our customers



- Achieve best in class service reliability and quality
- Replace obsolete equipment and facilities
- Improve system effectiveness and efficiency through automation
- Sustain the environment
- Improve safety

This Capital Investment Plan will remain flexible to meet the needs of our customers, regulators and other stakeholders.



1 INTRODUCTION

This Plan contains projects and programs needed for the Companies to deliver safe and reliable service to customers. Included in this Plan are so-called Appendix L projects,¹ with updated costs and schedules, and additional projects and programs that enable the accomplishment of the strategic objectives. During the five year period, the Companies will reassess needs and reprioritize projects to ensure that investments achieve the strategic objectives cost effectively for customers. Below is a summary of the Plan by year.

Table 1.1 Capital Investment Plan by Year (Dollars in Millions)

Company	2011	2012	2013	2014	2015	TOTAL
NYSEG Electric	174.2	188.0	167.3	164.4	182.0	875.9
RG&E Electric	171.5	178.6	201.4	215.4	122.5	889.4
Subtotal- Electric	345.7	366.6	368.7	379.8	304.5	1,765.3
Appendix L - Electric	283.7	265.9	318.4			
NYSEG Gas	45.2	40.3	41.6	43	44	214.1
RG&E Gas	34.4	33.3	36.9	38.9	39.3	182.8
Subtotal- Gas	79.6	73.6	78.5	81.9	83.3	396.9
Appendix L - Gas	77.6	73.6	78.5			
TOTAL	425.3	440.2	447.2	461.7	387.8	2,162.2

The investment amount for 2011 has been approved by the Iberdrola USA Board of Directors and reflects the impacts of electric projects begun in 2010 that will continue in 2011 (so-called carryover projects). At this time, the Plan exceeds Appendix L amounts for the period 2011 through 2013. As previously discussed, the Companies will reassess needs and reprioritize projects during this five year period. With the exception of 2011, the Companies will attempt to manage this Plan to Appendix L levels. However, the Companies commit to making investments necessary for the safe and reliable delivery of service to customers. Over the five year period, NYSEG expects to invest approximately \$170 per customer per year in its electric system and \$160 per customer per year in its gas delivery system, while RG&E expects to invest

¹ The Companies entered into a Joint Proposal which was approved by the NY Public Service Commission by Order dated September 21, 2010 (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) (“Rate Order”). Contained in the Rate Order was a commitment of the Companies to invest in their electric and gas delivery systems and in their generation facilities. The list of projects and programs included in that commitment is contained in Appendix L to the Rate Order.



approximately \$475 per customer per year in its electric system and \$120 per customer per year in its gas delivery system.

As previously mentioned, this Plan is driven primarily by the Appendix L projects and programs, which for the electric system is based in large part on the 2009 NYSEG and RG&E Local Transmission Owner Planning Process and Results that covered the bulk power and local transmission systems of NYSEG and RG&E, as well as the 11 kV network facilities in the City of Rochester. It is also informed from an ongoing review and assessment of the electric and gas delivery systems and a determination of priority projects and programs.

Section 2 describes the strategic objectives of this plan which are to meet the electric and gas needs of our customers, to achieve best in class reliability and service quality, to replace obsolete equipment and facilities, to improve the effectiveness and efficiency of the electric and gas systems through automation, to sustain the environment and to have a safe system.

Section 3 of the Plan presents the electric and gas delivery systems and the electric generation facilities. It contains information about the infrastructure and issues of concern that are addressed by projects and programs contained in this Plan.

Section 4 presents the Capital Investment Plan – the projects and programs necessary to achieve the strategic objectives. There are a number of significant projects that the Companies have undertaken or will undertake during the Plan term. These projects are high priority projects that result from a prioritization approach that considers number of customer, load and hours of exposure as metrics. In addition, the Companies plan to invest in automating delivery systems in order to operate more effectively and efficiently and provide added benefits to customers. The renovation of several indoor substations is included in order to lessen the risk of outages and improve safety. The Plan also contains increased distribution pole replacements and projects to eliminate the exposure of outages in the event of transformer failures at substations feeding distribution circuits.

Section 5 contains summaries of the electric Capital Investment Plan.

1.1 OPPORTUNITIES AND CHALLENGES

The Companies face the following opportunities and challenges as they implement this Plan:

1. The Companies are developing enhanced competencies in asset management. Improvements are being made to both the way in which the Companies determine asset replacements and the methods used to optimize the portfolio of projects and programs. As this Plan proceeds, the Companies will reassess needs and reprioritize projects using these improved asset management approaches.



2. The Companies have hired an owners' engineer to help execute this Plan. Working with its owners' engineer, the Companies will be developing best in class project management approaches which will result in more effective and efficient delivery of this Plan.
3. Under FERC's recent Order No. 743-A, there is expected to be a change in the definition of Bulk Electric System to include facilities not presently so classified. If this occurs, the Companies will need to meet more stringent reliability criteria, thus requiring mitigation and upgrades in facilities, particularly 115 kV facilities, not currently considered part of the Bulk Electric System. The projects for such upgrades are not included in this Plan.
4. The Companies are making technological changes and innovations, including standardization and automation of the Companies facilities.
 - Standardization of design and equipment will result in:
 - Cost reduction in project design and construction. For instance, the implementation of the IEC 61850 protocol in new substations and substation renovations will lessen the hours needed for wiring the protection systems of the equipment.
 - Use of advanced technology, quality, standardized equipment will improve service quality and reduce the need for spares. For example, new breakers, with SF6 as insulating medium, will require less maintenance than that needed for conventional oil-filled breakers.
 - The Companies have included system control, substation and other system automation projects to provide operational benefits by bringing the Companies electric system up to modern day standards:
 - New Energy Control Center in NYSEG and RG&E. Each one will backup the other and the New Energy Control Center will address expected additional NERC and FERC requirements.
 - New and increased numbers of remote terminal units (RTUs).
 - Increasing telecommunications capability for remote control of devices on the system, particularly the distribution system.
5. The Companies are analyzing the feasibility of the following projects, which are not included in the Plan.
 - Seneca Compressed Air Energy Storage (CAES) – NYSEG is involved in Phase 1 of a three phase project to analyze building a 110 to 180 MW CAES plant. The DOE awarded NYSEG a \$29.6 M Smart Grid Demonstration Grant for this project, and NYSERDA has provided a \$1 M grant. Phase 1 includes a final engineering design including project capital costs, project financials based on the final engineering design and updated forecasts of energy market revenues, a characterization of the salt cavern to be used for air storage, draft environmental permit applications and exhibits, and a draft NYISO interconnection filing. Phase 1 will be completed by the end of 2011. Phase 2 would proceed with actual plant construction with a target in-service date of late 2014, assuming the results of



Phase 1 are acceptable. Phase 3 will involve commercial demonstration, testing, and reporting for two years following unit start up in late 2014. The project would support renewable energy production, optimize load management and provide var support, spinning reserve, black start capability and automatic generator control. The Phase 1 cost estimate is \$4.6 M, which is 50% reimbursed by DOE.

- New Unit at Station 2 – The RG&E Station 2 hydroelectric project, FERC Licensed Project #2582, is located on the Genesee River in Rochester, NY near High Falls. RG&E has been considering adding a new Unit 2 to the Station, which would include the design, installation and construction of a 6.3 MW turbine-generator, a new powerhouse adjacent to the existing Unit 1 powerhouse, a substation and system interconnect at RG&E's new Substation #137, a 14-ft diameter penstock with two butterfly valves, a modified intake and rack house structure, deepening Brown's Race power canal, and a number of environmental and public recreational improvements as required by the license amendment that FERC issued on March 11, 2009. The project is estimated to cost \$22 million.



2 STRATEGIC OBJECTIVES OF THE PLAN

The Companies will deliver this Capital Investment Plan effectively and efficiently, while accomplishing the following strategic objectives:

1. Meet the electrical and natural gas needs of our customers

The Companies have an obligation to meet the energy needs of customers. The rate of growth in electrical usage and natural gas usage has decreased from that experienced during more robust economic times. The Companies continue to experience increases in the number of customers, and the Companies expect usage per electric customer to increase by 0.5% to 1.0% per year and usage per gas customer to remain at current levels.

The Companies typically provide electric service to approximately 7,000 new electric customers 2,000 new natural gas customers, annually. The Companies also need to provide reliable and dependable service to its larger commercial and industrial customers, often requiring the upgrading of facilities, the costs of which in certain cases may be all or partially offset by contributions from customers pursuant to the Companies line extension policies. The Companies must interconnect large and small generation projects to its transmission and distribution system. In addition NYSEG plans to add an additional natural transmission gas pipeline in order to reduce overall costs to customers.

2. Achieve best in class service reliability and quality

The Plan achieves this strategic objective by the following actions:

- Reduce problems of overloads in lines and transformers under normal operating conditions at peak demand;
- Reduce problems under contingency situations (N-1); and
- Enhance operation and restoration of the system through additional automation.

3. Replace obsolete equipment and facilities

During the period 2011-2015, the Companies propose to undertake continued plans to replace outdated and near end-of-life equipment and facilities. Besides age, the criteria used to select the facilities to be replaced are:

- Equipment and facilities with high failure rates;
- Technological obsolescence (lack of spare parts);
- Facilities that are in poor condition, and maintenance of such equipment is no longer cost effective; and



- Equipment with high maintenance costs.

The Companies inspect its equipment and facilities and will replace any equipment and facilities that have reached end of life. The Companies expect such replacements may well increase as the Companies embark on an enhanced distribution inspection program whereby 20% of all distribution line facilities will be inspected annually.

The Companies have a zero accident culture. Accordingly, the Companies make improvements in their facilities to enhance safety for their people and the general public.

4. Improve effectiveness and efficiency of the network automation

The Companies continually look for ways to make operations more effective and efficient. One of those ways is through automation. The Companies plan to automate further the operations of their systems which will enhance the effectiveness with which we serve customers, enhance reliability and help the Companies to become more efficient.

Automation is used to control the substations, breakers, transformers and major points of the electric system, providing information online to the Energy Control Center regarding voltages, loads, oil temperature of transformers, on or off positions of breakers and sectionalizers and alarms when there is a failure in the system.

The main advantage from automation for customers is reducing the length of outages in distribution lines. That is because the crews restoring service can receive notification of an outage sooner than with the current system of notification (receiving a call from a customer notifying us of the outage). The reclosers on distribution lines will reduce the number of customers out of service and facilitate information about the location of the damage in the lines. The remote control of breakers will increase the effectiveness of the crews by reducing their travel time.

Investments in automation in the Plan include:

1. NYSEG and RG&E Energy Control Center Project. The design and installation of a fully integrated EMS/SCADA/DMS/OMS system that replaces the existing EMS/SCADA systems and current "Smartmap" Outage Management System.

The Energy Control Center Project is needed to resolve the following issues and will result in the following benefits:

- One integrated control center platform for NYSEG and RG&E

- Improve efficiency with a single system that is deployed across all of the Companies' system.
 - An integrated Energy Management System, SCADA, distribution management system and outage management system
 - Deployment across 100% of the Transmission and Distribution network.
- The Integration of the EMS/SCADA system with the OMS provides real time transmission, substation, and distribution situational awareness for OMS dispatchers and operators:
 - Improves the identification of interrupted equipment/circuits
 - Decreases outage restoration times
 - Improves accuracy of outage analysis engine
 - Increases general public and utility crew safety
- New infrastructure that facilitates increased automation on the transmission and distribution system while providing a robust foundation for additional automation of the system.
 - Supports substation and distribution automation:
 - Capability to monitor many more data points
 - Simplifies new RTU additions
 - Growing penetration of distributed generation - requiring better coordination of distribution-transmission to manage distributed generation upstream power flows.
 - Stronger demand-side participation, especially with electric vehicles gaining popularity.
- Outage management based on a variety of integrated inputs, including customer calls, SCADA and other devices.
- Enterprise GIS Integration:
 - Provide customers a web-based customer information portal providing full interactive services for outage management information.
 - Customer data available to OMS operators and dispatchers
 - Decrease data entry errors and database reconciliation delays
- Safe operation and maintenance of the bulk power and sub-transmission systems in full compliance with all FERC/NERC/NPCC /ISO and State regulations.
 - Accommodates likely FERC bright line ruling



All these systems will be combined and integrated into one Energy Control Center system. This project will replace the current system at NYSEG and upgrade the current Siemens system at RG&E to the Siemens Spectrum system. Each new Energy Control Center system will also be the backup for the other.

Energy Control Center systems need constant updates and improvements to remain compliant with the NERC Critical Infrastructure Protection Standards (CIPS). The Companies currently have two energy control center systems with two unique SCADA systems. With the increase in distributed generation, distribution automation, and distribution control, the Companies will be modifying these existing systems to incorporate integrated distribution management systems.

2. Remote Terminal Unit (RTU). Additional and upgraded RTU communication connectivity with substations and switching devices to resolve the following issues:
 - Improve system reliability by providing the ability to remotely monitor and control substation devices.
 - Improve system reliability by reducing outage time through increased real time situational awareness.
 - Current radio RTUs have no additional capacity, are outdated and must be replaced to accommodate automation projects.

This project, together with the telecommunications infrastructure, will provide the backbone to remotely operate other sectional devices and reduce outage times. At RG&E additional smaller radio RTUs will be installed on switching equipment at customer substation locations so there will be better visibility of the stations' operations.

3. Telecommunications for remote control. The Companies plan to build the telecommunications infrastructure necessary for the above projects. This involves the strategic addition of fiber optic, microwave links and digital radio capability, depending on security and cost effectiveness.
4. Reclosers. The Companies plan to add electronic reclosers to increase the ability to sectionalize more of the distribution system. These reclosers will reduce the number of customers out of service after a momentary outage and facilitate the location of the fault in the lines.
5. Gas SCADA System. NYSEG's Gas SCADA System (GSS) monitors and controls the gas distribution systems for NYSEG and RG&E (primary gate stations). The system is



critical to safe and reliable gas operations and needs to be upgraded due to the following reasons:

- The GSS is well beyond its expected eight year life and has been exhibiting an increased number of hardware failures. The last major upgrade was completed in 1999.
- The current server hardware, operating systems, software and security patches are unavailable because they are no longer manufactured or supported by the respective vendors.
- The Energy Control Center integration strategy described above includes off loading the remaining low pressure gas distribution from the system in Rochester to the NYSEG GSS. This additional burden will push the existing GSS beyond its design capacity.

5. Sustain the environment

The Companies comply with all environmental laws and regulations in carrying out its electric and gas delivery services.

NYSEG and RG&E will make decisions today to deliver positive long term results. The Companies will not compromise long-term impacts in pursuit of short-term results, particularly when it comes to environmental and compliance matters. Operating in an ethical manner and demonstrating a respect for the environment are pillars of our business.

The details described in the Plan support this statement. Reducing the amount of leak prone natural gas mains and services will reduce methane emissions, a known greenhouse gas. Replacing outdated and near end-of-life electrical equipment presents opportunities to recycle both the metal and oil while minimizing the use of landfills. New electrical equipment purchased will also be more energy efficient than present equipment, and will also reduce the risk of an oil spill caused by equipment failure.

The tasks in this Plan will take into account environmentally sensitive areas, from the selection of any new right-of-ways to the restoration of disturbed areas.

Finally, improvements to the hydro generation facilities will continue to provide a source of clean, renewable, green electric energy to our customers.

6. Safety

Safety is the Companies number one priority. The Companies place much emphasis on the safety of their people and the public. The Companies operate a zero accident



culture and will continue to make investments in order to assure the safe and reliable operation of the system.

No aspect of the Companies' operations is more important than accident prevention. Safety is a value that does not change. There is no job so important that established safety rules are ever compromised. Management strives to provide a hazard-free work environment, to comply with all applicable health and safety laws and regulations, and to educate employees, customers and the public about health and safety hazards associated with our operations. Further, management is committed to the recognition, assessment and control of health and safety hazards related to our facilities and operations.

3 TRANSMISSION AND DISTRIBUTION SYSTEM AND GENERATION FACILITIES

New York State Electric and Gas Corporation is a combination electric and gas utility serving approximately 858,000 electric customers and 259,000 gas customers in an area of approximately 18,000 square-miles and a population of 2.2 million people in New York State.

Rochester Gas and Electric Corporation is a combination electric and gas utility serving approximately 360,000 electric customers and 301,000 gas customers within a 2,700 square-mile service territory with a population of approximately 1 million people in upstate New York.

3.1 ELECTRIC SYSTEM

Figure 3.1 is a map of the areas in which the Companies provide electric service in New York State:

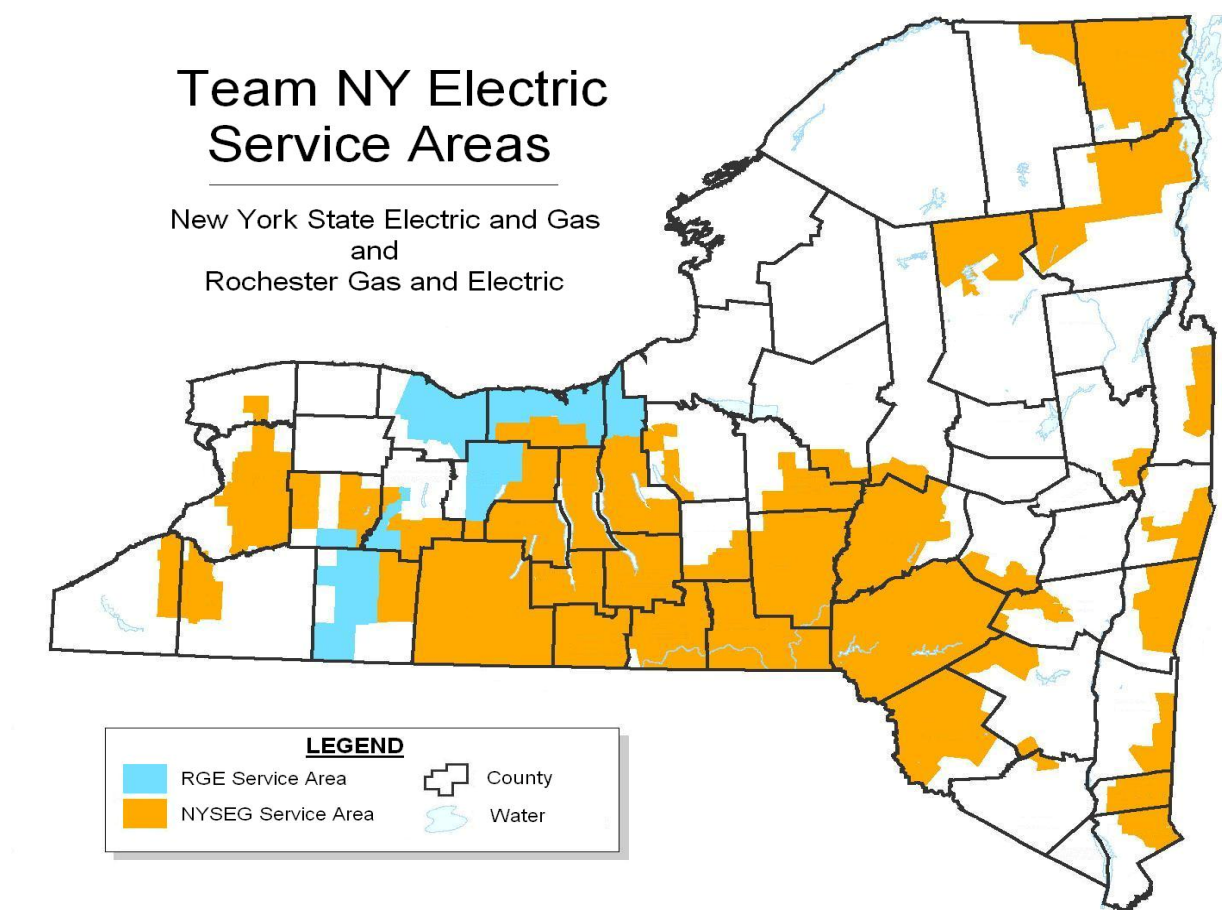


Figure 3.1 Electric Service Areas



NYSEG and RG&E provide electric delivery services to over 1.2 million customers in New York State. In 2010, the Companies delivered over 23 billion kWh of electricity to these customers.

The highest peak demand experienced by the Companies was 5,044 MW which occurred in the summer of 2006. The peak demand during 2010 was 3,178 MW in the summer and 2,931 MW in the winter for NYSEG, and 1,634 MW in the summer and 1,205 MW in the winter for RG&E. The growth in customer demand over the next five years is estimated to be slightly above 1% per year.

Table 3.1 provides information on the Electric Service Areas and Customers:

Table 3.1 Electric Service Areas and Customers

	area square miles	# cities (> 20,000 population)	# customers (000)	MWh 2010	MW peak load (2006)
NYSEG	18,359	6	858	15,479,700	3,300
RG&E	2,700	3	360	7,546,382	1,744
TOTAL	21,059	9	1,218	23,026,082	5,044

3.1.1 Electric System Infrastructure

The Companies electric system infrastructure is summarized below by system - transmission and distribution.

Table 3.2 Transmission Infrastructure

	NYSEG	RG&E	TOTAL
Lines (miles)	4,583	1,017	5,600
Substations #	106	22	128
Transformers #	273	43	316
MVA	11,126	4,143	15,269
Breakers (T&D) #	2,096	1,814	3,910
Circuits #	769	81	850
RTU' s #	31	22	53



Table 3.3 Distribution Infrastructure

	NYSEG	RG&E	TOTAL
Lines (miles)	32,881	7,597	40,478
Substations #	338	127	465
Transformers #	886	270	1,156
MVA	4,733	2,487	7,220
RTU' s #	198	114	312
Circuits #	1,391	572	1,963
Reclosers #	444	80	524
Line Transformers (#000)	302	70	372
Poles (#000)	894	254	1,148

NYSEG

The NYSEG electric system consists of 13 divisions that are fed from 345 kV, 230 kV, and 115 kV transmission facilities with a total capability of approximately 10,760 MW. NYSEG owns, in the NYSEG service territory, 59 MW of generation: 57 MW hydroelectric, and 2 MW diesel unit. The historical all-time peak load for NYSEG is 3,300 MW.

NYSEG is a member of the New York Independent System Operator (NYISO). Facilities designated in the NYISO-Transmission Owners Agreement filed and approved in FERC Docket No. ER97- 1523-000 are under the operational control of the NYISO, and NYISO provides transmission services on all NYSEG transmission facilities pursuant to the NYISO Open Access Transmission Tariff.

The reliability results for NYSEG since 2000 are in Figure 3.2, as measured by the System Average Interruption Frequency Index ("SAIFI") and Customer Average Interruption Duration Index ("CAIDI").

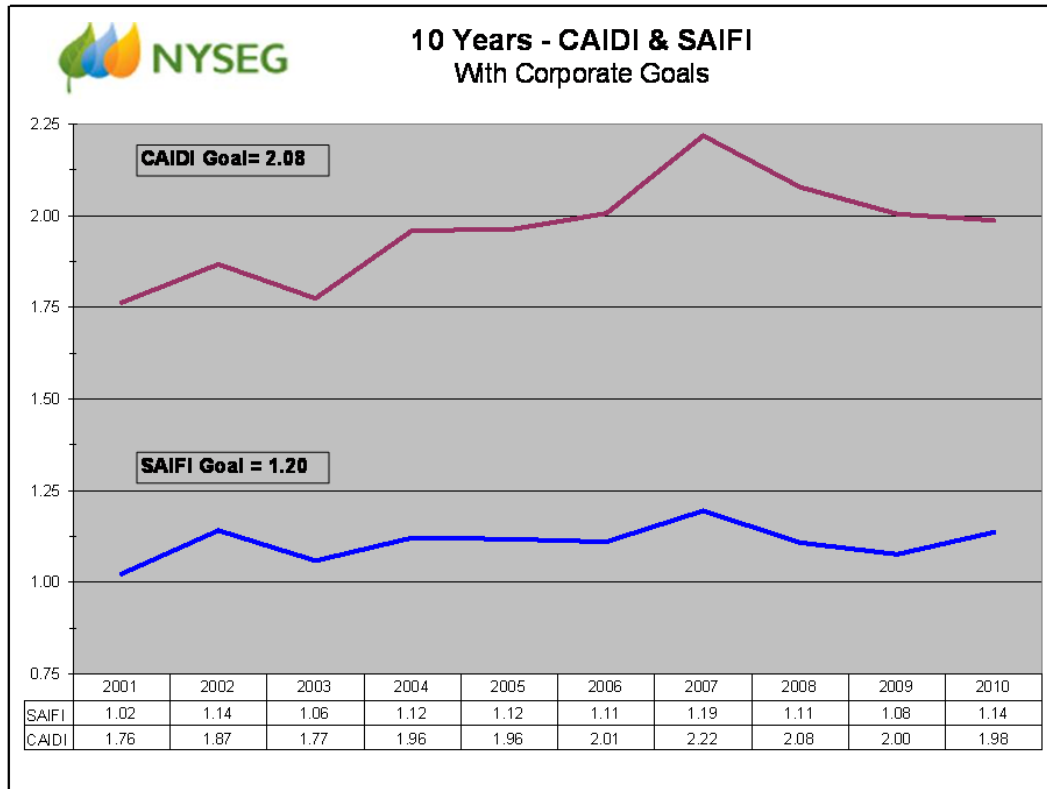


Figure 3.2 NYSEG Service Quality

RG&E

The Rochester electric system is supplied by three sources that provide a total transmission system capability of approximately 2,507 MW:

- Four bulk power transformers at Station 80, which connect to the NYPA-owned 345 kV bulk transmission system, providing approximately 1,221 MW.
- Three bulk power transformers at Station 122, which connect to the NYPA-owned 345 kV bulk transmission system, providing approximately 670 MW.
- Ginna Station, owned by Constellation Energy Nuclear Group, which can supply up to 610 MW, connects into several local RG&E 115kV substations and directly into the bulk transmission system at Station 122.

RG&E owns over 122 MW of generation: 50 MW RG&E-owned clean natural gas fired in the NYSEG service territory; 57 MW of hydroelectric facilities; and two combustion turbines (#2 CT and #13 CT) each having nameplate capacity of 15 MW.

The historical all-time peak load for RG&E is 1,744 MW.



These bulk transmission sources supply the 115 kV and 34.5kV sub-transmission system that, in turn, feed vast local distribution systems and the 11 kV network transmission system within the City of Rochester.

RG&E is a member of the NYISO. Facilities designated in the NYISO- Transmission Owners Agreement filed and approved in FERC Docket No. ER97-1523-000 are under the operational control of the NYISO, and the NYISO provides transmission services on all RG&E transmission facilities pursuant to the NYISO Open Access Transmission Tariff.

The reliability results for RG&E since 2000 are in Figure 3.3, as measured by SAIFI and CAIDI.

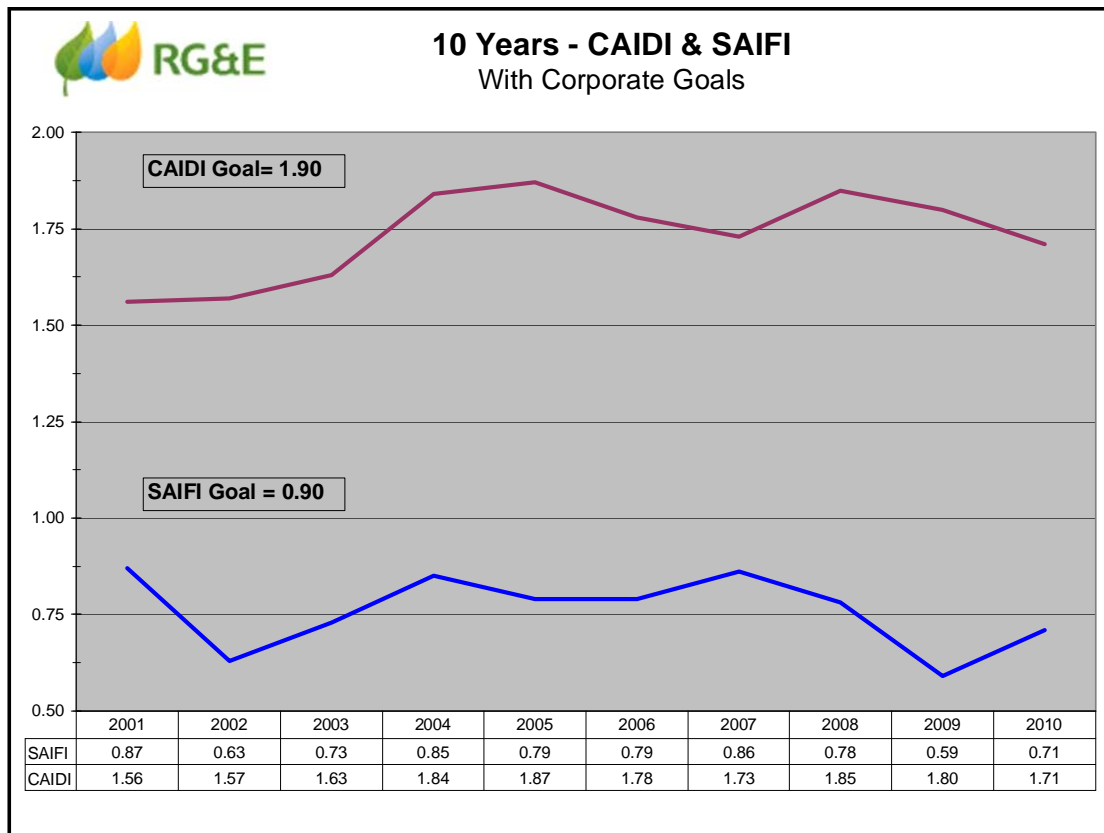


Figure 3.3 RG&E Service Quality

Maps of the Companies' transmission electric systems, showing lines and substations, are provided in Figure 3.4 and Figure 3.5, with the Rochester City Area provided in Figure 3.6

Team NY Electric

Electric Substations and Transmission Lines (34.5-69 kv)

New York State Electric and Gas
and
Rochester Gas and Electric

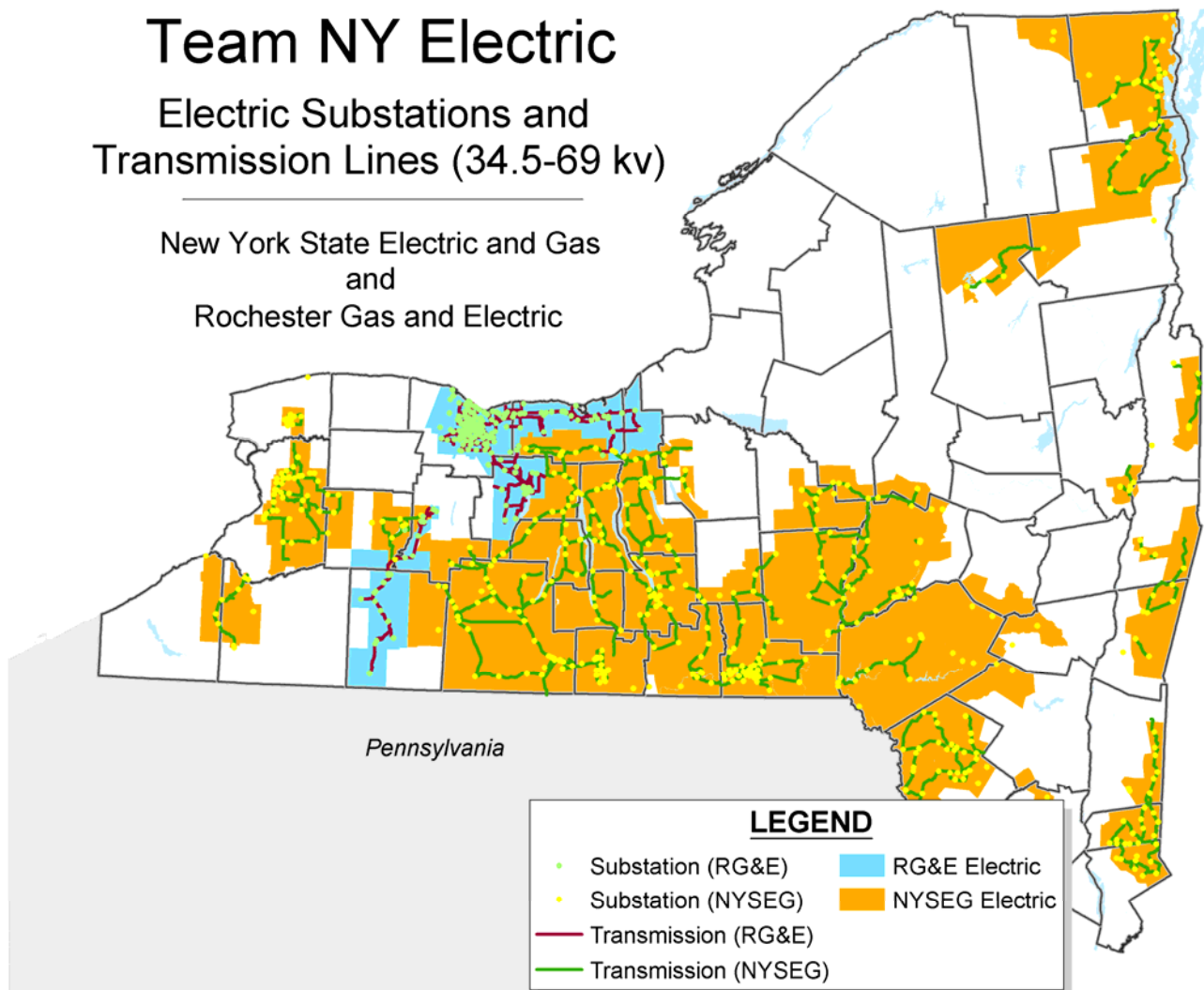


Figure 3.4 Electric Substations and Transmission Lines (34.5kv-69 kv)

Team NY Electric

Bulk Electric Substations and Transmission Lines (115-345 kv)

New York State Electric and Gas
and
Rochester Gas and Electric

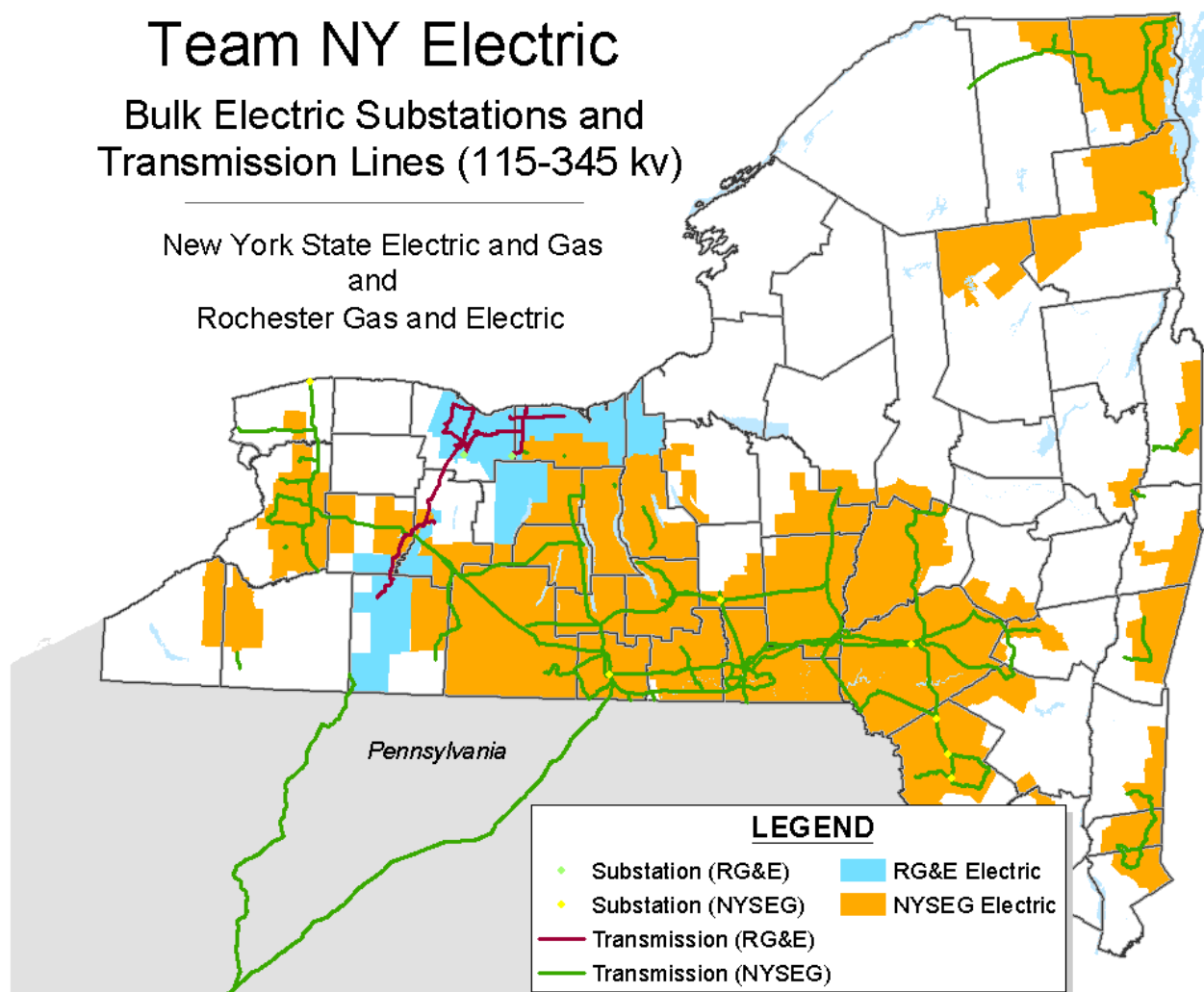


Figure 3.5 Electric Substation and Transmission Lines (115-345 kv)

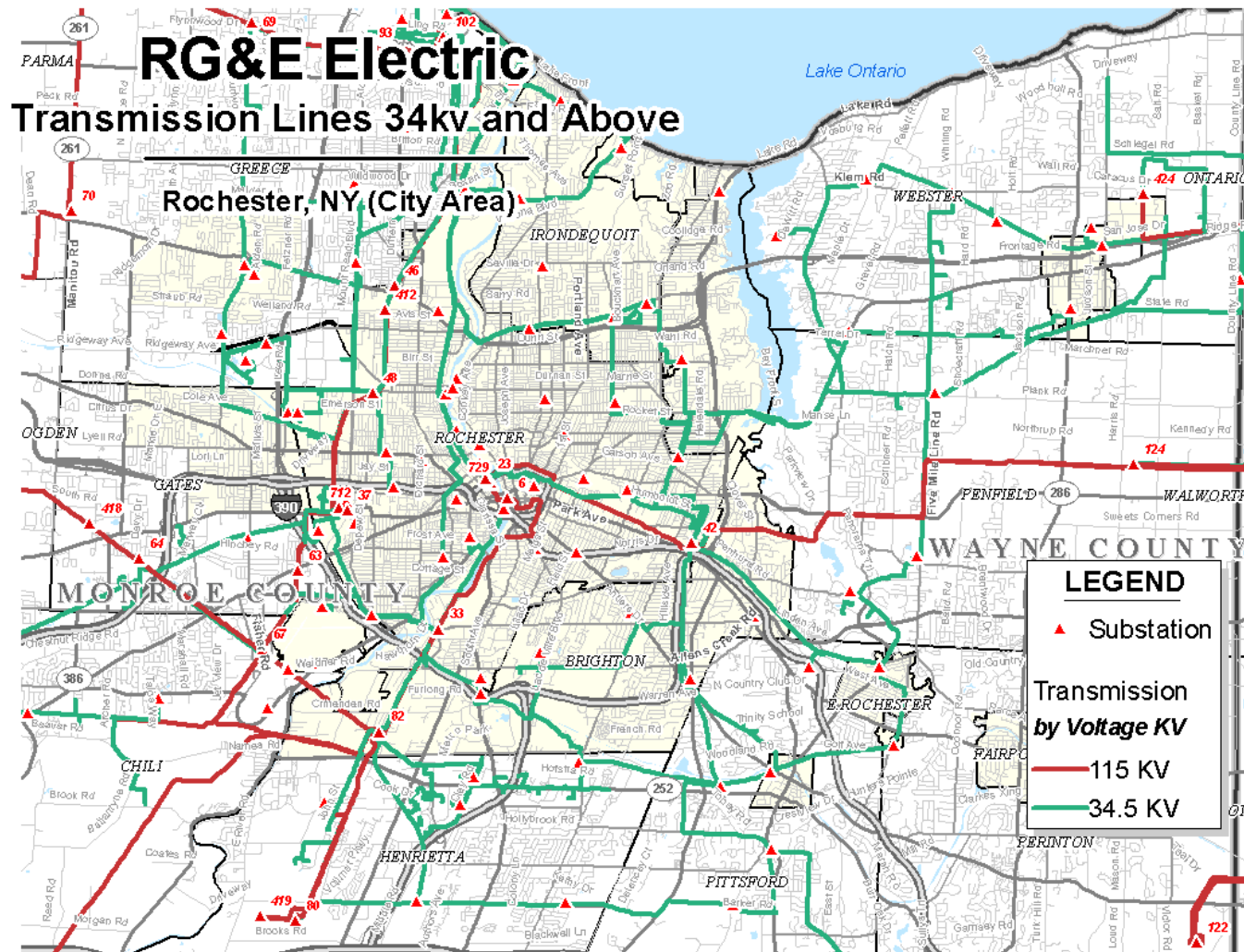


Figure 3.6 Electric Substations and Transmission Lines in Rochester City Area



3.1.2 Electric System Assessment

The Companies recognize that there are a number of concerns that could result under single element failure (in transformers or lines), contingency situations (N-1) at peak demand and a much smaller number of failures that could result under normal operating conditions at peak demand.

Transmission System Assessment

[Redacted – Critical Infrastructure Information]

Distribution System Assessment

[Redacted – Critical Infrastructure Information]



[Redacted – Critical Infrastructure Information]



3.2 GENERATION FACILITIES

NYSEG and RG&E own and operate 11 hydro generating plants in New York State, from Plattsburgh in the north through the southern tier, that include a total of 24 electric generating units with individual unit capacities ranging from 0.4 MW to 18.5 MW. They all are run-of-the-river hydro facilities. These facilities have the capacity to produce approximately 600,000,000 KWh of renewable energy annually.

All of the hydroelectric facilities are under the jurisdiction of the Federal Energy Regulatory Commission (FERC) or the New York Department of Dam Safety. As a result, the Companies also make investments in order to fulfill regulatory obligations to these agencies.

NYSEG owns and operates a standby generator located at the Harris Lake Substation, in the Adirondack Park, having a nameplate capacity of 2 MW. This unit produces electric energy to serve local customers in the event of a transmission line outage.

RG&E has three fossil fueled generating plants: Allegany Station, a combined-cycle plant, located in the southern tier, fueled by natural gas having a nameplate capacity of 62 MW, and two combustion turbines (#2 CT and #13 CT), located in the City of Rochester, fueled by natural gas and fuel oil respectively, each having nameplate capacity of 15 MW/18 MW (summer/winter ratings).

The Companies strive to maximize the hydroelectric energy produced for our customers from the water that is available, and maintain the fossil units so they are available when required to support local load centers. To that end, the strategy is to make investments in projects that cost-effectively improve unit efficiencies, improve reliability, increase capacity, and maintain the infrastructure. The Companies also make investments to protect the safety of their people and the public.

3.3 NATURAL GAS SYSTEM

Figure 3.7 is a map of the areas in which the Companies provide natural gas service in New York State.

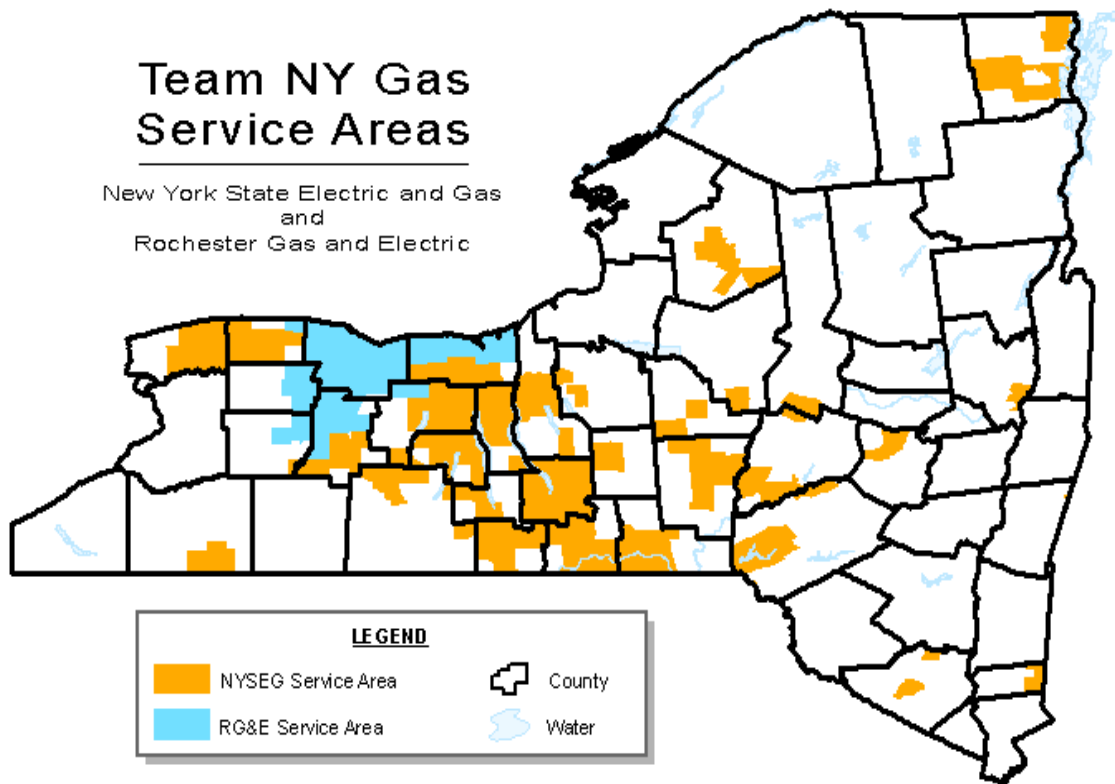


Figure 3.7 Gas Service Areas

NYSEG and RG&E provide gas delivery services to approximately 600,000 customers in New York State. In 2010, the Companies delivered over 90 million dtms of natural gas to these customers. The growth in overall customer demand over the next several years is estimated to be approximately 1% per year.

The majority of gas is purchased from interstate gas transmission pipelines and received at system gate stations, where gas flow is metered and regulated and the ownership or custody of the gas transfers from the delivering pipeline to the Companies. Gas is odorized at these facilities. The city gate stations reduce the pressure to system pressure. The Companies also receive gas from local well production at various locations along its infrastructure. The Companies' transmission system transports gas from the system gate stations to the district regulator stations and field regulators where the pressure is further reduced, controlled and monitored to meet customer needs. Service laterals connect the local distribution system to customers' meters.



3.3.1 Gas System Infrastructure

Table 3.5 contains information about the Companies natural gas transmission and distribution system.

Table 3.4 Gas System Infrastructure

Facilities	2009 – Miles or Number		
	NYSEG	RG&E	TOTAL
TRANSMISSION PIPELINE	72	106	178
DISTRIBUTION PIPELINE	4698	4709	9407
REGULATORS STATIONS (include gate stations)	544	315	859
DISTRIBUTION PIPELINE			
Steel – Protected	2,218	2,482	4,700
Steel - Unprotected	339	369	708
Cast Iron	1	91	92
Plastic	2,108	1,767	3,875
Ductile Iron	32	0	32
Total	4,698	4,709	9,407
SERVICES -Number			
Steel – Protected	34,638	73,899	108,537
Steel - Unprotected	24,166	11,165	35,331
Cast Iron	0	0	0
Plastic	157,112	178,451	335,563
Other	8,389	8,135	16,524
Total	224,305	271,650	495,955



Table 3.6 contains safety and reliability metrics for NYSEG and RG&E for 2010.

Table 3.5 Gas Safety and Reliability Metrics

		NYSEG	RG&E
Measurements - Operations			
Emergency Response:			
Natural Gas Leak Response =< 30 min.	Actual	80.22%	90.77%
	Yr-End Target	75.00%	75.00%
Natural Gas Leak Response =< 45 min.	Actual	95.26%	98.29%
	Yr-End Target	90.00%	90.00%
Natural Gas Leak Response =< 60 min.	Actual	99.02%	99.76%
	Yr-End Target	95.00%	95.00%
Leak Management:			
Pending Leak Measure: Total # of all pending leaks (Type 1, 2, 2A and 3) NYSEG = ≤ 100 RG&E = ≤ 200	Actual	42	158
	Yr-End Target	100	200
Damage Prevention:			
Overall Damages per 1000 Tickets	Actual	1.74	1.55
	Yr-End Target	2.00	2.00
Mismarks per 1000 Tickets	Actual	0.36	0.36
	Yr-End Target	0.50	0.50
Co Damages per 1000 Tickets	Actual	0.05	0.11
	Yr-End Target	0.20	0.20
Achieve Gas Regulatory Safety & Reliability Targets			
Bare Steel & Leak Prone Main - miles	Actual	21.01	23.12
	Yr-End Target	20.00	20.00
Bare Steel & Leak Prone Services - #	Actual	2,104	2,087
	Yr-End Target	2,000	2,000

A map of the Companies' gas systems, showing transmission mains and supply points, is included as Figure 3.8:

Team NY Gas

Transmission Mains and Purchase Points

New York State Electric and Gas
and
Rochester Gas and Electric

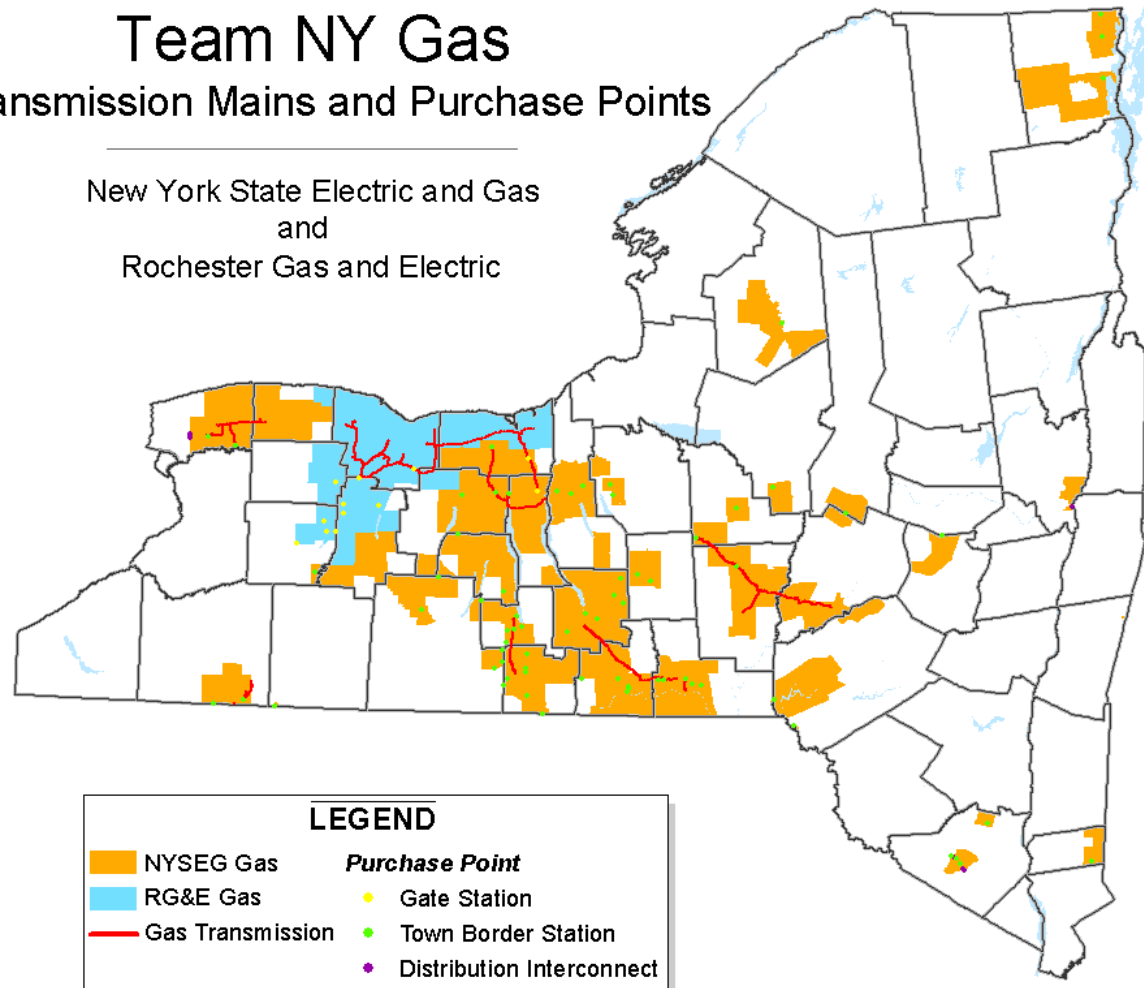


Figure 3.8 Natural Gas System



3.3.2 Gas System Strategies

The Companies key gas business strategies are:

- Safely operate gas transmission and distribution systems
- Achieve all NY Public Service Commission gas service quality performance measures
- Minimize leaks through corrosion control, leak repair and replacement of leak prone pipe
- Provide innovative, cost-effective and timely planning, engineering and design services that meet or exceed customer expectations



4 CAPITAL INVESTMENT PLAN

This section contains descriptions of the projects and program necessary to accomplish the strategic objectives. The following table summarizes the combined electric and gas capital investment plan for the Companies:

Table 4.1 Capital Investment Plan by Year (Dollars in Millions)

Company	2011	2012	2013	2014	2015	TOTAL
NYSEG Electric	174.2	188.0	167.3	164.4	182.0	875.9
RG&E Electric	171.5	178.6	201.4	215.4	122.5	889.4
Subtotal- Electric	345.7	366.6	368.7	379.8	304.5	1,765.3
Appendix L - Electric	283.7	265.9	318.4			
NYSEG Gas	45.2	40.3	41.6	43	44	214.1
RG&E Gas	34.4	33.3	36.9	38.9	39.3	182.8
Subtotal- Gas	79.6	73.6	78.5	81.9	83.3	396.9
Appendix L - Gas	77.6	73.6	78.5			
TOTAL	425.3	440.2	447.2	461.7	387.8	2,162.2

The amount for 2011 has been approved by the Iberdrola USA Board of Directors and reflects the impacts of electric projects begun in 2010 that will continue in 2011 (so-called carryover projects). At this time, the Plan exceeds Appendix L amounts for the period 2011 through 2013. As previously discussed, the Companies will reassess needs and reprioritize projects during this five year period. With the exception of 2011, the Companies will attempt to manage this Plan to Appendix L levels. However, the Companies commit to making investments necessary for the sale and reliable delivery of service to customers.

4.1 ELECTRIC PROJECTS

Table 4.2 presents the electric capital investment amounts by year.



Table 4.2 Summary of Electric Capital Investment Plans NYSEG and RG&E (\$000)

	2011	2012	2013	2014	2015	TOTAL
Appendix L Projects	111,890	156,556	143,240	109,360	46,190	567,236
Appendix L Programs	126,218	126,963	125,132	127,159	122,145	627,617
Subtotal Appendix L	238,108	283,519	268,372	236,519	168,355	1,194,853
Projects Supplemental to Appendix L	44,059	49,046	26,172	54,599	46,410	220,286
Programs Supplemental to Appendix L	11,335	7,600	54,700	73,700	82,700	230,035
Generation Projects	52,187	26,390	19,458	15,006	7,060	120,101
TOTAL	345,689	366,555	368,702	379,824	304,505	1,765,275

Attachment 1 contains the list of electric projects included in this Plan. Attachment 2 contains a reconciliation of Appendix L Projects and Programs contained in this Plan to those contained in Appendix L to the Rate Order.

4.1.1 Appendix L Projects - Electric

The Companies plan to complete the following Appendix L projects that address the strategic objectives. The most immediate and more significant of the projects (over \$5 M total investment) are as follows.

Table 4.3 NYSEG Appendix L Projects (\$000)

Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Corning Valley Upgrade Project	20,464				
Total Cost: \$47,300					
Description: <ul style="list-style-type: none"> • New 230/115 kV, 200 MVA, Substation, Stoney Ridge, one transformer of 200MVA • New 9.6-mile, 115 kV line from Stoney Ridge Substation to West Erie Avenue Substation • New 115 kV/12.5 kV, 66 MVA, substation, Sullivan Park, two transformers of 33 MVA. • Upgrade at Hickling, West Erie and Campbell Substations • Modifications to the 34.5 kV sub transmission lines #532 and #561 Investment Reason: System Capacity					
Year started: 2009					
Year in service: 2011					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
South Perry, Add New 230/115 kV Transformer	1,260	13,593			
Total Costs: \$15,230					
Description: New 230/115 kV, 200 MVA, Load Tap Changing (LTC) transformer at South Perry substation.					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2012					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
115 kV Line Klinekill – Valkin	600	1,414	9,000		
Total Costs: \$11,062					
Description: New 8.5-mile, 115 kV line from the Valkin (National Grid) substation (or another tap point on NG Trunk #15) to the Klinekill (NYSEG) substation.					
<ul style="list-style-type: none"> • New 115 kV breaker location will be built at Klinekill • Four-breaker ring bus in a new substation will be constructed at the Valkin end of the new line, or a three-breaker ring bus at another tap point on NG Trunk #15. 					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2013					



Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Northend 115kV, 150 MVAR Switched Capacitor Bank	478	4,018			
Total Costs: \$ 4,596 (net of DOE funding)					
Description: Install a 144 MVAR switched capacitor bank at the NORTHEND 115 kV bus.					
Investment Reason: Power Quality					
Year started: 2011					
Year in service: 2012					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
807 Line Conversion Project	2,887	3,259			
Total Costs: \$8,394					
Description: Convert approximately 13 mile of 46kV to 115 kV. Convert the existing #807, 46 kV line from Carmel to Katonah to 115 kV. The new 115 kV line will extend from Carmel Substation to Wood Street Substation to Katonah Substation.					
<ul style="list-style-type: none"> • New 115 kV line breaker location and two new 115 kV breakers will be added at Carmel Substation • Two new 115 kV line breaker locations and two new 115 kV breakers will be added at Wood Street Substation • New 115 kV line breaker location and three new 115 kV breakers will be added at Katonah Substation. 					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2012					

Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Westover Substation New 115kV Transformer & Binghamton Division Capacitors	753	3,939	1,836		
Total Costs: \$6,712					
Description: <ul style="list-style-type: none"> • Replace existing 25MVA 115/34.5kV Transformer at South Perry with a 56MVA LTC unit. • New Westover (Goudey) 115/34.5 kV, 30/40/50 MVA, LTC transformer bank. • Install 102 MVAR, 2-step, switched capacitor bank, at the Westover (Goudey) substation 115 kV bus. • Install 12.6 MVAR switched capacitor bank at the Robble Ave substation 115 kV bus. • Install 13.2 MVAR switched capacitor bank at the Noyes Island substation 34.5 kV bus. • Install 7.2 MVAR switched capacitor bank at the Oakdale substation 34.5 kV bus. • Install 2.4 MVAR switched capacitor bank at the Whitney Ave substation 34.5 kV bus. • Install 2.4 MVAR switched capacitor bank along the 34.5 kV transmission line #431 in the vicinity of the Conklin substation. • Install 1.2 MVAR switched capacitor bank along the 34.5 kV transmission line #453 in the vicinity of the Bevier Street substation. 					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2013					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Auburn 345kV source		3,600	3,000	13,100	33,800
Total Costs: \$75,000					
Description: <ul style="list-style-type: none"> • New 345/115 kV, Substation in Auburn Division • New 115 kV line from the new substation to State Street Substation 					
Investment Reason: System Capacity					
Year started: 2012					
Year in service: 2016					

Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Stephentown Substation New Transformer	300	2,710	2,245		
Total Costs: \$ 5,439					
Description: Install new 115/34.5kV, 20/26/33(37) MVA, LTC transformer to operate in parallel with the existing one.					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2013					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Stolle Substation-Dysinger	0	0	3,400	1,600	1,000
Total Costs: \$100,800					
Description:					
<ul style="list-style-type: none"> • New 345 kV switching station at Dysinger • New 345 kV line from the new Dysinger Station to Stolle Road Substation, • New 345/115 kV, 250 MVA, transformer at Stolle Road Substation. 					
Investment Reason: System Capacity					
Year started: 2013					
Year in service: 2018					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
NYSEG Distribution Projects			9,000	7,400	8,000
Total Costs: \$ 24,400					
Description: Distribution Projects not yet defined.					
Investment Reason: Asset condition					
Year started: Various					
Year in service: Various					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Other Electric Projects - NYSEG	21,788	30,365	13,044	0	390
Description: Various other projects with project costs under \$5.0 M. Refer to Attachment 1 for more information.					
Year started: Various					
Year in service: Various					

Table 4.4 RG&E Appendix L Projects (\$000)

Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
New Bulk Power Station 255	2,500	11,200	80,000	84,000	
Total Costs: \$177,792					
Description: <ul style="list-style-type: none"> • New BPS (bulk power system) Station 255, located approximately 3.8 miles west of the RG&E Station 80, 345/115 kV 800 MVA, two transformers of 400 MVA. • Two NYPA 345kV cross-state transmission lines, SR1-39 (Somerset - Rochester) and NR-2 (Niagara - Rochester), will be brought in and out of the new station. • A breaker-and-a-half setup for the 345kV bus • A 115 kV breaker-and-a-half bus • New Line #940 (approximately 10 miles in length) will tie into the western part of the RG&E 115 kV system at Station 418. • New Line #941 (approximately 14.3 miles in length, 7.9 miles overhead and 6.4 miles underground) will tie into the RG&E 115 kV system at Station 23. 					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2014					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
New Downtown 115 kV Source	10,000	23,900			
Total Costs: \$34,913					
Description: <ul style="list-style-type: none"> • New gas-insulated 115 kV bus at Station 23 • Two new 115/34.5 kV, 65MVA, transformers at Station 23 • Station 3 will be rebuilt as Station 137. • Two new 2.5-mile, 34.5 kV, feeds from Station 23 to Station 137. • Swap the 901 and 902 lines from Station 82 to Station 33 • Re-conductor the 901 line to 400MVA. • Add a phase-shifting transformer on the 920 line at Station 42. • Relocate 11kV phase-shifting transformer from Station 23 to new Station 137. 					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2012					

Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Station 124 New Phase Shifter Transformer	13,000	17,519			
Total Costs: \$32,546					
Description: Add a New Phase Shifter Transformer					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2012					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Station 124 New SVC	8,000	19,500			
Total Costs: \$27,533					
Description: Add a +/-200MVAR Static VAR Compensator (SVC) at the 115kV bus of Station 124.					
Investment Reason: System Capacity					
Year started: 2009					
Year in service: 2012					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Highway Projects, Undefined		3,000	3,000	3,000	3,000
Total Costs: \$ 12,000					
Description: Similar to projects in 2011 that are required by customers or government entities. These projects are not defined after 2011.					
Investment Reason: Statutory					
Year started: Various					
Year in service: Various					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
New 115/34.5kV Substation, 262		920	8,336		
Total Costs: \$ 9,256					
Description:					
<ul style="list-style-type: none"> • New 115/34.5kV, 57 MVA substation, one transformer of 57MVA in Rochester • New 1.5-mile, 34.5 kV line from the new substation to Station 26 • New 34.5/11.5 kV, 37 MVA, transformer at Station 26 					
Investment Reason: System Capacity					
Year started: 2012					
Year in service: 2013					



Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Station 67 to 418 New 115kV Transmission Line	750	7,002			
Total Costs: \$ 7,802					
Description: New 6-mile, 115 kV line from Station 67 to Station 418					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2012					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Station 218 to Clyde Station - New 34.5 Transmission Line	60	420	5,500		
Total Costs: \$ 6,000					
Description: New 8-mile, 34.5 kV line from the Clyde Station to Station 218					
Investment Reason: System Capacity					
Year started: 2010					
Year in service: 2013					
Project	2011 Budget	2012 Budget	2013 Budget	2014 Budget	2015 Budget
Other Electric Projects	29,051	10,197	4,879	260	0
Description: Various other projects with project costs under \$5.0 M. Refer to Attachment 1 for more information.					
Year started: Various					
Year in service: Various					

Definition of Bulk Power System

As mentioned in the Introduction, Section 1.1, the FERC has directed North American Electric Reliability Corp. ("NERC") to develop a revised definition of the Bulk Electric System (BES) to further ensure reliable operation of the US interconnected transmission network. FERC has eliminated the unchecked regional discretion and has recommended that NERC adopt a definition of the BES that included all non-radial facilities at 100kV and above (a so-called "bright-line" approach). On November 18, 2010 FERC issued Order 743 requiring the NERC to revise its definition of BES to:

- "eliminate the regional discretion in the current definition"
- "maintain the bright line threshold that includes facilities operated at and above 100 kV"
- "Establish an exception process and criteria for excluding facilities that are not necessary for operating the interconnected transmission network" (e.g., radial facilities).



NERC must file a revised BES Definition and Transition Plan with FERC by January 2012. The FERC BES order can greatly expand the scope of facilities in New York State subject to the NERC reliability standards and the associated risk of compliance sanctions. It is anticipated that the new BES definition will take effect in 2013. Table 4.5 shows the impact that this change will likely have on the Companies.

Table 4.5 FERC Bright line Impacts – Preliminary Assessment

	NYSEG	RG&E
Facilities already defined as BES	15 Substations 38 lines	2 Substations 0 lines
Facilities defined as BES under new "Bright Line"	87 Substations 200 lines	25 Substations 31 lines

The Companies are monitoring the FERC process and will continue to assess further the impacts of this potential change.

4.1.2 Appendix L Programs - Electric

The Companies plan to complete the following Appendix L programs that address the strategic objectives.

Table 4.6 Appendix L Programs (\$000)

	2011	2012	2013	2014	2015	TOTAL
Transmission Distribution Infrastructure Reliability Program (TDIRP)	40,497	40,000	40,000	40,000	40,000	200,497
Division Minors	56,000	56,000	56,000	56,000	56,000	280,000
System Security	5,083	3,465	2,996	2,948	1,448	15,940
Fleet	15,218	17,054	18,759	20,635	18,817	90,483
Facilities	3,695	2,371	2,371	2,371	2,371	13,179
Information Technology	5,725	8,073	5,006	5,205	3,509	27,518
TOTAL	126,218	126,963	125,132	127,159	122,145	627,617

Transmission and Distribution Infrastructure Reliability Program (TDIRP): The purpose of the program is to replace transmission and distribution equipment based on age and condition in order to improve system reliability for customers.



Division Minors: Individual projects that are less than \$100k and not included in other special programs such as TDIRP. Jobs include streetlight head replacements, establishing services for individual customers, underground residential developments, commercial services, voltage conversions, and capital storm damage.

System Security: Expanded use of video surveillance and access control technologies at hydro generating stations and key substations. In parallel with the expanded use of these technologies, the Companies are upgrading their Information Technology infrastructure to satisfy the need for increased bandwidth. With respect to physical security, the Companies are continuing to replace and upgrade the perimeter fencing around substations.

Fleet: Purchase of new vehicles in order to move towards industry standard average ages for specific fleet equipment and to replace older and less reliable vehicles.

Facilities: Improvements to division offices, garages, and other facilities owned or leased by the Companies.

Information Technology: Upgrades to computers and other equipment and new systems to improve effectiveness and efficiency of work.

4.1.3 Projects Supplemental to Appendix L – Electric

The Companies plan to complete the following projects over the time period 2011 and 2015 that address the strategic objectives.



Table 4.7 Projects Supplemental to Appendix L (\$000)

	2011	2012	2013	2014	2015	TOTAL
The Mechanicville Reinforcement Project	7,000	12,968	356	0	0	20,324
Energy Control Center	8,700	9,300	2,800	0	0	20,800
Watercure Rd. - 2nd 345 kV Transformer	2,195	9,427	0	0	0	11,622
Greenidge Ground Bank	2,710	0	0	0	0	2,710
Bedford Hills - Replace Bank #2	1,513	1,800	1,800	0	0	5,133
Erie Street - Add 3rd 115/34.5kV Transformer - Lancaster	0	0	0	3,451	0	3,451
Station 42 - Replace 115-11kV 4T Transformer	3,042	1,000	0	0	0	4,042
Station 42 - Replace 34.5-11.5kV 3T Transformer	1,329	1,800	0	0	0	3,129
Station 80 - Replace 1T and 3T Transformers	3,000	4,000	1,500	0	0	8,500
Line 926 - Upgrade 115kV Line - Rochester	634	2,018	0	0	0	2,652
Station 48- Replace (2) 115-34.5kV Transformer	0	0	9,804	0	0	9,804
Station 168 Service Area Reinforcement	0	2,000	5,908	5,730	0	13,638
System Planning Reliability Projects	0	4,000	4,000	40,000	40,000	88,000
Other	13,940	733	0	5,418	6,410	26,501
TOTAL	44,059	49,046	26,172	54,599	46,410	220,286

Mechanicville Reinforcement: The feed for all of NYSEG’s customers in Mechanicville comes from Mulberry Substation. Additional transformer capacity at Mulberry is very limited due to load growth over the past 10 years. The development of Luther Forest Technology Campus is likely to add another 25MVA of new load to NYSEG’s service territory over the next five years. Most of the additional load will be in the western end of Mechanicville division which is remote from the Mulberry Substation.



Energy Control Center : An expansion of the following Appendix L projects: SCADA at NYSEG and GIS at NYSEG and RG&E. As previously explained, this project will result in state of the art Energy Control Centers with resulting benefits to customers.

Watercure Road 2nd 345kV Transformer : Install 400MVA 360-240-36.5kV, LTC transformer at Watercure Road Substation. Install circuit breakers to connect the new transformer in parallel with Bank #1. This project will mitigate the emergency system conditions encountered after the failure of Bank #1.

Greenidge Ground Bank: Install two new 115/34.5 kV, 20 MVA, 5% impedance grounding transformers at Greenidge Substation to provide a redundant grounding source. The installation of the proposed transformers 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 on the 115 kV system in the Geneva Division for an outage of the #3 and #4 generating units at Greenidge Station.

Bedford Hills - Replace Bank #2 : Purchase and install a new 46-13.2 KV, 12/16/20 MVA LTC transformer with circuit switcher and install it in place of the existing Bank #2 10/11.2/12.5 MVA bank at Bedford Hills Substation in Brewster.

Erie Street - Add 3rd 115/34.5kV Transformer – Lancaster: Install a third 115/34.5 kV, 30/40/50 MVA, Non-LTC transformer at Erie Street Substation and operate it in parallel with the two existing 115/34.5 kV, 30/40/50 MVA, Non-LTC transformers

Station 42 : During high load periods, the 115kV/11.5kV transformer at Station 42 will overload for system normal conditions. This would result in the shedding of approximately 5MW of load to relieve the overload. This project will replace transformer 4T with a 56MVA, LTC unit and upgrade the 11.5kV bus, circuit breakers and switches to 3000 amp rating. The completion of this project will allow normal and reliable operation of the 11.5kV system with increased capacity for growth. The 34.5/11kV transformer will also be replaced.

Station 80 – Replace 1T and 3T Transformers: Replace transformers 1T and 3T with new 345-115kV autotransformers with LTC.

Line 926 – Upgrade 115kV Line: Station 37 supplies about 40 MW of transmission and distribution load to approximately 3300 customers. During high load periods, loss of the 916 line results in overloads above LTE on the 926 line from Station 67 to Station 37. This would result in shedding all 20MW of load at Station 37. The period of exposure is approximately 40 hours per year. The line upgrade will eliminate this exposure.



Station 48 – Replace 2 transformers: Replace two transformers with new 115-34.5kV transformers.

Station 168 Service Area Reinforcement: Sectionalize National Grid 115kV Trunks #2 and #4 at Station 168 with 115kV circuit breakers. Install fixed and switched voltage controlled capacitors along 34.5 kV circuits presently served from Station 168. Construct a new 14.6 mile 34.5 kV line with routing from the NYSEG Eelpot Station to the 34.5 kV Bristol Mountain area presently served from Station 168. Install a new 12 MVAR switched capacitor bank on each of the 34.5kV buses at Station 168. Both of the new switched capacitor banks will be voltage controlled.

System Planning Reliability Projects: Numerous projects are identified through the ten-year System Planning process that analyzes the transmission system for single contingency (N -1) impacts on equipment thermal and voltage capabilities. Reinforcements are identified for system reliability concerns and prioritized in-part based on the metrics of MWs impacted, number of customers impacted, and potential hours of exposure. The highest priority projects were identified and included in Appendix L. These remaining projects are justified by reliability need but were not included in Appendix L.

Other: Various other projects with project costs under \$2.0 M. It includes the purchase of one Mobile Substation at NYSEG to replace one existing unit that is approaching the end of its service life. The new unit has a 15MVA transformer with 34.5kV high side voltage and six low side voltages to provide flexibility for its use. This unit will maintain the current level of 21 Mobile Substations at NYSEG. At RG&E, three Mobile Substations are currently in use.

4.1.4 Programs Supplemental to Appendix L - Electric

The Companies plan to complete the following programs over the time period 2011-2015 that address the strategic objectives.



Table 4.8 Programs Supplemental to Appendix L (\$000)

	2011	2012	2013	2014	2015	TOTAL
Substation and Other Improvements	760	600	16,700	16,700	16,700	51,460
Indoor Substation Refurbishment (Station 210, Station 63 and Others)	0	0	0	9,000	9,000	18,000
Cablecure	1,850	3,000	3,000	3,000	3,000	13,850
Distribution Pole Replacement	0	0	9,000	8,000	13,000	30,000
RTU Program	8,128	4,000	26,000	37,000	41,000	116,128
Other	597	0	0	0	0	597
TOTAL	11,335	7,600	54,700	73,700	82,700	230,035

Substation and Other Improvements: Replace breakers, batteries, DC and AC panels, and relays to improve the reliability and to automate the operation and performance of substations. These improvements will enhance operational safety and reduce risks of environmental incidents, improve reliability in case of damage or failure, and reduce maintenance. The Companies plan to replace mechanical disconnect switches on the distribution system with remote control switches. This also includes the addition of electronic reclosers for improved sectionalization. The goal is to improve the quality of service by reducing both the number of customers out of service per each distribution line failure and the time on case of an outage. The Companies are also investigating the feasibility of upgrading the oil containment systems in substations to underground storage tanks. The systems would collect and retain the dielectric oil that may leak in a power.

Indoor Substations: These indoor substations located in Downtown Rochester need to be refurbished to enhance reliability, environmental and safety concerns. The refurbishments will enable restoration of service, in the event of an outage, through use a mobile substation or other provisional equipment, thus reducing the amount of time of the outage. Refurbishments will also enable increased automation of the Rochester system.

Cablecure: The objective of this program is to extend the useful life of the XLP cables at least 20 years. These cables were installed during the period 1970 to 1985 and have since experienced a high frequency of premature insulation failures. This program results in lower total life cycle asset costs and reduced outages due to cable failures. This work involves injecting an insulating fluid into the stranding of aged XLP URD primary distribution cables that permeates into the insulation.



Distribution Poles Replacements: Target additional investment to replace those poles in the worst condition and needing replacement in order to improve reliability to customers.

Remote Terminal Units: The addition of remote terminal units (RTUs) at NYSEG and RG&E substations that can communicate with the Energy Control Center. Also includes the telecommunications infrastructure necessary for this automation. This involves the strategic addition of fiber optic, microwave links and digital radio capability.

4.2 GENERATION PROJECTS

The Companies plan to complete the following generation projects over the time period 2011-2015. These projects help the Companies meet the strategic objectives. The majority of the investments in generating stations revolve around the completion of two major undertakings: returning Station 5 to service and restoring the reliability of the penstock and related structures and equipment associated with Station 2, both on the Genesee River.

Table 4.9 Generation Projects (\$000)

Project Title	2011	2012	2013	2014	2015	TOTAL
Mechanicville – Unit 1 Major Overhaul	0	0	639	1,361	0	2,000
Station 5 - Tunnel Relining	26,750	13,446	0	0	0	40,196
Station 5 – Other projects	15,156	6,015	749	1,850	750	24,520
Station 2 – Penstock	50	1,000	9,000	0	0	10,050
Allegany & Miscellaneous - Allegany Combustor/HP Turbine	0	0	0	2,500	0	2,500
Other Projects	10,231	5,929	9,070	9,295	6,310	40,835
Total	52,187	26,390	19,458	15,006	7,060	120,101

Mechanicville: NYSEG plans a major overhaul on Unit 1. This 10 MW unit on the Hudson River has never had a major overhaul in more than 20 years of operation and needs work to be performed to be able to return to full efficiency and reliability.

Station 5 Projects: RG&E is refurbishing this 45 MW station. The entire water conveyance system, from the intake shaft under the rack house to the penstocks, is being relined with reinforced concrete. This includes a 16-foot diameter, 1,350-foot long tunnel located more than 100 ft underground and both the intake and surge tank riser shafts that service it. All three hydro-turbines are under-going major overhauls designed to restore them to full performance and reliability. Nearly every support system in the Station is either undergoing a major overhaul or is being replaced outright. These include, but are not limited to, the turbine lubrication systems, the monitoring and control instrumentation, the cooling water systems, the compressed air system, the sump and waste systems, the electrical distribution systems



and the communications systems. RG&E is also performing major upgrades on the Station 5 powerhouse, including the foundations to the roof. Major work on the unit draft tubes and a dredging of the discharge channel will take place at the same time. RG&E is also renovating or rebuilding all of the support systems and structures at the Station 5 head gates, including major efforts on the control building foundations, the trash removal system and structures, the gate operating cylinders and a four part project to stabilize the rock formations upon which the head gates dam is constructed.

Station 2: Major projects are being completed at Station 2 to increase the capacity of that unit from 6.5 MW to 8.5 MW. As at Station 5, numerous station support systems are also being renovated in support of this upgrade. RG&E will perform a major electrical upgrade in 2011-2012 to realign the Station electrical output with the new substation 137 currently being constructed. RG&E plans to enlarge the water flow capacity in Brown's Race in support of the upgraded Unit 1 at Station 2. RG&E is evaluating the replacement of the needle dam that is used to channel water into Brown's Race from the Genesee River. RG&E also has under evaluation, and in the final planning stages, a major project to replace the existing penstock at Station 2. This penstock is nearly 100 years old and is approaching its end of life. This equipment replacement will ensure the reliable operation of Station 2 for another 50+ years.

Allegany Station: This is the Companies remaining significant fossil generation resource – a 62 MW gas fired combustion turbine/combined cycle plant located in the Southern Tier. The Companies have a few small gas and oil fired combustion turbines and diesel engines scattered across the state. Most of these facilities operate to support peak power needs or for electric operations stability. At Allegany in 2014, the Companies plan a combustor/HP turbine upgrade in accordance with the manufacturer's recommendations to ensure the reliable operation of this unit in the future.

Other Projects: In addition, we are completing the replacement of Gate 2 at the Central Avenue Dam and initiating the replacement of Gates 3 and 6. This will culminate a multi-year project intended to restore the Central Avenue Dam gates to full operability in conformance with our FERC Hydro License for this facility. At High Falls on the Saranac River near Plattsburgh, NYSEG will be completing a major electrical switchgear modernization this year to improve the reliability of the station's ties to the electric grid. At Rainbow Falls, on the Ausable River adjacent to the scenic Ausable Chasm, NYSEG will be completing work on a major environmental improvement project designed to reduce the impact of our operations on fish in the river. This project entails adding new, narrower, trash racks on the station intakes and providing a means for fish to bypass the station and be deposited safely downstream of the station. Future work at the station will address some major structural upgrades on the dam and controlling gates designed to ensure that we are completely fulfilling our regulatory obligations to FERC to maintain the structures safely and in full compliance with all regulations.



Additional projects conducted at RG&E's Station 26 and 160 are designed to enhance the performance of those stations or to otherwise fulfill our FERC license requirements.

4.3 GAS PROJECTS

The table below presents the gas capital investment amounts by year.

Table 4.10 Summary of Gas Capital Investment Plan NYSEG and RG&E (\$000)

	2011	2012	2013	2014	2015	TOTAL
Projects	14,417	4,475	0	1,050	0	19,942
Programs	65,173	69,131	78,500	80,855	83,280	376,939
TOTAL	79,590	73,606	78,500	81,905	83,280	396,881

4.3.1 Projects – Gas

The following table provides the Appendix L projects and other projects planned for NYSEG and RG&E included in the Plan.



Table 4.11 Gas Projects (\$000)

Project Title	2011	2012	2013	2014	2015	TOTAL
Seneca West Pipeline Interconnect to Elmira Distribution System	5,792	0	0	0	0	5,792
Oakwood Ave. to Gardner Road point of delivery (not in Appendix L)	0	4,475	0	0	0	4,475
Canandaigua Cast Iron Replacement (not in Appendix L)	1,035	0	0	0	0	1,035
Lansing Interconnect (not in Appendix L)	0	0	0	1,050	0	1,050
Gas SCADA System Migration Project	2,279	0	0	0	0	2,279
Southwest 60 System Improvements, Install Pipe and Regulator Station, Livingston (not in Appendix L)	3,460	0	0	0	0	3,460
Seneca Lake Storage Facility	1,851	0	0	0	0	1,851
TOTAL	14,417	4,475	0	1,050	0	19,942

Seneca West Pipeline: Build a five mile natural gas pipeline from the Seneca West Pipeline to Elmira, which will result in reduced capacity obligations over the Dominion pipeline and enable a lower cost source of natural gas for customers.

Oakwood Ave: This is a reliability reinforcement project for the Elmira Division and includes installation of a new steel main to allow increase supply flexibility.

Canandaigua Cast Iron Replacement : Replace approximately 1,300' of 4" and 1,000' of 6" cast iron gas main along with approximately 200' of existing bare steel gas main in the downtown portion of the City of Canandaigua. This project will require the installation of approximately 2,500 feet of new 6" plastic pipe and also require the replacement of approximately fifty (50) existing gas services

Lansing Interconnection : Reinforcement project due to increased demands in the Lansing area.

Gas SCADA: Replace the Gas SCADA system, as previously explained.



Southwest 60 System Improvements, Install Pipe and Regulator Station, Livingston : This project will increase capacity to support on-going industrial growth and improve system reliability to the Southwest 60 psi system.

Seneca Lake Storage Facility : Replace existing OPTO 22 Program Logic Control (PLC) Equipment with new Telvent PLC Equipment at NYSEG's Seneca Lake Storage Facility in Watkins Glen, NY. This project has been delayed and will not be completed if the sale of Seneca Lake Storage Facility is finalized.

4.3.2 Programs – Gas

The following table provides the Appendix L programs planned for NYSEG and RG&E included in the Plan.

Table 4.12 Gas Programs (\$000)

Project Title	2011	2012	2013	2014	2015	TOTAL
Leak Prone Main Replacement Program	18,140	18,073	18,819	19,597	20,409	95,038
Transmission Mains	1,879	1,716	11,035	11,366	11,707	37,703
Distribution Mains	3,813	7,567	4,659	4,799	4,943	25,781
Gas Services Replacement	10,729	11,769	11,918	12,062	12,199	58,677
Meter Purchases and Installation	8,005	8,245	4,236	4,363	4,494	29,343
M&R / Gate Stations	1,925	1,983	766	789	813	6,276
Highway Relocations	8,882	9,149	5,509	5,675	5,844	35,059
Other	11,800	10,629	21,558	22,204	22,871	89,062
TOTAL	65,173	69,131	78,500	80,855	83,280	376,939

Leak Prone Main Replacement: The replacement of 24 miles of leak prone cast iron and unprotected steel gas main annually at each company.

Transmission Mains: Replace cased crossings to comply with Federal Integrity Management regulations and replace transmission gas mains to improve system safety and reliability.

Distribution Mains: Extend new gas mains and minor replacements.

Gas Service Replacements: Replace gas services as part of Leak Prone Service Replacement program (2,200 leak prone unprotected steel gas services annually at the Companies – 1,200 at NYSEG and 1,000 at RG&E), customer requested relocations or additions, service work associated with main replacements, leaks, all service replacements.



Meter Purchases and Installation: All new and replacement meters as required due to new services and mandated replacement and change out programs.

M&R and Gate Stations: Replacement of obsolete equipment and equipment in poor condition associated with regulator and gate stations including: regulators, odorizers, heaters, reliefs, RTU equipment, and other associated equipment.

Highway Relocations: Relocations of gas mains as required by regulation (terms and conditions of permit to occupy public rights-of-way) where gas facilities are in conflict with proposed municipal street and highway projects.

Other: This is the gas portion of Fleet and common facilities.



5 SUMMARIES OF ELECTRIC PLAN

This section contains various summaries of the electric portion of the Capital Investment Plan. In addition, a detailed list of projects and programs is included in Attachment 1. Attachment 2 contains a reconciliation of Appendix L Projects and Programs contained in this Plan to those contained in Appendix L to the Rate Order.

The following table provides a summary of the Electric Plan by year. This is the same as Table 4.2 and is provided here in order to enable comparison to other summaries provided in this section.

Table 5.1 Summary of Electric Capital Investment Plan NYSEG and RG&E

	2011	2012	2013	2014	2015	TOTAL
Appendix L Projects	111,890	156,556	143,240	109,360	46,190	567,236
Appendix L Programs	126,218	126,963	125,132	127,159	122,145	627,617
Subtotal Appendix L	238,108	283,519	268,372	236,519	168,355	1,194,853
Projects Supplemental to Appendix L	44,059	49,046	26,172	54,599	46,410	220,286
Programs Supplemental to Appendix L	11,335	7,600	54,700	73,700	82,700	230,035
Generation Projects	52,187	26,390	19,458	15,006	7,060	120,101
TOTAL	345,689	366,555	368,702	379,824	304,505	1,765,275

The following table provides a summary of the Electric Plan by type of investment for the entire five year period 2011-2015.

Table 5.2 Summary of Electric Capital Investment Plan by Type of Investment 2011-2015
(Dollars in Millions)

Company	Transmission Lines	Substations	Distribution Lines	Generation	Other	TDIRP	TOTAL
NYSEG	99,104	180,360	247,568	18,704	204,786	125,369	875,891
RGE	38,658	427,694	143,407	101,397	103,228	75,000	889,384
TOTAL	137,762	638,054	390,975	120,101	278,014	200,369	1,765,275



The following table and chart provides a summary of the Plan by investment reason for the period 2011-2015.

Table 5.3 Summary of the Plan by Investment Reason 2011-2015

	\$000	%
Asset Condition	603,596	34.2
Automation	206,887	11.7
Damage	1,000	0.1
Generation	120,101	6.8
Growth	5,782	0.3
Power Quality	67,681	3.8
Statutory	32,322	1.8
System Capacity	574,067	32.5
Other	153,839	8.7
TOTAL	1,765,275	100.0

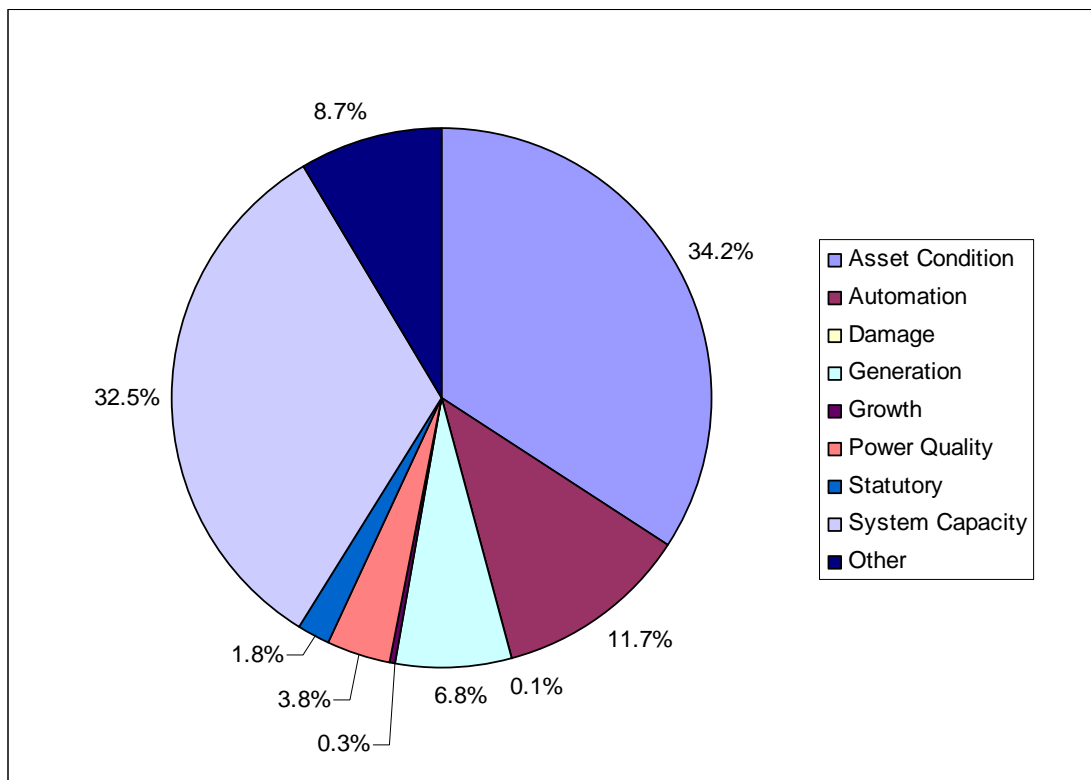


Figure 5.1 Summary of Electric Capital Investment Plan by Investment Reason 2011-2015 (Dollars in Millions)



Following is a definition of the investment reason categories:

1. Asset condition:

Projects or programs done to reduce the likelihood and consequences of failures of assets and to address potential safety issues. The focus is identification of specific susceptibilities and development of remedies to address specific, ongoing reliability concerns. This work is done proactively and preemptively, not in the process of restoring service. Examples are:

- replacing overhead lines/structures
- replacing underground cable
- replacing substation equipment

2. Automation

Projects done to control the circuits of substations, transformers and major points of the electric system.

3. Damage:

Projects or programs done to replace failed or damaged equipment and to restore the system to its original configuration and capability. This work is done to respond to post failure conditions. Examples are:

- damage to facilities from vehicle accidents
- replacement of failed outdoor light equipment
- unplanned or other deterioration

4. Generation

Projects done to upgrade and renew hydro facilities and other generating facilities.

5. Growth

Projects done specifically to accommodate new services or change the existing service of individual customers. Examples are:

- Responding to requests for new service by a retail or wholesale load customer or a generator
- New installations of outdoor lights or street lights as requested by a customer
- system upgrades required to meet specific customer load additions
- customer requested relocation of facilities

6. Power quality

Projects or programs done to correct or maintain regulated voltage level guidelines. This category includes work on distribution, transmission and substation facilities and is responsive to low voltage, high voltage or flickering light situations.



7. Statutory (or regulatory):

Projects done for regulatory, governmental or contractual obligations that are generally non-discretionary. Examples are:

- facility relocations related to public works projects
- inter-utility and other interconnection work that is mandated, such as generator interconnections

8. System capacity:

Projects and programs done to ensure the system has sufficient capacity, resiliency, or operability to meet the demands of the customers. Examples are:

- System study driven work not associated with specific new customer loads (new customer loads are included in item 5 above)
- Increases to accommodate organic load growth
- System changes to meet NERC, NPCC, NYPSC or Planning Criteria reliability standards under normal conditions and under contingency conditions
- Provide increased system flexibility and operability
- Customer requested redundancy
- Actions taken to reduce degradation of equipment service lives due to thermal stress
- Improve performance where design standards have changed over time
- Provide appropriate degrees of system configuration flexibility to limit adverse reliability impacts of large contingencies

9. Other

Projects or programs that do not fit into other investment categories.

The following tables present a summary of the electric infrastructure added or replaced as a result of the projects and programs included in the Plan. Data for 2011 and 2012 are more precise, and data for the remaining years is an estimate, because not all the projects are defined exactly.

Table 5.4 Electric Projects – Number of New Facilities

		2011	2012	2013	2014	2015
New substations #		2	2	4	1	0
New transformers #		4	10	11	5	5
New capacitor banks #	115 kV	2	4	3	2	2
	34.5 kV	9	8	7	3	3
New transmission lines #		3	3	2	2	1
Poles #		9,313	9,313	21,000	20,000	27,000

Table 5.5 Electric Projects- Capacity and Miles Installed

		2011	2012	2013	2014	2015
New substations (MVA)		266	190	177	800	0
New transformers (MVA)		140	880	306	200	200
New capacitor banks (MVar)	115 kV	60	405	171.	60	60
	34.5 kV	76	18	57	21	21
Transmission lines (miles)		18	24	15	24	10

The new substations included in the Plan are the following:

University of Rochester (U of R project), 2012: 115/34.5kV substation with 2-7MVA transformers to serve the University of Rochester load. The new substation will tap the 115 kV transmission circuits #901 and #902. The existing load served out of Station 33 will be transferred to the new substation. This new arrangement will relieve the Station 33 115/34.5 kV transformers of thermal stress, and will accommodate present and future load levels.

New Bulk power substation (Station 255), 2014: A new 345 kV BPS (bulk power system) station will be constructed and located approximately 3.8 miles west of the RG&E Station 80. The two NYPA 345kV cross-state transmission lines, SR1-39 (Somerset - Rochester) and NR-2 (Niagara - Rochester), will be brought into the new station. The project will meet present and future RG&E load level requirements under any first contingency condition, i.e., a condition involving the loss of any Bulk Power System (BPS) transformer or generation element.

Station 262, 2013: A new 115/34.5kV, 57 MVA, substation, one transformer of 57 MVA with LTC. The new substation and the new 34 kV line to Station 26, will provide necessary relief to



existing lines and transformers from thermal stress under contingency conditions in the area of Rochester Central District.

Stoney Ridge and Sullivan Park (Corning Valley Upgrade project), 2011: A new 230/115 kV, 200 MVA, Substation, Stoney Ridge, one transformer of 200MVA and a new 115 kV/12.5 kV, 66 MVA, substation, Sullivan Park, two transformers of 33 MVA. The project eliminates the potential for sub marginal voltages throughout the Cities of Corning and Elmira and thermal overloads on parts of the 115 kV system in Elmira for loss of: a) Hillside-Caton Avenue 115 kV line #960, b) Hickling-Ridge Tap 115 kV line #964, and c) Hickling-West Erie 115 kV line #935. These contingencies cause 6,500 customers and up to 100 MW to be at risk.

Klinekill/Valkin (Klinekill/Valkin substation 115kV transmission line project), 2013: Construct and install a new 8.5-mile, 115 kV, 477 MCM 18/1 (or larger) ACSR, line from the VALKIN (National Grid) substation (or another tap point on NG Trunk #15) to the KLINEKILL (NYSEG) substation. A new 115 kV terminal will be built at the KLINEKILL end of the new line. A new substation, for a three-breaker ring bus, will be constructed on NG Trunk #15. A new 115 kV line VALKIN – KLINEKILL will provide a nearby 115 kV source to the CRARYVILLE and KLINEKILL service areas in the event of a contingency involving the loss of 115 kV line CHURCHTOWN-CRARYVILLE, thereby eliminating the associated voltage and thermal problems

Perry Center Area (Perry Center Area substation project), 2012: A new 3-breaker, 34.5 kV switching station and bring in all three sections of the 591 line into the new substation and close the normally open switch #59186 between Stanton Avenue and Perry Center Substations. Construction of this switching station at Perry Center will allow for adequate voltages and thermal conditions to be maintained in the area for an outage of the Federal Street to Perry Center 34.5 kV line.

Tom Miller Road (Tim Miller Road Substation project), 2013: A new 46/12.5 kV substation with one 12/16/20 MVA transformer, in the Plattsburgh Division to relieve a substation transformer overload condition.

Luther Forest Substation (Mechanicville System Reinforcement Project), 2013: A New 115/34.5 kV Substation, with two 30/40/50 (56) MVA , 3Ph Transformers. The high side will be a four breaker ring bus and include two LTC transformers. The low side will have four breaker protected distribution circuits complete with low side bus breakers and a tie breaker. The objective is to provide a second source of supply to the Mechanicville Division and to accommodate anticipated load additions related to the Luther Forest Technology Campus to ensure continued reliable service.



Auburn 345 New Source, 2016: A new 345/115 kV substation in the Auburn Division to connect the new station to the Pannell - Clay 345 kV line. This project will begin in 2012 and will be completed in 2016. The installation of the 345/115 kV source and the new 115 kV line to State Street Substation will strengthen the transmission system throughout the Auburn Division and thus reduce voltage issues on the system.

Stolle Substation-Dysinger, 2018, Construct a new 345 kV switching station at Dysinger, construct a new 345 kV line from the new Dysinger Station to Stolle Road Substation, and install a new 345/115 kV, 250 MVA, transformer at Stolle Road Substation. Project will begin in 2013, but will not be in service until 2018. These will increase the voltage stability of the 345 kV transmission system and allow for increased power transfers across New York State.



Attachment 1

Detail Project List for 2011 to 2015



This attachment contains a detailed list of electric projects included in the Plan for 2011 through 2015 (\$000)

New York State Electric & Gas

Appendix L Projects- NYSEG Electric	2011	2012	2013	2014	2015
Corning Valley Upgrade	20,464	0	0	0	0
South Perry New 230kV Transformer	1,260	13,593	0	0	0
Klinekill - Valkin (NMPC) New 115 kV Transmission Line	600	1,414	9,000	0	0
Northend Substation New Capacitor Bank	477	4,018	0	0	0
Line #807 115kV Conversion	2,887	3,259	0	0	0
Westover Substation New 115kV Transformer and Binghamton Division Capacitors	753	3,939	1,836	0	0
Auburn 345kV Source	0	3,600	3,000	13,100	33,800
Stephentown Substation New Transformer	300	2,710	2,245	0	0
Stolle Substation– Dysinger	0	0	3,400	1,600	1,000
New NYSEG Distribution Projects (< 1M Cost)	0	0	9,000	7,400	8,000
Willet Substation New Transformer	300	2,972	0	0	0
Flat Street Substation New Transformer	300	3,522	0	0	0
South Perry New 115kV Transformer	400	3,691	0	0	0
Windham Substation 115kV Capacitor Addition	0	0	1,076	0	0
Perry Center Area New 34.5kV Substation	0	0	2,533	0	0
Watercure Rd. Substation Transformer Replacement	1,000	0	0	0	0
Meyer - Add 115kV Capacitor Bank	980	0	0	0	0
Ithaca Reinforcement Project	210	0	0	0	0
Moraine Road Substation-Breaker Addition	750	820	0	0	0



Appendix L Projects- NYSEG Electric	2011	2012	2013	2014	2015
Capacitor Additions - Energy Efficiency Initiative	1,000	0	0	0	0
Mobile Radio Project	1,238	0	0	0	0
Walden 69kV Transmission Line Upgrade	600	2,856	0	0	0
Transit St Substation- MGP Remediation	195	1,550	0	0	0
New Bulk Transformer (Station 80)	4,644	0	0	0	0
New Mobile Substations	1,800	600	0	0	0
Biogas 34.5kV Collector System	1,000	1,512	761	0	0
Silver Creek Substation- New Transformer	600	586	0	0	0
Richfield Springs Substation- New Transformer	600	2,222	1,572	0	0
Eelpot Substation- New Transformer	300	1,023	453	0	0
Meyer Substation- New Transformer	300	991	453	0	0
Tom Miller Rd. -New Substation	0	210	2,509	0	0
Big Tree Substation- Capacitor Addition – (DOE funding)	139	1,490	1,351	0	0
Coddington Substation- Add LTC Capability to 115/34.5kV Transformer	400	453	0	0	0
Harris Lake -Source Upgrade	0	0	2,336	0	0
Circuit 426 (Katelville Tap - Chenango Bridge) - Upgrade Conductor	1,178	0	0	0	0
Bon Acre Development (Crooked Lake 170), Electric line extension	127	0	0	0	0
Rolling Hills URD, Electric Line Ext	161	0	0	0	0
Stonecrest URD, Electric Line Ext	115	0	0	0	0
Falcon Trace URD, Electric Line Ext	156	0	0	0	0
Meadows Subdivision	120	0	0	0	0
Haviland Hollow - Replace Breaker #1	500	390	0	0	0
Cantitoe - Add 2nd 13.2 kV Cir	490	0	0	0	0



Appendix L Projects- NYSEG Electric	2011	2012	2013	2014	2015
Seneca Ordnance Cir 207-001 Third Phase Addition	390	0	0	0	0
West Woodbourne - Add 34.5kV Capacitor	0	0	0	0	390
Roll Road – Add 4th Circuit	238	0	0	0	0
Davis Road - Add 4th Circuit	212	0	0	0	0
Afton Substation - Add New 34.5kV Circuit	164	0	0	0	0
Spaulding Green URD	140	0	0	0	0
Under Frequency Load Shedding Project	127	0	0	0	0
Line Capacitor Banks	96	0	0	0	0
Coons Crossing - Partial Conversion to 34.5kV	50	0	0	0	0
New 34.5kV UG Facilities	50	0	0	0	0
Ridge Rd. - Capacitor Banks (DOE funding)	139	1,386	0	0	0
Langdon - Capacitor Banks (DOE funding)	139	1,386	0	0	0
West Woodbourne - Capacitor Banks (DOE funding)	139	1,351	0	0	0
Amawalk - Add 1 46 KV Capacitor Bank(DOE funding)	136	1,354	0	0	0
Radix Replacement	165	0	0	0	0
TOTAL Appendix L Projects- NYSEG Electric	48,529	62,898	41,525	22,100	43,190

Appendix L Programs – NYSEG Electric	2011	2012	2013	2014	2015
TDIRP	25,000	25,000	25,000	25,000	25,000
Homer City	135	0	0	0	0
Kattleville - Replace switch	234	0	0	0	0
Division Minors	39,000	39,000	39,000	39,000	39,000
2011 Security Projects	3,406	2,022	1,548	1,500	0



Appendix L Programs – NYSEG Electric	2011	2012	2013	2014	2015
Stoney Ridge Substation Perimeter Protection	250	0	0	0	0
Fleet, Facilities, General, IT	19,268	20,845	20,170	22,383	18,587
TOTAL Appendix L Programs-NYSEG- Electric	87,293	86,867	85,718	87,883	82,587

Projects Supplemental to Appendix L- NYSEG Electric	2011	2012	2013	2014	2015
Mechanicville Reinforcement Project	7,000	12,968	356	0	0
Energy Control Center (includes GIS and SCADA)	5,655	6,045	1,820	0	0
Watercure Rd. - 2nd 345 kV Transformer	2,195	9,427	0	0	0
Greenidge Ground Bank	2,701	0	0	0	0
Bedford Hills - Replace Bank #2	1,513	1,800	1,800	0	0
Erie Street - Add 3rd 115/34.5kV Transformer	0	0	0	3,451	0
System Planning Reliability Projects	0	2,000	2,000	10,000	10,000
Fallbrook World Kitchen (not of customer contribution)	1,250	0	0	0	0
Dansville radio tower and equipment relocation	1,600	0	0	0	0
ECC Map Board Replacement	1,500	0	0	0	0
Circuit 512 (Vestal - Goudey) - Upgrade Conductor	917	0	0	0	0
Condition Based Maintenance	530	0	0	0	0
South Perry - Replace 115-35kV transformer	0	0	0	0	0
Hillside - Replace Bank #3	327	0	0	0	0
Line 1611 & 1620 Circuit 437 Tilly Foster Rebuild Reconductor	0	110	0	0	0
Agra-Farma Circuit 12.5kV Conversion	693	0	0	0	0
Bon Acre Development (Crooked Lake 170) Electric Line Ext	0	0	0	127	0
Brewster Business Transformation Unitization Pilot	0	0	0	0	696



Projects Supplemental to Appendix L- NYSEG Electric	2011	2012	2013	2014	2015
Cemetery Road Dist Relocation	0	0	0	175	0
Countryscape URD - Beattie Rd	0	0	0	0	100
Craryville 611 Relocation	0	0	0	120	0
Dover Plains Cir 494, Line 173 Conversion and Rebuild	0	0	0	0	105
Eastern Hills Mall Part 1 - West Side - Replace UG Dist	0	0	0	570	0
Eastern Hills Mall Part 2 - East Side - Replace UG Dist	0	0	0	430	0
Falcon Trace URD, Electric Line Ext	0	0	0	156	0
Farm Pond Circle Subdivision	0	0	0	105	0
Glenwood Replace Substation Transformers	2000	623	0	0	0
Kent Cir 175 Conversion	0	0	0	110	0
Klinekill 630 Rebuild	0	0	0	150	0
Klinekill 631 Rebuild	0	0	0	150	0
Line 139 Line Ten Mile River Cir 443 Rebuild	0	0	0	100	0
Line 502 - Lockport Gulf, Rebuild 35kV Transmission	0	0	0	250	0
Line 874 Goldens Bridge Cir 421 Rebuild Reconductor	0	0	0	110	0
Line 552 Bennington to Cowlesvilles, Replace 35kV Trans Poles	0	0	0	750	0
Line 620, Brainard Tap to W. Lebanon Rebuild	0	0	0	495	0
Line 871/872, Phase 1: Route 3 to High Falls Rebuild	0	0	0	660	0
Line 871/872, Phase 2: Kents to Cadyville to Structure T12 Rebuild	0	0	0	330	0
Line 874 Goldens Bridge Cir 421 Rebuild Reconductor	0	0	0	110	0
Line 877, Kents to Banker Framing Issues, 2.6 miles, 46kV, Rebuild	0	0	0	520	0
Line 878, Phase 1: Sciota Flatrock to Hyde to W. Chazy Rebuild	0	0	0	0	1,000
Line 878, Phase 2: W. Chazy to Beekmantown to Woodruff Rebuild	0	0	0	0	750



Projects Supplemental to Appendix L- NYSEG Electric	2011	2012	2013	2014	2015
Line 879 Phase 2: Ausable Town Line to Rainbow Falls Rebuild,	0	0	0	0	100
Line 879, Phase 1: South Junction to Ausable Town Line Rebuild	0	0	0	0	443
Line 880, Wade Tap to Cabots Rebuild	0	0	0	0	1,000
Line 884, Barton Brook to Jay Rebuild, 20.8 miles	0	0	0	0	1,500
Meadows Subdivision	0	0	0	0	120
Pawling Cir 166 Conversion	0	0	0	0	105
Roll Road 512 & 529 - Replace OH URD Cables	0	0	0	0	130
Roll Road 545 Cir Improvement	0	0	0	0	200
Rolling Hills URD, Electric Line Ext	0	0	0	0	161
TOTAL Projects Supplemental to Appendix L-NYSEG Electric	27,881	32,973	5,976	18,869	16,410

Programs Supplemental to Appendix L-NYSEG Electric	2011	2012	2013	2014	2015
Substation Automation Program	760	600	11,000	11,000	11,000
Distribution Pole Replacement Program	0	0	5,000	0	5,000
Cantitoe - RTU Upgrade	237	0	0	0	0
Kent - RTU Upgrade	236	0	0	0	0
Putnam Lake - RTU Upgrade	236	0	0	0	0
Teakettle Spoute - RTU Upgrade	236	0	0	0	0
Dingle Ridge - RTU Upgrade	236	0	0	0	0
Kent Cliffs - RTU Upgrade	236	0	0	0	0
Peach Lake - RTU upgrade	236	0	0	0	0
West Patterson - RTU Upgrade	236	0	0	0	0
Harlem Valley - RTU Upgrade	236	0	0	0	0



Programs Supplemental to Appendix L-NYSEG Electric	2011	2012	2013	2014	2015
Wassaic - RTU Upgrade	236	0	0	0	0
State St. - RTU Network Expansion Program	236	0	0	0	0
Clark St. - RTU Network Expansion Program	236	0	0	0	0
Northside - RTU Network Expansion Program	236	0	0	0	0
Noyes Island - RTU Network Expansion Program	236	0	0	0	0
Oakdale - RTU Network Expansion Program	236	0	0	0	0
South Owego - RTU Network Expansion Program	236	0	0	0	0
Willet - RTU Network Expansion Program	236	0	0	0	0
Amawalk - RTU Network Expansion Program	236	0	0	0	0
Flat Street - RTU Network Expansion Program	236	0	0	0	0
Macedon - RTU Network Expansion Program	236	0	0	0	0
State School - RTU Network Expansion Program	236	0	0	0	0
Kintigh - RTU Network Expansion Program	236	0	0	0	0
Mechanicville Hydro - RTU Network Expansion Program	236	0	0	0	0
Mulberry - RTU Network Expansion Program	236	0	0	0	0
Colliers - RTU Network Expansion Program	236	0	0	0	0
RTU Program	0	2,000	14,000	20,000	20,000
Dover Plains - RTU Upgrade	236	0	0	0	0
TOTAL Programs Supplemental to Appendix L-NYSEG Electric	6,897	2,600	30,000	31,000	36,000

Generation Projects - NYSEG	2011	2012	2013	2014	2015
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Generation Projects - NYSEG	2011	2012	2013	2014	2015
Mechanicville Unit 1- Major Overhaul	0	0	639	1,361	0
Mill C Unit 1-2 -Draft Tube Replacements and Foundation Protection	256	0	0	0	0
Generation Minor Projects	600	1,600	2,100	2,100	2,100
CV Unit 2 -Major Overhaul	986	0	0	0	0
High Falls -Switchgear	477	0	0	0	0
Rainbow Falls- Fish Bypass and Trash rack	294	0	0	0	0
4th Street Substation UG Distribution	284	0	0	0	0
Rainbow Falls- Rackraker	300	0	0	0	0
Rainbow Falls -Penstock Expansion Bellows	200	0	0	0	0
Rainbow Falls -Intake Gate upgrade	10	250	0	0	0
Mill C Gravity Dam -Construction ports	137	0	0	0	0
Kents Falls -Penstock Trifurcation	10	185	0	0	0
Kents Falls -Ring Girder	2	178	0	0	0
Rainbow Falls -Spillway Resurfacing	10	50	450	0	0
High Falls -Draft Tube Stop logs	0	0	0	235	0
Mill C -Unit 1 Generator rewind	0	0	500	0	0
Mill C -Trash Removal System Upgrade	0	0	0	110	410
Rainbow Falls- Spillway Floodgate	10	50	250	0	0
High Falls -Gravity Dam construction ports	0	0	0	100	0
High Falls -Unit 2 Major overhaul	0	0	50	700	0
Cadyville -Gravity Dam Construction ports	0	0	0	0	100
Mechanicville Standby Generator/Black Start/Isolated Operation	0	0	0	0	200
Mechanicville- Unit 2 Major Overhaul	0	0	0	0	500



Generation Projects - NYSEG	2011	2012	2013	2014	2015
Mechanicville -Building 113 Demolition	0	0	0	0	250
Mechanicville -New Detached Equipment Storage Building	0	0	0	0	250
Kents Falls - Emergency Bypass Valve	0	150	0	0	0
Kents Falls - Surge Tank	10	150	0	0	0
Rainbow Falls - Gravity Dam Construction Ports	0	0	100	0	0
TOTAL Generation Projects- NYSEG	3,586	2,613	4,089	4,606	3,810
TOTAL NYSEG Electric	174,186	187,951	167,308	164,458	181,997



Rochester Gas & Electric

Appendix L Projects-RG&E Electric	2011	2012	2013	2014	2015
New Bulk Power Station - 345kV Source and 115kV Transmission Lines	2,500	11,200	80,000	84,000	0
New Downtown 115kV Source	10,000	23,900	0	0	0
Station 124- New Phase Shifter Transformer	13,000	17,519	0	0	0
Station 124 -New SVC	8,000	19,500	0	0	0
Highway Projects	0	3,000	3,000	3,000	3,000
New 115kV/34.5kV Substation	0	920	8,336	0	0
Stations 67 to 418- New 115kV Transmission Line	750	7,002	0	0	0
Station 218 to Clyde- New 34.5kV Transmission Line	60	420	5,500	0	0
Station 424 -New Line	3,176	0	0	0	0
Station 42 -New Capacitors	920	0	0	0	0
New 115kV Transmission Line (Sta.13A to Sta.135)	1,826	0	0	0	0
Stations 180 and 128 -New Capacitors	1,836	0	0	0	0
New Station 137	3,530	0	0	0	0
Webster East -New 12 kV Source	3,100	0	0	0	0
Jefferson Ave Electric Facilities Relocation	1,650	0	0	0	0
Culver Rd Electric Facilities Relocation	215	0	0	0	0
Rochester SCADA NERC Compliance	2,248	1,600	0	0	0
U of R New 115-34kV Substation	0	1,000	0	0	0
Midtown Electric Facilities Relocation	1,197	0	0	0	0
Stations 198 -New 34.5kV Capacitors	58	604	0	0	0
Station 181 - 34kv Capacitor Bank	730	0	0	0	0



Appendix L Projects-RG&E Electric	2011	2012	2013	2014	2015
Station 194 - 34kV Capacitor Bank	730	0	0	0	0
Station 218 - 34kV Capacitor Bank	58	604	0	0	0
Stations 127 -New 34.5kV Capacitors	50	838	0	0	0
Station 120 - New 34.5kV Capacitors	908	0	0	0	0
Station 125 - New 34.5kV Capacitors	70	838	0	0	0
Stations 173 -New 34.5kV Capacitors	70	569	0	0	0
Station 178 - 34kV Capacitor Bank	70	0	569	0	0
Station 180 - 34kV capacitor Bank	660	0	0	0	0
Station 168 -New Capacitors –(DOE funding)	1,050	0	0	0	0
Station 56 -Additional 12kV Source	0	2,580	1,890	0	0
Station 121- New 115kV Capacitor	98	1,564	0	0	0
Station 71 -New 115kV Capacitor	0	0	1,458	0	0
Station 9 -Transformer Storage Yard Expansion	130	0	0	0	0
89 East St.- Panel Upgrades	0	0	0	0	0
Long Pond Rd. Hwy Relocation	872	0	0	0	0
South Lincoln Rd Hwy Relocation	720	0	0	0	0
Salter Road	100	0	0	0	0
Walmart Northgate Plaza Cir 5255	70	0	0	0	0
Cobbs Hill Hwy Relocation	250	0	0	0	0
Charlotte St Hwy Relocation	440	0	0	0	0
Seneca Ave Hwy Relocation	300	0	0	0	0
Westfield Street (Chili - Brooks) - Relocate Electric Facilities	288	0	0	0	0
Cir 419- Add new 12kv circuit	0	0	0	260	0



Appendix L Projects-RG&E Electric	2011	2012	2013	2014	2015
Lines 911 - 932 - Add Oil Circulation to Pipe Cable	330	0	0	0	0
Broad Street Tunnel - Highway Relocation	250	0	0	0	0
Station 13A - JMUX Core Network Build-Out	35	0	0	0	0
I-590 @ Winton Rd Hwy Relocation	196	0	0	0	0
Ridgeway Ave Hwy Relocation	173	0	0	0	0
Akron Street (Curb Group) - Relocate Electric Facilities	102	0	0	0	0
Circuit 430 - Rebuild and Convert to 12kV	241	0	0	0	0
Station 122 - relay Upgrades	50	0	0	0	0
Station 137 - JMUX Core Network Build-Out	51	0	0	0	0
Station 23 - JMUX Core Network Build-Out	38	0	0	0	0
Station 42 - JMUX Core Network Build-Out	38	0	0	0	0
Station 124 - JMUX Core Network Build-Out	38	0	0	0	0
Station 204 - JMUX Core Network Build-Out	30	0	0	0	0
Dorsey Road- Relocate Electric Facilities	40	0	0	0	0
Station 135 - JMUX Core Network Build-Out	19	0	0	0	0
Station 48 - Add (2) 34.5kV Capacitor Banks	0	0	962	0	0
TOTAL Appendix L Projects-RG&E Electric	63,360	93,658	101,715	87,260	3,000

Appendix L Programs-RG&E Electric	2011	2012	2013	2014	2015
TDIRP	15,000	15,000	15,000	15,000	15,000
Station 38 - Install 13 VAC Breakers	60	0	0	0	0
Station 81 - Install 5 AMVAC VAC Breakers	25	0	0	0	0
Station 412 - Replace circuit Breaker 71412 34kV	28	0	0	0	0



Appendix L Programs-RG&E Electric	2011	2012	2013	2014	2015
Station 81 - Install New VAC Breakers 6 DS	15	0	0	0	0
Division Minors	17,000	17,000	17,000	17,000	17,000
2011 Security Projects	1,427	1,444	1,448	1,448	1,448
Fleet, Facilities, General, IT	5,370	6,652	5,966	5,828	6,110
TOTAL Appendix L Programs-RG&E Electric	38,925	40,096	39,414	39,276	39,558

Projects Supplemental to Appendix L-RG&E Electric	2011	2012	2013	2014	2015
Energy Control Center (Includes GIS and SCADA)	3,045	3,255	980	0	0
Station 42 - Replace 115-11kV 4T Transformer	3,042	1,000	0	0	0
Station 42 - Replace 34.5-11.5kV 3T Transformer	1,329	1,800	0	0	0
Station 80 - Replace 1T and 3T Transformers	3,000	4,000	1,500	0	0
Line 926 - Upgrade 115kV Line	634	2,018	0	0	0
Station 168 Service Area Reinforcement	0	2,000	5,912	5,730	0
Station 48 - Replace (2) 115-34.5 kV Transformer	0	0	9,804	0	0
System Planning Reliability Projects	0	2,000	2,000	30,000	30,000
East Ridge Rd. Highway Relocation	1,600	0	0	0	0
Portland Ave. Highway Relocations	1,230	0	0	0	0
Broad Street (Court St - Chestnut St) - Relocate Electric Facilities	1,178	0	0	0	0
Westfall Rd. Highway Relocation	1,035	0	0	0	0
Station 42 - Transformer (3) 34.5-11kV Replacement	60	0	0	0	0
Station13A - relay Upgrades	25	0	0	0	0
TOTAL Projects Supplemental to Appendix L-RG&E Electric	16,178	16,073	20,196	35,730	30,000



Programs Supplemental to Appendix L-RG&E Electric	2011	2012	2013	2014	2015
Substation Automation	0	0	5,700	5,700	5,700
Indoor Substation Refurbish	0	0	0	9,000	9,000
Cablecure	1,850	3,000	3,000	3,000	3,000
Distribution Pole Replacement Program	0	0	4,000	8,000	8,000
RTU Program	2,000	2,000	12,000	17,000	21,000
Radio Unit Installation	597	0	0	0	0
TOTAL Programs Supplemental to Appendix L-RG&E Electric	4,447	5,000	24,700	42,700	46,700

Generation Projects- RG&E	2011	2012	2013	2014	2015
Station 5 -Tunnel Relining	26,750	13,446	0	0	0
Station 5 -Wicket Gate Upgrades	4,084	2,730	0	0	0
Station 5 -Crest Gate Operating Cylinder Replacement	572	0	0	0	0
Station 5 -HG Trash chute upgrade incl. gate operators	778	0	0	0	0
Station 5 -Surge Tank Roof replacement and upgrade	102	317	0	0	0
Station 5 -River Wall Stabilization	123	0	0	0	0
Station 5 -Pave Road to Seth Green Drive	0	0	569	0	0
Station 5 -Cooling Water System	162	0	0	0	0
Station 5 -HG North and South Pier Foundations	0	500	0	500	0
Station 5 -OH Door	125	0	0	0	0
Station 5 -Incline Rail	201	0	0	0	0
Station 5- projects Unit 1	995	0	0	0	0
Station 5- projects Unit 2	977	0	0	0	0



Generation Projects- RG&E	2011	2012	2013	2014	2015
Station 5- projects Unit 3	621	0	0	0	0
Station 5 - Unit 1,2,3 Penstock Drain Valves	174	0	0	0	0
Station 5 -Head gates Intake	1,177	0	0	0	0
Station 5 - Air Compressor System	200	300	0	0	0
Station 5 -Spill gate	87	893	30	1350	750
Station 5 -Powerhouse	3,224	800	150	0	0
Station 5- Electric Distribution	1,263	475	0	0	0
Station 5 - Vibration Stator Monitoring System	34	0	0	0	0
Station 5 - Abandoned Equip. Removal	53	0	0	0	0
Station 5 - Office Expansion	204	0	0	0	0
Station 2 -Replace Unit 1 Penstock	50	1,000	9,000	0	0
Allegany & Miscellaneous - Allegany Combuster	0	0	0	2,500	0
Station 2- Runner Upgrade and Generator Rewind	328	0	0	0	0
Generation Minor Projects	2,500	2,500	2,500	2,500	2,500
Station 2 -Needle Dam Replacement	20	40	680	0	0
Station 2 -CAD Gate 3 Replacement	521	0	0	0	0
Station 2 -CAD Gate 6 Replacement	518	0	0	0	0
Station 2 -Browns Race Excavation for Unit 1	1,173	0	0	0	0
Station 2 -Unit 1 11kV and DC controls	750	150	0	0	0
Allegany & Miscellaneous - Allegany Cooling Towers	200	0	0	0	0
Station 160- license surrender Phase I	204	0	0	0	0
Station 2- Unit 1 Roof Upgrade	151	0	0	0	0
Station 2 -Unit 1 Interconnect to Station 6	0	0	0	0	0



Generation Projects- RG&E	2011	2012	2013	2014	2015
Station 2 -6 MW Ongoing Project Support	25	25	0	0	0
Station 2 -Unit 1 Butterfly Valve	10	10	600	0	0
Station 2 -Upgrade Trash racks	0	256	0	0	0
Station 26 -Penstock/scroll case upgrade	0	0	250	0	0
Station 2 -CAD Gate 2 Replacement	15	0	0	0	0
Station 26- Rackraker	33	0	0	0	0
Station 26- Unit 1 major overhaul	0	50	800	0	0
Station 2 -Upgrade Rackrakers	10	10	90	0	0
Unit 1 Static Exciter Addition	0	0	250	0	0
Wiscoy -Penstock Installation	0	0	0	1,200	0
Wiscoy -Bearing Installation	0	0	0	150	0
Wiscoy -Dam Upgrades	0	0	0	500	0
Station 26 - Tailrace wall extension	0	50	150	0	0
Station 2 - CAD Communications & Control Bldg	75	175	0	0	0
Station 26- Heating and Ventilation	112	0	0	0	0
Station 26 - Tailrace wall extension	0	50	150	0	0
Station 170- (Wiscoy) Unit 2 Major Rebuild/Bearings	0	0	50	100	0
Station 170 -(Wiscoy) Dam Upgrades	0	0	50	450	0
Station 170 -(Wiscoy) Penstock Installation	0	0	50	1,150	0
TOTAL Generation Project- RG&E	48,601	23,777	15,369	10,400	3,250
TOTAL RG&E-Electric	171,511	178,604	201,394	215,366	122,508



Attachment 2

Reconciliation of Electric Plan to Appendix L



The following schedules provide a reconciliation of Electric Projects and Programs in Appendix L contained in this Plan to those contained in Appendix L to the Rate Order.

(Dollars in millions)

	2011	2012	2013
NYSEG Appendix L (Projects & Programs)	147.20	127.40	141.10
	Changes in Plan		
Projects			
Ithaca Reinforcement Project	0.20	0.00	0.00
Watercure Road Sub Transformer Replacement	1.00	0.00	0.00
Moraine Road Substation Breaker Addition	0.80	0.80	0.00
Yahoo Service Project	0.00	0.00	0.00
Capacitor Additions - Energy Efficiency Initiative	1.00	0.00	0.00
Meyer - Add 115kV Capacitor Bank - Hornell	1.00	0.00	0.00
Corning Valley Upgrade	(3.50)	0.00	0.00
Klinekill - Valkin New 115kV Transmission Line	(9.10)	1.40	9.00
Transit Street Substation MGP Remediation	(1.50)	1.50	0.00
Walden 69kV Transmission Line Upgrade	(2.60)	2.90	0.00
Line #807 115kV Conversion	(0.30)	1.00	0.00
New Mobile Substation	0.10	(1.20)	0.00
Biogas 34.5kV Collector System	(0.10)	0.20	0.00
Bulk Spare Transformer	1.60	0.00	0.00
Silver Creek Substation New Transformer	(0.60)	0.60	0.00
Northend Substation New Capacitor Bank	(1.00)	4.00	0.00
Willet Substation New Transformer	(0.40)	0.40	0.00
Flat Street Substation New Transformer	(0.30)	0.30	0.00
South Perry New 115kV Transformer	(0.50)	0.50	0.00
Windham Substation 115kV Capacitor Addition	0.00	(1.10)	1.10
Perry Center Area Install New 34.5kV Substation	0.00	(2.50)	2.50
South Perry New 230kV Transformer	1.30	9.60	(12.50)
Westover Substation New 115kV Transformer	0.80	0.00	(0.80)
Eelpot New Transformer	0.30	0.50	(3.10)
Meyer Substation New Transformer	0.30	0.50	(2.90)
Stephentown Substation New Transformer	0.30	2.20	(0.20)
Richfield Springs Substation New Transformer	0.60	1.60	(0.30)
Tom Miller Road New Substation	0.00	0.10	0.00
Coddington Add LTC Capability to 115-34.5kV Transformer	0.40	0.50	(1.00)
Big Tree Substation Capacitor Addition	0.10	1.50	0.30

	2011	2012	2013
Mobile Radio Project	(1.00)	0.00	0.00
Mill C Unit 1-2 Draft Tube Replacements	(0.70)	0.00	0.00
Electric GIS - Now part of the Energy Control Center	(4.80)	(1.10)	0.00
System Security	0.00	(1.40)	(1.50)
Other	5.20	0.00	(0.50)
Programs			
TDIRP	0.00	(0.40)	(3.90)
NYSEG Electric Appendix L (Projects & Programs) - Plan	135.80	149.8	127.3

	2011	2012	2013
RGE Appendix L (Projects & Programs)	136.50	138.50	177.30
	Changes in Plan		
Projects			
Webster East New 12kV Source	3.10	0.00	0.00
New Station 137	3.50	0.00	0.00
Station 424 New Line	3.20	0.00	0.00
Station 42 New Capacitors	1.00	0.00	0.00
New 115kV Transmission Line (Station 13A to Station 135)	1.80	0.00	0.00
Station 13A Replace Breakers	0.00	0.00	0.00
Stations 180 and 128 New Capacitors	1.80	0.00	0.00
Culver Road Electric Facilities Relocation	0.20	0.00	0.00
Jefferson Avenue Electric Facilities Relocation	1.70	0.00	0.00
U or R New 115-34kV Substation	(3.80)	1.00	0.00
Rochester SCADA NERC Compliance	1.20	1.60	0.00
Station 124 New SVC	0.00	(0.40)	0.00
New Down Town 115kV Sources	0.00	0.00	0.00
New Bulk Power Station	0.50	1.20	0.00
Midtown Electric Facilities Relocation	0.20	0.00	0.00
Stations 127, 125 & 120 New 34.5kV Capacitors	(1.70)	1.70	0.00
Station 168 New Capacitors	0.00	0.00	0.00
Stations 198, 218, 194 & 181 New 34.5kV Capacitors	(1.20)	1.20	0.00
Stations 67 to 418 New 115kV Transmission Line	(0.50)	(0.10)	0.00
Station 56 Additional 12kV Source	(2.60)	0.60	1.90
Stations 173, 178 & 180 New 34.5kV Capacitors	(1.20)	0.60	0.00
New 115/34.5 kV Substation	0.00	0.00	0.00
Station 218 to Clyde New 34.5 Transmission Lines	0.06	(0.08)	0.00
Station 121 New 115kV Capacitor	0.10	1.60	(1.20)



	2011	2012	2013
TDIRP	0.00	0.00	0.00
Substation Transformers (Station 124 New PST) *	(3.40)	3.80	(1.30)
Electric GIS - Now Part of Energy Control Center	(2.40)	(0.60)	0.00
Station 5 Tunnel Relining	(10.30)	(1.00)	0.00
Station 5 Wicket Gate Upgrades	0.08	1.00	0.00
Other - Unspecified Projects In Appendix L	(25.40)	(16.80)	(35.50)
RGE Appendix L (Projects & Programs) - Plan	102.30	133.80	141.10
NYSEG & RGE Appendix L (Projects & Programs) - Plan	238.10	283.60	268.40

* Mainly Station 124 New Phase Shifter Transformer