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Vice President - Rates and Regulatory Economics

April 2, 2012

VIA ELECTRONIC FILING

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 Corporation ("NYSEG") and Rochester Gas and Electric Corporation ("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 2012 through 2016. 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.

[1] The variance information requirement noted in Appendix 2, Paragraph 2(d) was fulfilled with the Companies March 1, 2012 filing in Cases 09-E-0715, 09-G-0716, 09-E-0717, 09-G-0718.

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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 Paul Dumais at (585) 724-8542.

Respectfully submitted,

James A. Lahtinen

Enclosure

cc: Active Party Service List (via e-mail)
Mr. Colonel Dickens
Mr. Michael Rieder
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NYSEG and RG&E Capital Investment Plan 2012-2016

March 2012

IBERDROLA USA

TABLE OF CONTENTS

ATTACHMENTS

Attachment 1 Detail Project List for 2012 to 2016 – In alphabetical order

Attachment 2 Reconciliation of Electric Plan Investments to Appendix L

Attachment 3 Description of the Most Significant Electric Projects

Attachment 4 List of Electric Projects Included in Category 1 – Network Reinforcement

Attachment 5 List of Electric Projects Included in Category 2 – Customer and Statutory

Attachment 6 List of Electric Projects and Programs Included in Category 3 – Modernization and Automation

Attachment 7 Description of the Most Significant Gas Projects

Attachment 8 List of Gas Projects and Programs Included in Category 2 – Customer and Statutory

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 & Gas ("NYSEG") and Rochester Gas and Electric ("RG&E"), for the period 2012 through 2016 (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 towards becoming world-class energy companies. To that end, the Companies propose investing $1.8 billion in the electric delivery system and generation projects and $0.5 billion in the gas delivery system over the five-year period.

The projects and programs proposed in this Plan are what the Companies have determined today is needed to deliver safe and reliable service to customers. The Companies continually reevaluate and reprioritize projects, and the later years of this Plan will likely change as a result of both this reevaluation and the 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 continue the process of bringing the electric and gas

delivery systems up to current day standards by modernizing equipment, employing software and IT platforms and expanding automation of the network.

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
- Optimize replacement of obsolete equipment and facilities
- Improve system effectiveness and efficiency
- 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

TABLES

FIGURES

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 ($000)

Company	2012	2013	2014	2015	2016	TOTAL
NYSEG Electric	152,068	116,359	214,476	203,993	198,993	885,889
NERC Alert Project	9,206	5,478				14,684
RG&E Electric	181,839	134,053	227,141	189,965	185,494	918,492
Subtotal-Electric	**343,113**	**255,890**	**441,617**	**393,958**	**384,487**	**1,819,065**
Appendix L- Electric	**265,912**	**318,407**				
NERC Alert Project-Total		**14,684**				
NYSEG Gas	40,346	41,634	59,390	64,585	70,538	276,492
RG&E- Gas	33,260	36,865	55,521	59,802	65,340	250,788
Subtotal- Gas	**73,606**	**78,499**	**114,910**	**124,388**	**135,877**	**527,280**
Appendix L- Gas	**73,606**	**78,499**				
TOTAL	**416,719**	**334,390**	**556,528**	**518,346**	**520,364**	**2,346,346**

The investment amount for 2012 has been approved by the Iberdrola USA Board of Directors and reflects advancing 2013 Appendix L funding amounts into 2012 (the sum of 2012 and 2013 funding amounts equals that in Appendix L plus the NERC Alert Project). Over the five year period, NYSEG expects to invest approximately $205 per customer per year in its electric system and $212 per customer per year in its gas delivery system, while RG&E expects to

[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.

invest approximately $503 per customer per year in its electric system and $165 per customer per year in its gas delivery system.

As previously mentioned, this Plan is driven primarily by the Appendix L projects and programs for 2012 and 2013, 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. The plan is also driven by ongoing review and assessment of the electric and gas delivery systems and a determination of priority projects and programs. For periods after 2013, the amounts reflect projected capital investment needs at this time.

The NERC Alert Project and the FERC Bright Line Bulk Electric System upgrades are regulatory requirements that require funding in excess of Appendix L amounts. The FERC Brightline Bulk Electric System upgrades are not included in Table 1.1 because scopes have not been sufficiently developed and costs are not available at this time.

Chapter 2 describes the **STRATEGIC OBJECTIVES OF THE 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 and end of life equipment and facilities, to improve the effectiveness and efficiency of the electric and gas systems through modernization, to sustain the environment and to have a safe system.

Chapter 3 of the Plan presents the electric and gas **TRANSMISSION AND DISTRIBUTION SYSTEMS AND HYDRO GENERATION FACILITIES**. It contains information about the infrastructure.

Chapter 4 presents the **ELECTRIC 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 customers, load and hours of exposure as metrics. In addition, the Companies plan to invest in modernization of its delivery systems and in network automation, in order to operate more

effectively and efficiently, provide added benefits to customers and promote the safe operation of the network. The modernization investments include:

- New standards in equipment and substation schemes.
- Improvements in network infrastructure to reduce the exposure of outages, in the event of failures in transformers at substation and circuits, (N-1).
- Replacement of obsolete and end of life equipment in substations and poor condition poles, wires and other line devices.

Chapter 5 presents the **GAS 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. The Companies key gas business strategies are:

- Safely operate the delivery system
- Achieve all New York Public Service Commission gas service quality performance measures
- Minimize leaks through corrosion control, leak repair and replacement of leak prone mains and services, including an enhanced replacement effort
- Provide innovative, cost-effective and timely planning, engineering and design services that meet or exceed customer expectations

1.1 OPPORTUNITIES AND CHALLENGES

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

1. Enhanced asset management capabilities: The Companies continue to develop 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 recently reorganized its engineering function into two groups: Asset Management and Planning and Engineering and Project Delivery. This was done to improve the planning and delivery of capital investment projects and programs. Asset Management

and Planning is responsible for developing the capital investment plan, recommendations for replacing assets near end of life based upon the new asset management competencies described above and the asset maintenance programs. Engineering and Project Delivery is responsible for the project management, engineering and effective delivery of all of the larger capital investment projects. The groups have developed enhanced project and program tracking processes that enable more effective prioritization of projects. They have also developed a thorough project management manual that provides a consistent approach to the management of capital investment projects. The Companies are continually improving the capital investment planning approach and processes. One such way is through participating in a global asset management effort to determine best practices in the Iberdrola family.

3. The Companies have recently undertaken a focused review of the worst performing distribution circuits. These circuits are being reviewed for betterments and opportunities to better isolate faults in order to lessen the number of customers out during an outage event. The Companies expect to undertake much of this work during the term of this Plan.
4. Project management: The Companies are using owners' engineer services to help execute this Plan. Working with its owners' engineers, the Companies are developing best in class project management approaches which will result in effective and efficient delivery of this Plan.
5. FERC Brightline: Under FERC's Order No. 743-A, there is a change in the definition of Bulk Electric System. The Companies 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, which scopes will be developed, are not included in this Plan.
6. NERC Clearances: Under the NERC Alert Project, NYSEG must determine that all bulk power system transmission lines meet clearances. Areas found to have substandard clearances will be corrected. This is expected to be done in 2012 and 2013.
7. Technological advancements: The Companies are making technological changes and innovations, including standardization, modernization 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 and 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.
- As a result, the number of hours to construct green field substations potentially can be reduced by up to 14%. The number of hours to construct brown field substations potentially can be reduced by up to 6%.

- Improvements to system control: 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. These include:
  - A new Energy Control Center at 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.

  The system automation will be compatible with the future implementation of a smart grid.

- All the new substation or renovations in substation will be done according to the new standards. These standards include voltage monitoring and measures of power quality.

6. Rochester 11kV system: Today the 11 kV system in Downtown Rochester is operated as a transmission system. With current technology, it is possible to operate the system as a distribution system with the same reliability. We plan to install new digital relays, integrated system controls and new software applications that will enable RG&E to operate the network more efficiently. An assessment of the system is being done to evaluate the different possibilities.

7. The Companies are putting in place new framework agreements with different Iberdrola-wide manufacturers. With these multi-year agreements, the Companies expect to improve prices of equipment.
8. The Companies have begun to work at cost with an affiliate company, Iberdrola Energy Projects (IEP). IEP charges reflect fully loaded costs for their work (the hourly rate is below market).

1.2 SUMMARIES

This section contains various summaries 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 electric Appendix L Projects and Programs contained in this Plan to those contained in Appendix L to the Rate Order.

The following table and chart provide a summary of the Plan by Type of Investment for the period 2012-2016.

Table 1.2 Summary of Capital Investment Plan by Type of Investment 2012-2016
($000)

Company	Transmission	Distribution	Gas	Generation	Other	**TOTAL**
NYSEG	372,495	374,424	240,317	16,741	173,087	1,177,065
RG&E	575,119	239,607	231,306	67,586	55,662	1,169,280
TOTAL	**947,614**	**614,031**	**471,623**	**84,327**	**228,750**	**2,346,346**

Below is a chart depicting the above categorization.

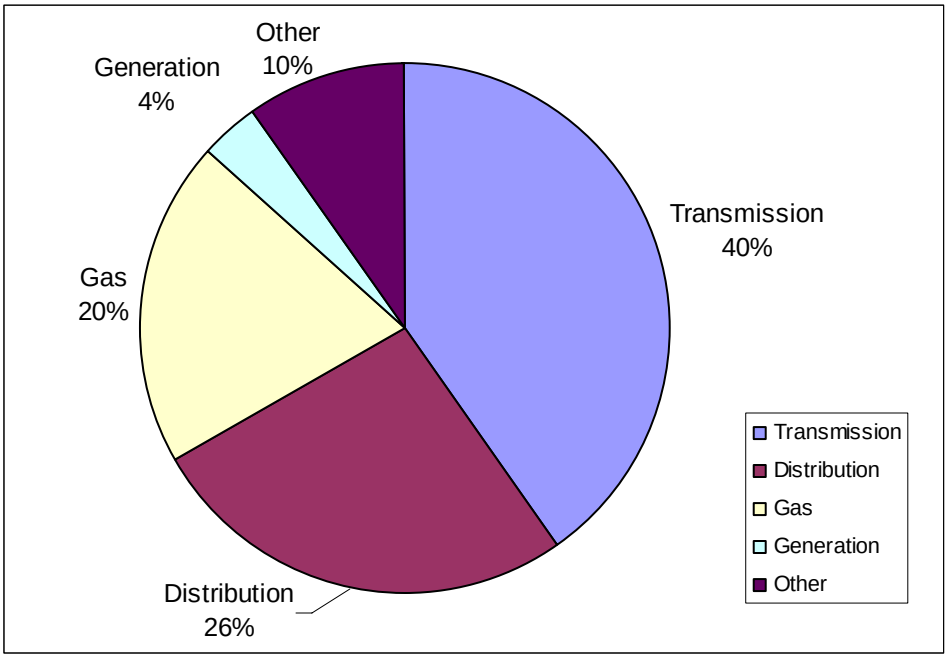


Figure 1.1 Summary of Capital Investment Plan by Type of Investment 2012-2016

1.2.1 Electric Summary

This section contains various summaries of the electric portion of the Capital Investment Plan. Transmission projects are indicated with a “T” and distribution projects with a “D.”

Table 1.3 Summary of Electric Capital Investment Plan by Category (dollars in 000s)

Category	2012	2013	2014	2015	2016	TOTAL
Network Reinforcement-T	112,397	113,854	172,269	156,168	163,585	718,274
Network Reinforcement-D	18,949	5,626	19,795	19,681	13,057	77,108
Total Network Reinforcement - Category 1	131,346	119,480	192,064	175,849	176,642	**795,382**
Customer & Statutory- T	20,144	10,083	10,393	625	2,425	43,671
Customer & Statutory -D	16,842	4,615	23,804	9,100	8,280	62,640
Total Customer and Statutory - Category 2	36,986	14,698	34,197	9,725	10,705	**106,311**
Modernization & Renovation -T	18,065	15,140	37,015	32,489	26,704	129,414
Modernization & Renovation -D	71,736	67,439	79,846	80,636	82,246	381,903
Total Modernization & Renovation - Category 3	89,801	82,580	116,862	113,125	108,950	**511,317**
Automation-T	10,916	7,176	12,975	12,988	12,200	56,255
Automation-D	12,724	4,551	25,350	24,700	25,055	92,380
Automation -Category 4	23,640	11,727	38,325	37,688	37,255	**148,635**
Generation- Category 5	32,022	3,900	20,079	17,481	10,845	**84,327**
Other - Category 6	29,317	23,506	40,090	40,090	40,090	**173,093**
TOTAL	343,113	255,890	441,617	393,958	384,487	1,819,065

Below is a chart depicting the above categorization.

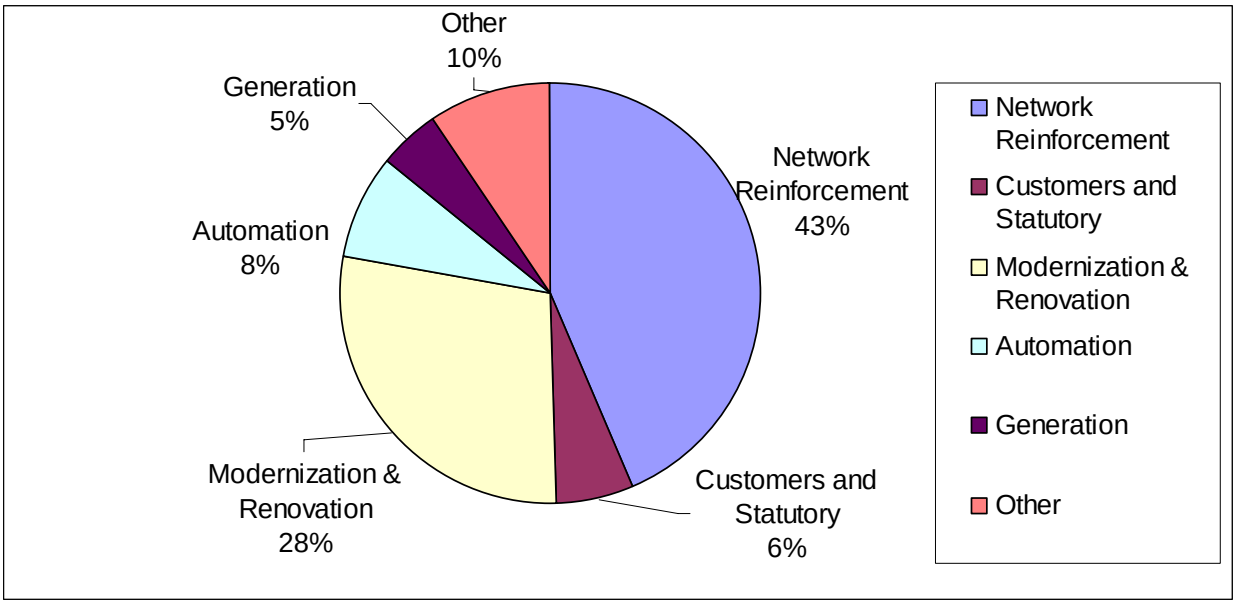


Figure 1.2 Summary of Electric Capital Investment by Category

The following assets will be added to the electric network over the 2012 through 2016 period:

Table 1.4 Electric Projects: New Facilities, Capacity and Miles Installed

	TOTAL	2012	2013	2014	2015	2016
New Substations #	**8**	1	3	2	-	2
MVA	**1,554**	112	77	15	-	1,350
New Transformers #	**63**	31	11	13	6	2
MVA	**3,154**	1,017	1,322	710	55	50
Transmission Lines	**80**	18	23	32	3	4
miles	**92**	13	38	31	5	5
Capacitor Banks #	**72**	36	14	7	7	8
MVAr	**1,129**	370	626	43	40	50
Breakers	**523**	151	121	82	85	84

The following table and chart provide a summary of the Electric Capital Investment Plan by investment reason for the period 2012-2016.

Table 1.5 Summary of the Electric Capital Investment Plan by Investment Reason 2012-2016

	$000	%
Power Quality	152,853	8.4%
System Capacity	642,529	35.3%
Growth	36,231	2.0%
Statutory	70,080	3.9%
Asset Condition	508,787	28.0%
Damage	2,530	0.1%
Automation	148,635	8.2%
Generation	84,327	4.6%
Other	173,093	9.5%
TOTAL	1,819,065	100%

Below is a chart depicting the above categorization.

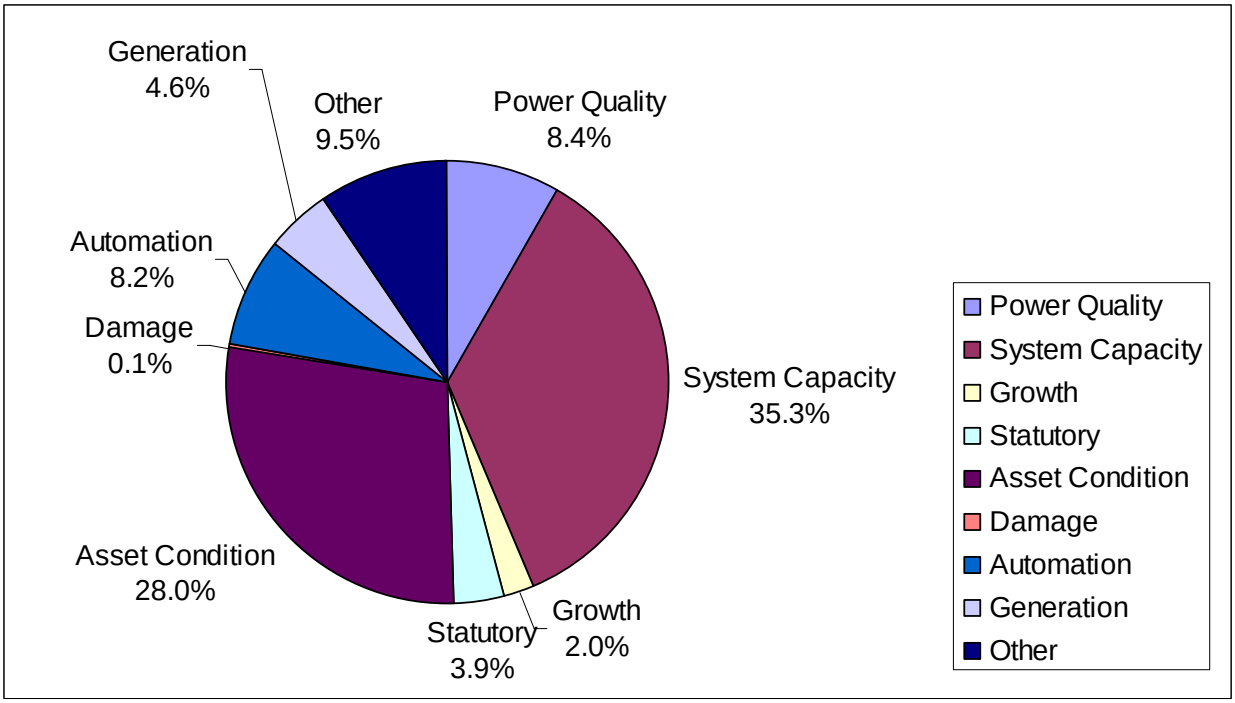


Figure 1.3 Summary of Electric Capital Investment by Investment Reason 2012-2016

1.2.2 Gas Summary

This section contains various summaries of the natural gas portion of the Capital Investment Plan. In addition, a detailed list of projects and programs is included in Attachment 1.

Table 1.6 Summary of Gas Capital Investment Plan by Category

Category	2012	2013	2014	2015	2016	TOTAL
Network Reinforcement – Category 1	6,884	10,723	8,856	9,096	8,921	**44,480**
Customer and Statutory – Category 2	25,809	24,432	23,410	24,343	24,677	**122,670**
Modernization & Renovation – Category 3	30,045	35,329	67,735	76,039	87,370	**296,517**
Automation – Category 4	1,626	330	2,000	2,000	2,000	**7,956**
Other – Category 6	9,243	7,685	12,910	12,910	12,910	**55,657**
TOTAL	**73,606**	**78,499**	**114,910**	**124,388**	**135,877**	**527,280**

Below is a chart depicting the above categorization.

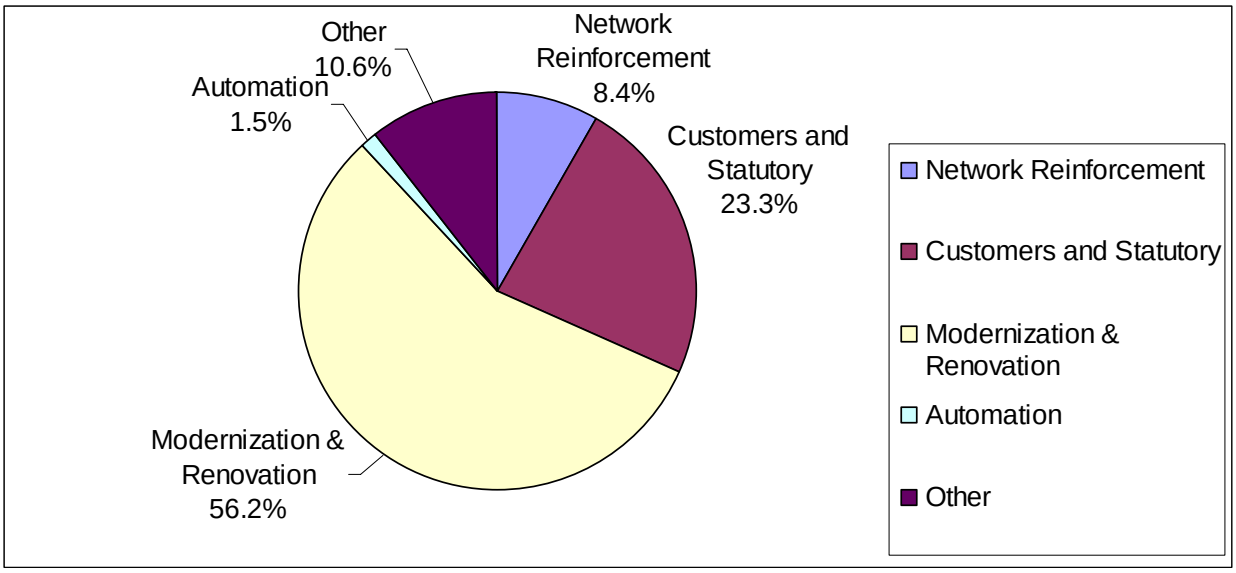


Figure 1.4 Summary of Gas Capital Investment by Category

The following table and chart provides a summary of the Gas Plan by investment reason for the period 2012-2016.

Table 1.7 Summary of the Gas Capital Investment Plan by Investment Reason 2012-2016

	$000	%
System Capacity	44,479	8.4%
Growth	2,140	0.4%
Statutory	120,530	22.9%
Asset Condition	296,517	56.2%
Automation	7,956	1.5%
Other	55,657	10.6%
TOTAL	**527,280**	**100%**

Below is a chart depicting the above categorization.

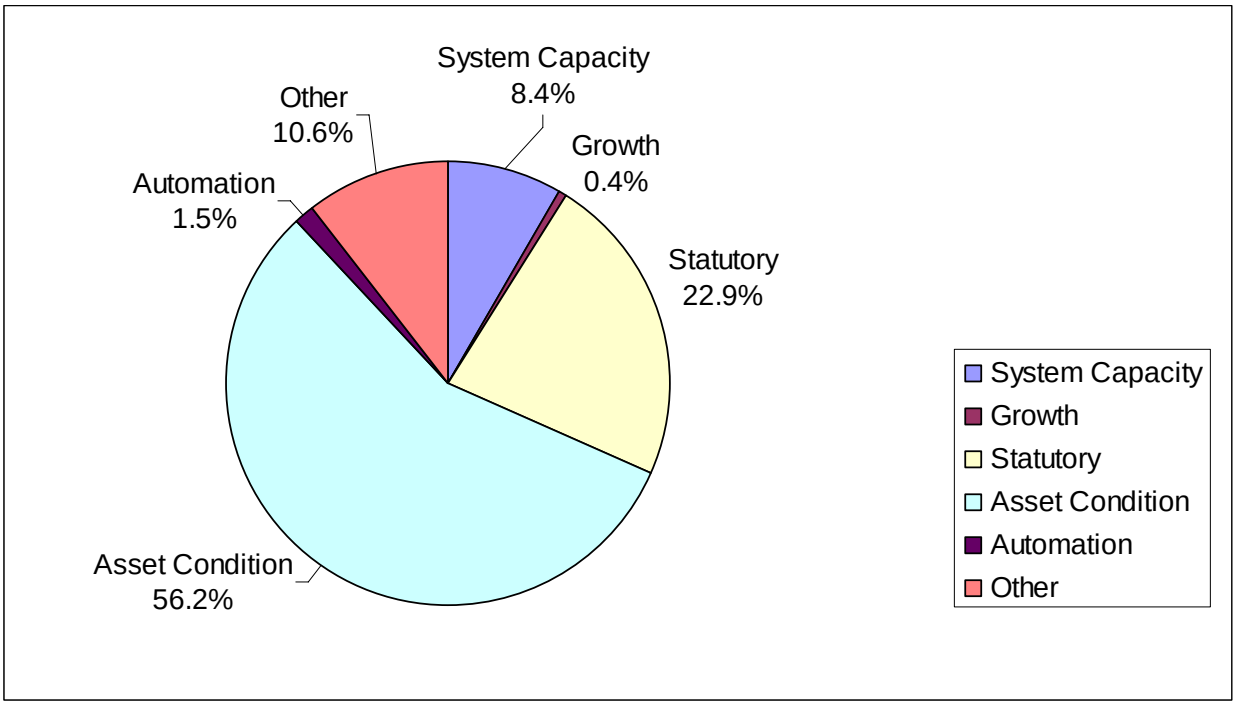


Figure 1.5 Summary of Gas Capital Investment by Investment Reason 2012-2016

2 STRATEGIC OBJECTIVES OF THE PLAN

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

Objective 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 5,000 new electric customers and 2,000 new natural gas customers, annually. The Companies also need to provide reliable and dependable service to 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 gas pipeline in order to reduce commodity costs for customers.

Objective 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 replacement and modernization of end of life equipment.

Objective 3: Replace obsolete equipment and facilities - modernization

During the period 2012-2016, the Companies propose to undertake continued plans to replace outdated and near end-of-life equipment and facilities. The Companies are enhancing asset management competencies and include the following criteria to determine the facilities to be replaced are:

- Equipment and facilities with high failure rates;
- Technological obsolescence (inability to obtain spare parts);
- Facilities that are in poor condition, and maintenance of such equipment is no longer cost effective;
- Equipment with high maintenance costs
- An assessment of risk of failure on safety, reliability and the environment and
- Other indicators of asset health.

The Companies inspect 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 and equipment replaced according to priority. The enhanced asset management competencies will greatly aid the prioritization of assets needing replacement by systematically assessing asset health and including an assessment of the risks related to the assets. The asset health is based upon both condition assessments done during physical inspections and from equipment operation information. The Companies have in place a transmission line wood pole inspect and treat program that extends the life of wooden poles. The Companies also inspect their transmission circuits by helicopter, as such visuals show crossarm, insulator and other wear that is not visible from the ground. The Companies are embarking on more rigorous analyses of failed equipment to aid improving maintenance practices and asset replacement practices.

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

Objective 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 network automation. The Companies plan to modernize 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 real time information 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 the Companies faster response to outages, thus reducing the length of outages resulting from problems in distribution circuits. 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). Adding reclosers on distribution lines likely will reduce the number of customers out of service during an outage and will facilitate information about the location of the damage in the lines. The remote control of breakers will also increase the efficiency of the crews by reducing their travel time.

Investments in automation will be compatible with technologies required for the development of a smart grid.

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 will 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' systems.

- o An integrated Energy Management System, SCADA, distribution management system and outage management system
- o 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 dispatchers and operators:
  - o Improves the identification of interrupted equipment/circuits
  - o Decreases outage restoration times
  - o Improves accuracy of outage analysis engine
  - o 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.
  - o 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 and electric vehicles potentially gaining popularity.
    - ▪ Outage management based on a variety of integrated inputs, including customer calls, SCADA and other devices.
    - ▪ Enterprise Geographic Information System (GIS) Integration:
  - o Provide customers a web-based customer information portal providing full interactive services for outage management information.
  - o Customer data available to operators and dispatchers
  - o Decrease data entry errors and database reconciliation delays
  - o Safe operation and maintenance of the bulk power and sub-transmission systems in full compliance with all FERC/NERC/NPCC /ISO and State regulations.
  - o Accommodates anticipated 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 be the backup for the other.

Energy Control Center systems need constant updates and improvements to remain compliant with 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. Modernization and automation of substations. The substation modernization program will prepare substations for automation through new standards of design and equipment. New controls with microprocessor based relays and with high speed connections to the Energy Control Center allow for immediate indication of system disturbances and outages, reducing outage detection time by up to 30 minutes, and maintenance cycles for some equipment may be extended. In addition to the reduced outage duration time, the microprocessor based relaying will have remote connection so that employees will have access to event reports and system data in a few minutes rather traveling to the station to investigate events. This may further reduce overall restoration time depending on the event that occurred. Microprocessor relays and new breakers also have faster fault clearing times, as little as one-half the time of existing equipment, which enhances the safety of the crews and public. The Companies are standardizing the design and equipment in substation that will result in reduced construction costs. As mentioned previously, the Companies are implementing the IEC 61850 protocol in new substations and substation renovations which will lessen the hours needed for wiring the protection systems of the equipment. The Companies are using advanced technology, quality and standardized equipment which 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. As a result, the number of hours to construct brown field substations potentially can be reduced by up to 6%.

3. Remote Terminal Unit (RTU). Additional and upgraded RTU communication connectivity with substations and switching devices to resolve the following issues:

- Provides the ability to remotely monitor and control substation devices.
- Reduces outages and improves response 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 below, will provide the backbone to remotely operate 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.

4. Telecommunications for remote control. The Companies plan to build or lease the telecommunications infrastructure necessary for the projects described in this section. This involves the strategic addition of fiber optic, microwave links and digital radio capability, depending on security and cost effectiveness. This will include erection of towers needed to communicate from remote locations to the Energy Control Center. The Companies will work with telecommunication providers to determine the least cost approaches to achieving the objectives. These communication links are vital to gain the benefits from automating the substations and distribution system as described in this section.

5. 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 and facilitate the location of the fault in the lines.

6. Gas SCADA System. NYSEG's Gas SCADA System (GSS) monitors and controls the primary gate stations for the gas distribution systems for NYSEG and RG&E. The system is critical to safe and reliable gas operations and needs to be upgraded for 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.

Objective 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 environment and compliance matters. Operating in an ethical manner and demonstrating a respect for the environmental are pillars of the 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 new right-of-ways to the restoration of disturbed areas.

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

Objective 6: Safety

Safety is the Companies' number one priority. The Companies place much emphasis on the safety of their employees 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 HYDRO GENERATION FACILITIES

TABLES

FIGURES

New York State Electric and Gas Corporation is a combination electric and gas utility serving approximately 878,000 electric customers and 261,000 gas customers in an area of approximately 18,400 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 365,000 electric customers and 303,000 gas customers within a 2,700 square-mile service territory with a population of approximately 1.0 million people in upstate New York.

3.1 ELECTRIC SYSTEM

Figure 3.1 on the next page is a map of the areas in which the Companies provide electric service in New York State.

NYSEG and RG&E provide electric delivery services to over 1.2 million customers in New York State. In 2011, the Companies delivered over 23.7 billion kWh of electricity to these customers.

The highest peak demand experienced by the Companies was 5,117 MW which occurred in the summer of 2011. The most recent seasonal peaks were 3,352 MW in the summer and 2,695 MW in the winter for NYSEG, and 1,765 MW in the summer and 1,204 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 2011	MW peak load (2011)
NYSEG	18,359	6	877	15,991,588	3,352
RG&E	2,700	3	364	7,738,353	1,765
TOTAL	**21,059**	**9**	**1,241**	**23,729,941**	**5,117**

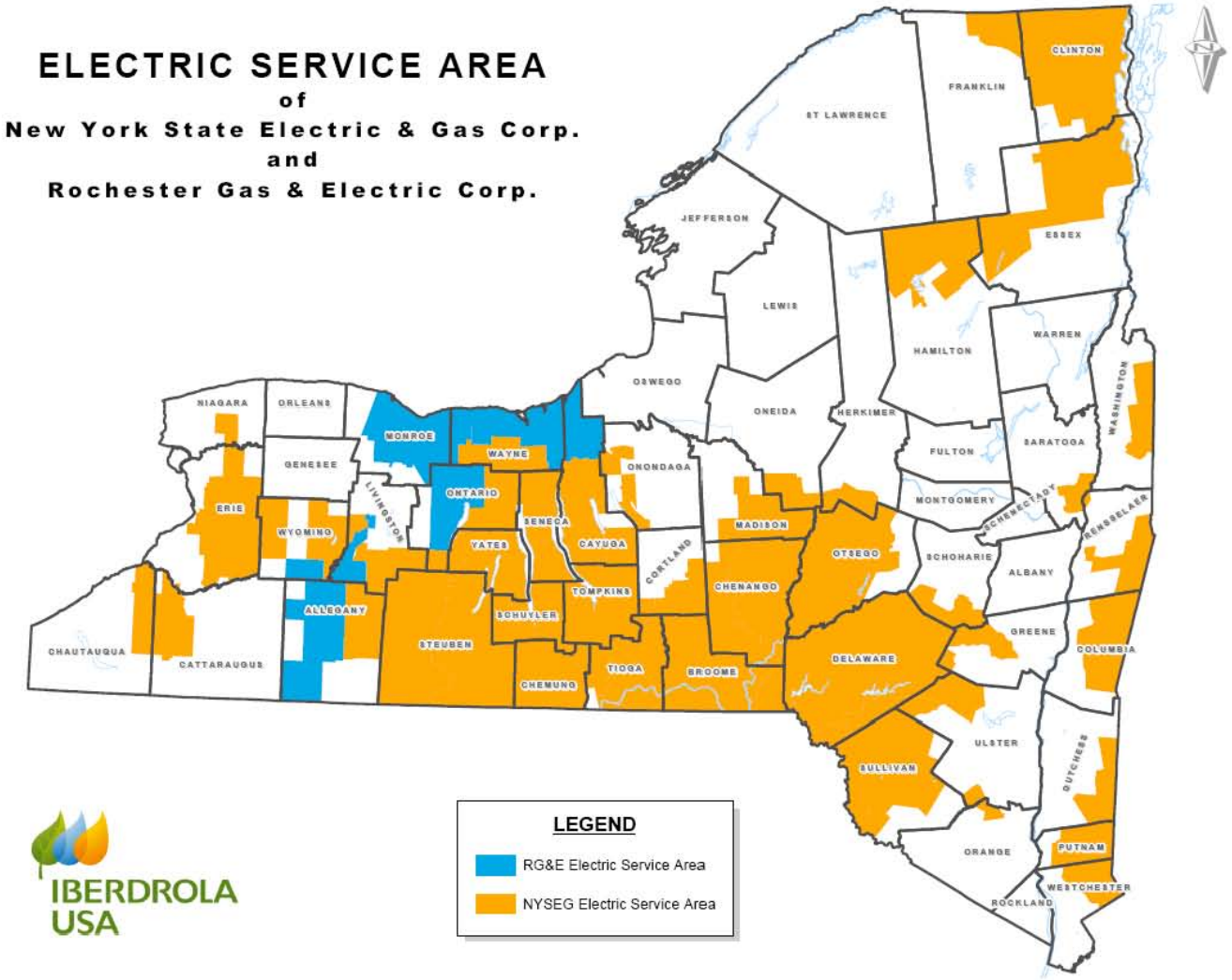


Figure 3.1 Electric Service Area

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)	4,558	1,017	**5,575**
Substations #	93	24	**117**
Transformers #	269	83	**352**
MVA	11,917	4,809	**16,726**
Breakers (T&D) #	2,255	1,746	**4,001**
Circuits #	769	81	**850**
RTU' s #	34	32	**66**

Table 3.3 Distribution Infrastructure

	NYSEG	RG&E	TOTAL
Lines (miles)	34,267	8,622	**42,889**
Substations #	354	160	**514**
Transformers #	884	285	**1,169**
MVA	4,289	2,154	**6,443**
RTU' s #	198	247	**445**
Circuits #	1,391	572	**1,963**
Reclosers #	646	181	**827**
Line Transformers (#000)	343	83	**426**
Poles (#000)	886	253	**1,139**

NYSEG

The NYSEG electric system consists of 13 divisions that are supplied from 345 kV, 230 kV, and 115 kV transmission facilities with a total capability of approximately 11,000 MW. NYSEG owns, in the NYSEG service territory, 65 MW of generation (63 MW of hydroelectric and a two MW diesel unit). The historical all-time peak load for NYSEG is 3,352 MW in the summer of 2011.

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 2002 are included in Figure 3.2 below, as measured by the System Average Interruption Frequency Index ("SAIFI") and Customer Average Interruption Duration Index ("CAIDI").

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 115 kV substations and directly into the bulk transmission system at Station 122.

RG&E owns, in the RG&E service territory, 155 MW of generation (98 MW of fossil fuel and 57 MW of hydroelectric facilities). The fossil facilities include both two combustion turbines (#2 CT – natural gas and #13 CT-fuel oil) located in Rochester, NY, each having nameplate capacity of

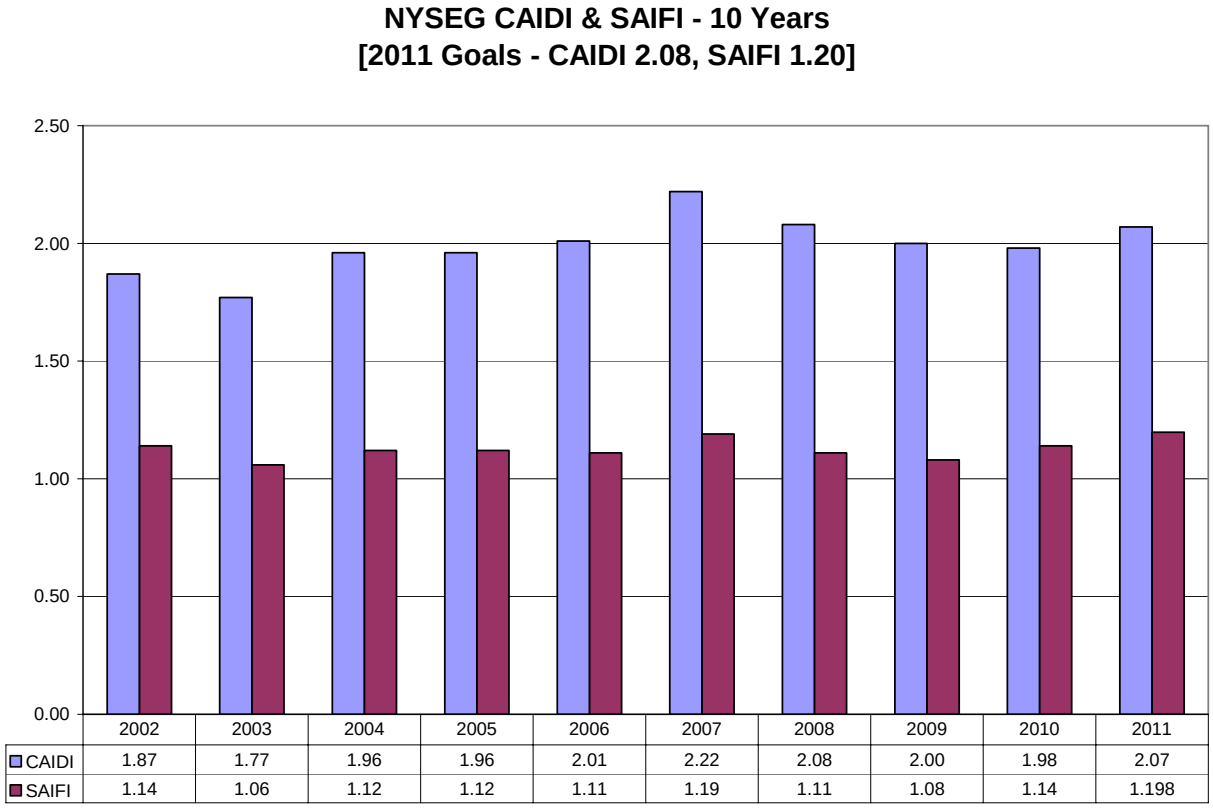
18 MW and a combined-cycle natural gas-fired facility located in Hume, NY rated at 62 MW. The fossil generating assets are being auctioned consistent with the Iberdrola merger order.

The historical all-time peak load for RG&E is 1,765 MW (2011 summer)

The above 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.

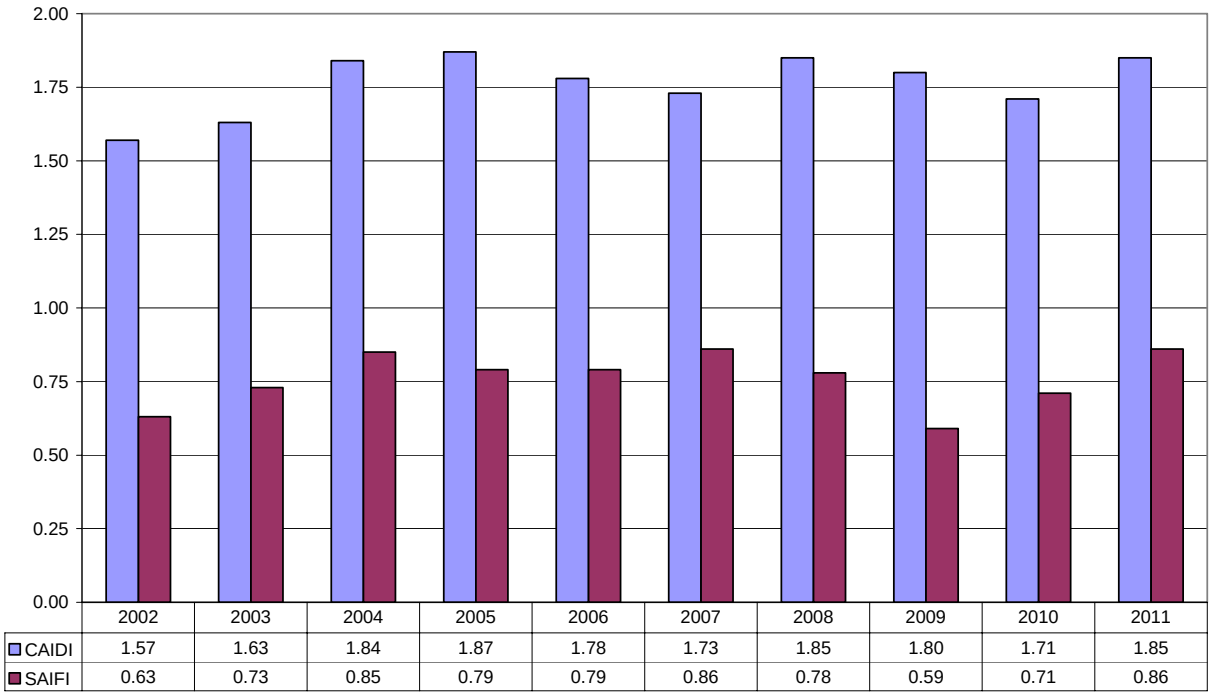
The reliability results for RG&E since 2002 are included in Figure 3.3 below, as measured by SAIFI and CAIDI.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
CAIDI	1.87	1.77	1.96	1.96	2.01	2.22	2.08	2.00	1.98	2.07
SAIFI	1.14	1.06	1.12	1.12	1.11	1.19	1.11	1.08	1.14	1.198

Figure 3.2 NYSEG Service Quality

RG&E CAIDI & SAIFI - 10 Years
[2011 Goals - CAIDI 1.90, SAIFI 0.90]



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
CAIDI	1.57	1.63	1.84	1.87	1.78	1.73	1.85	1.80	1.71	1.85
SAIFI	0.63	0.73	0.85	0.79	0.79	0.86	0.78	0.59	0.71	0.86

Figure 3.3 RG&E Service Quality

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

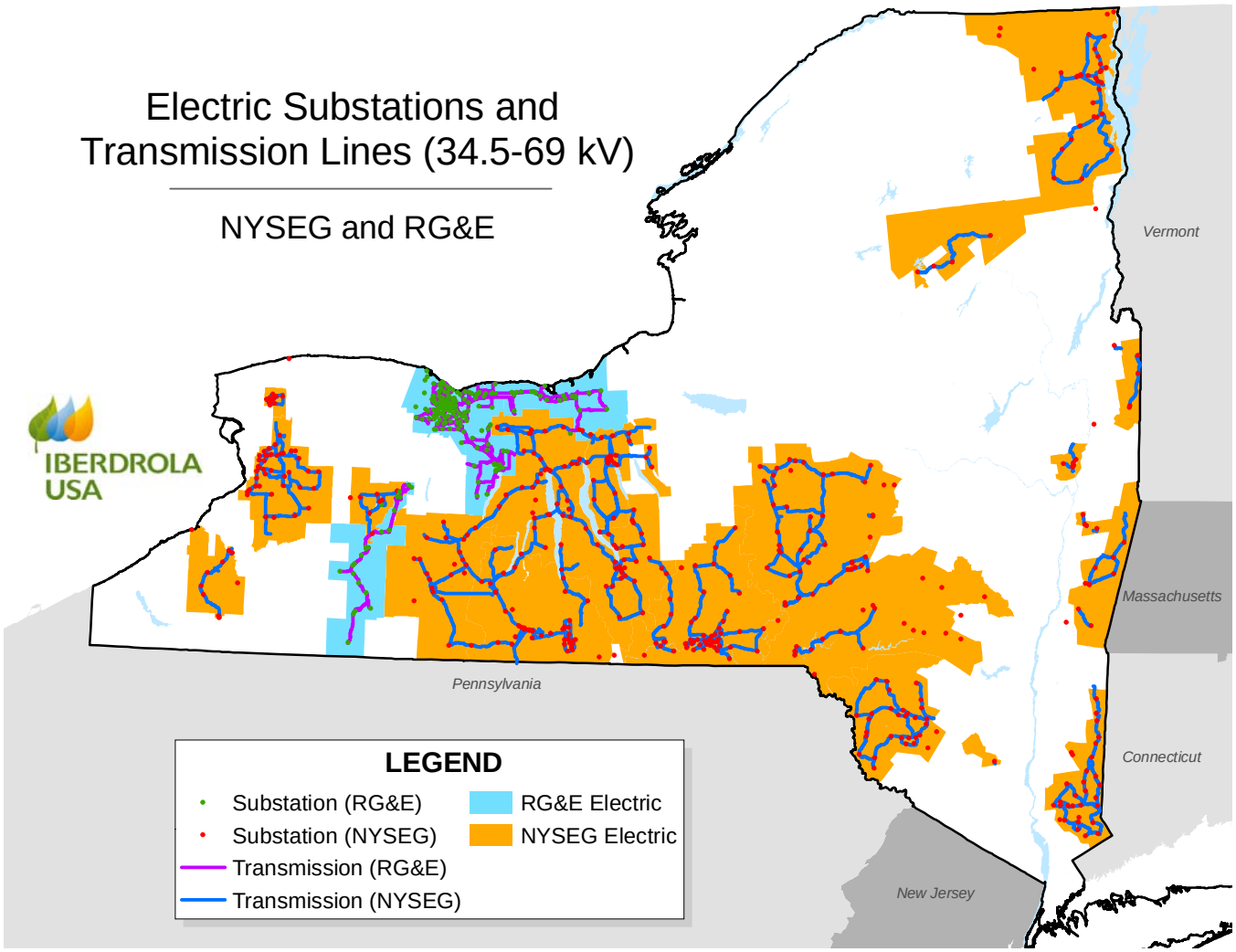


Figure 3.4 Electric Substations and Transmission Lines (34.5kV-69 kV)

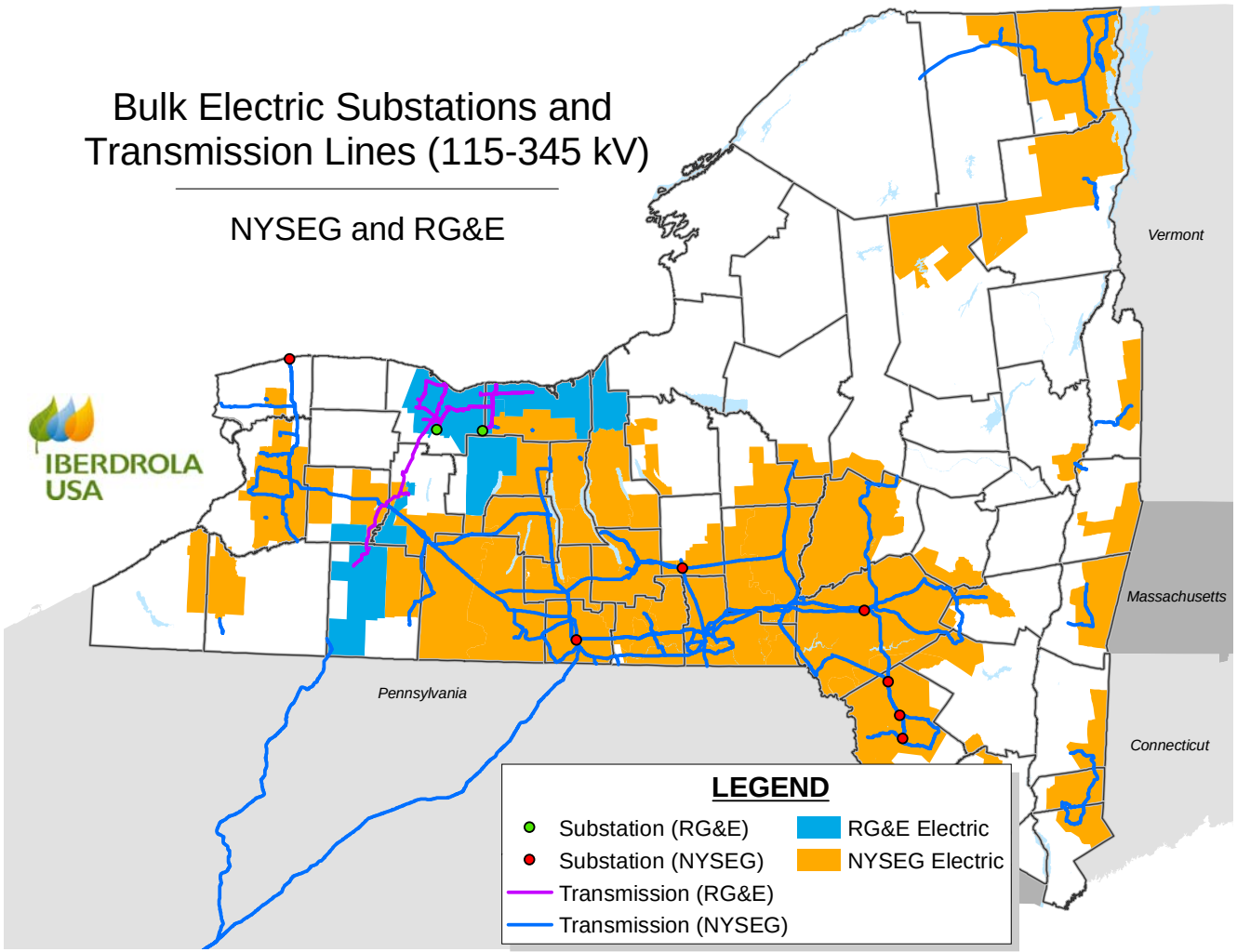


Figure 3.5 Electric Substation and Transmission Lines (115-345 kV)

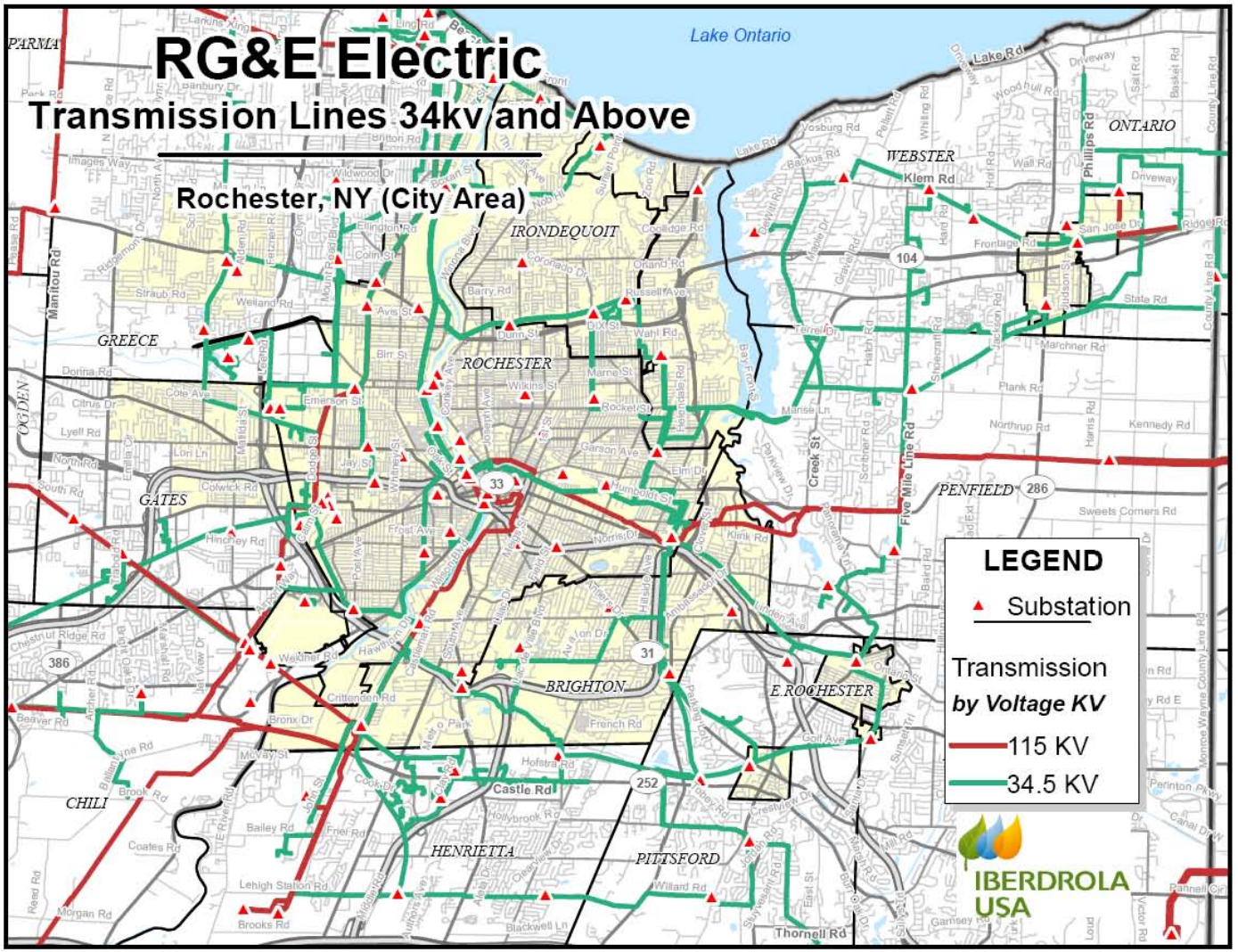


Figure 3.6 Electric Substations and Transmission Lines in Rochester City Area

3.2 GENERATION FACILITIES

NYSEG and RG&E own and operate fossil and hydroelectric generating plants throughout New York State as shown in Figure 3.7 below, including 12 hydro generating plants 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 MWh of renewable energy annually.

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. In 2013, the existing 1960's vintage diesel-generator will be replaced with a new larger unit in order to serve this local load center more reliably, when needed.

RG&E has three fossil fueled generating plants: Allegany Station, a combined-cycle plant, located in the southern tier, fueled by natural gas and 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). RG&E's three fossil-fuel facilities are included in the Divestiture Plan that was filed with the Commission on October 21, 2011. In 2011, #13 CT experienced equipment failures that caused a forced outage. Due to the estimated repair and other capital costs, RG&E decided to retire the unit. As a result, RG&E filed with the Commission a "Notice of Intent to Retire Beebee Station Unit 13 CT" by letter dated November 18, 2011. The Company will invest in its RG&E fossil facilities only to the extent necessary to sustain plant and public safety, unit availability, and electric service reliability through completion of the auction process.

The Companies strive to maximize the hydroelectric energy produced for our customers from the water that is available and to 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, maintain the

infrastructure, and protect the safety of employees and the public. Moreover, 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.

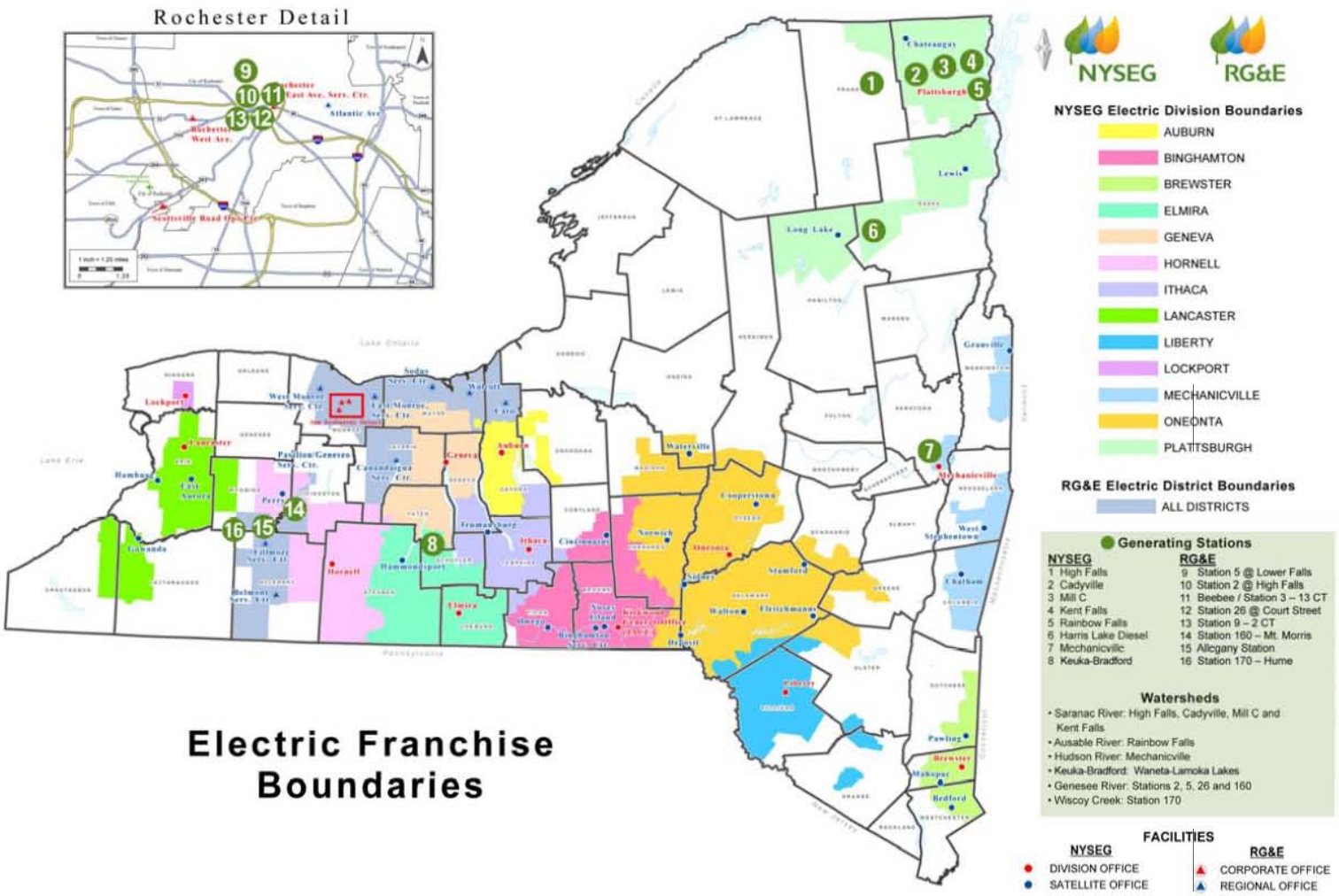


Figure 3.7. Generation Facilities

3.3 NATURAL GAS SYSTEM

Figure 3.8 below is a map of the areas in which the Companies provide natural gas service in New York State. NYSEG and RG&E provide gas delivery service to over 564,000 customers in New York State. In 2011, the Companies delivered over 103 million dth of natural gas to these customers, 54 million dth in NYSEG and 49 million dth in RG&E. 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 producers at various locations along its infrastructure. The Companies' 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 3.4 contains information about the Companies natural gas transmission and distribution system as of the end of 2010.

Table 3.4 Gas System Infrastructure

Facilities	2011 – Miles or Number		
	NYSEG	**RG&E**	**TOTAL**
TRANSMISSION PIPELINE	15.4	106	**121**
DISTRIBUTION PIPELINE	4,723	4,740	**9,463**
REGULATORS STATIONS (include gate stations)	540	327	**867**
DISTRIBUTION PIPELINE			
Steel – Protected	2,210	2,472	**4,682**
Steel - Unprotected	293	342	**635**
Cast Iron / Wrought Iron	28	66	**94**
Plastic	2,123	1,860	**3,983**
Total	**4,654**	**4,740**	**9,394**
SERVICES -Number			
Steel – Protected	33,643	96,057	**129,700**
Steel - Unprotected	21,458	17,037	**38,495**
Plastic	166,321	216,287	**382,608**
Other	7,976	11,945	**19,921**
Total	**229,398**	**341,326**	**570,724**

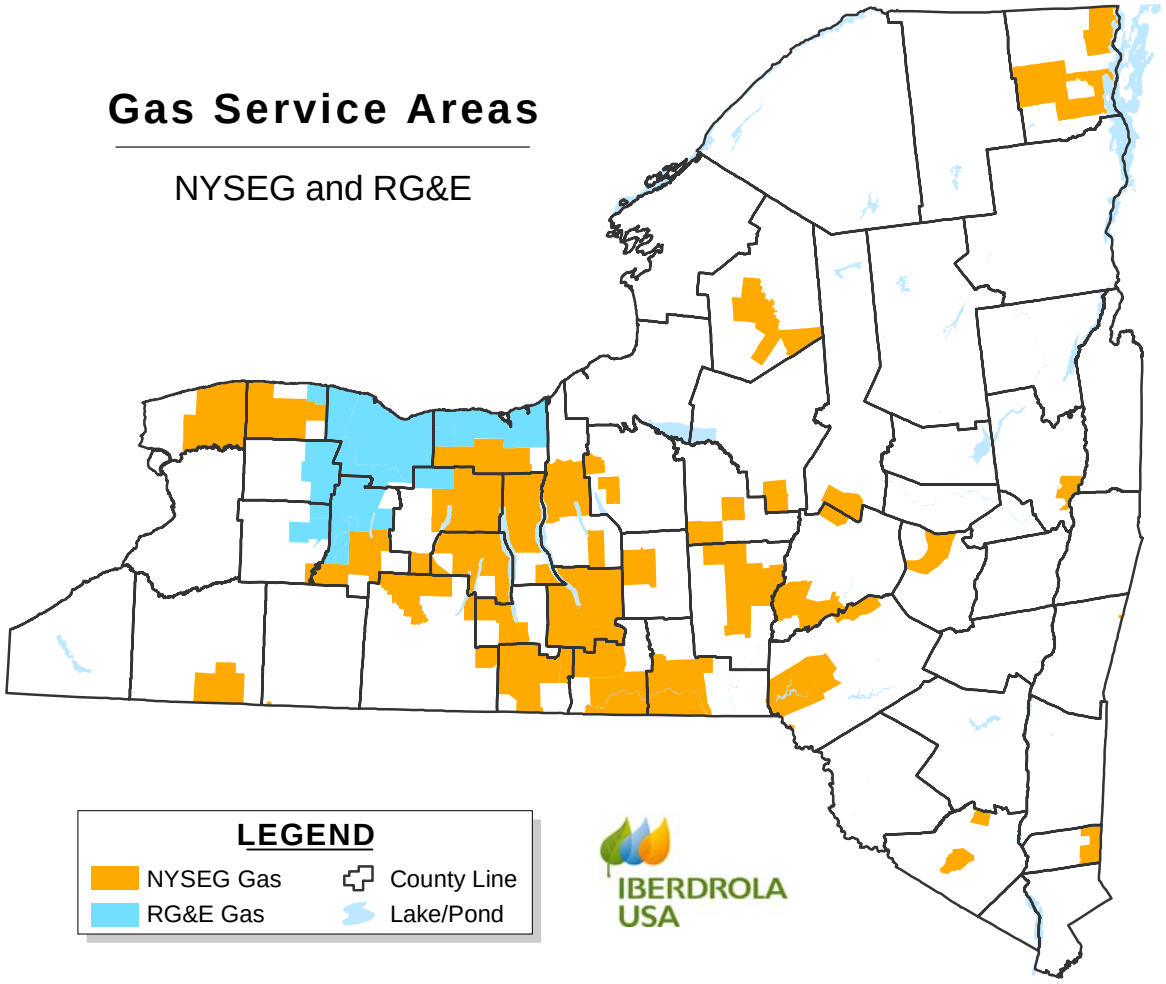


Figure 3.8 Gas Service Areas

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Table 3.5 contains safety and reliability metrics for NYSEG and RG&E for 2011.

Table 3.5 Gas Safety and Reliability Metrics

		NYSEG	RG&E
Measurements - Operations			
Emergency Response:			
Natural Gas Leak Response =< 30 min.	Actual	82.26%	90.35%
	Yr-End Target	75.00%	75.00%
Natural Gas Leak Response =< 45 min.	Actual	95.08%	98.59%
	Yr-End Target	90.00%	90.00%
Natural Gas Leak Response =< 60 min.	Actual	98.17%	99.77%
	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	46	88
	Yr-End Target	100	200
Damage Prevention:			
Overall Damages per 1000 Tickets	Actual	1.62	1.91
	Yr-End Target	2	2
Mismarks per 1000 Tickets	Actual	0.34	0.33
	Yr-End Target	0.5	0.5
Co Damages per 1000 Tickets	Actual	0.06	0.08
	Yr-End Target	0.2	0.2
Achieve Gas Regulatory Safety & Reliability Targets			
Bare Steel & Leak Prone Main - miles	Actual	31.46	31.77
	Yr-End Target	24	24
Bare Steel & Leak Prone Services - #	Actual	2,055	1,331
	Yr-End Target	1,200	1,000

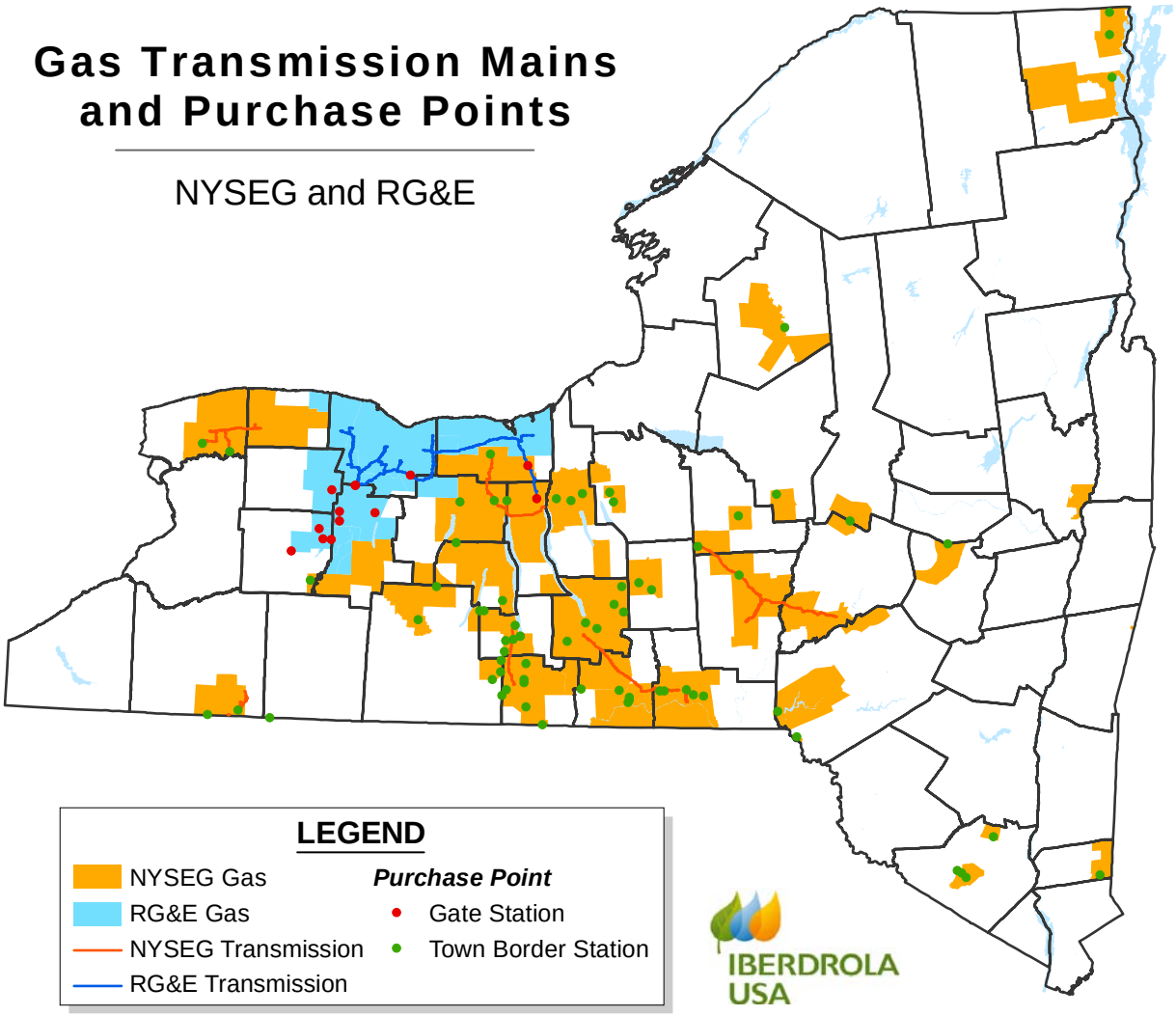

Figure 3.9 Natural Gas System

4 ELECTRIC CAPITAL INVESTMENT PLAN

TABLES

A map of the Companies' gas systems, showing transmission mains and supply points, is included as figure 3.9.

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

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

Company	2012	2013	2014	2015	2016	TOTAL
NYSEG Electric	152,068	116,360	214,476	203,993	198,993	885,889
NERC Alert Project	9,206	5,478				14,684
RG&E Electric	181,838	134,053	227,141	189,965	185,494	918,492
Subtotal-Electric	**343,112**	**255,890**	**441,617**	**393,958**	**384,487**	**1,819,065**
Appendix L- Electric	**265,912**	**318,407**				

The investment amount for 2012 has been approved by the Iberdrola USA Board of Directors and reflects advancing 2013 Appendix L funding amounts into 2012 (the sum of the 2012 and 2013 funding amounts equals Appendix L funding plus the NERC Alert Project). The objective of the Plan is to improve system reliability by reducing risks in the system by increasing system capacity, redundancy and power quality.

4.1 PROJECT CATEGORY 1- NETWORK REINFORCEMENT

This category is related to Objective 2, achieve service reliability and quality. This includes the projects and programs done for the following investment reasons:

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:

- Reduce problems of overloads in lines and transformers under normal operating conditions at peak demand.

- Reduce problems under contingency situations (N-1), taking into account prioritization of the projects based upon MW's at risk, number of customer affected and length of time of exposure.
- System study driven work not associated with specific new customer loads (new individual customer loads are included in Project Category 2)
- 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

Power quality

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

The Companies propose to invest $795M in Category 1 - Network Reinforcements during 2012 through 2016 as is shown in Table 4.2. Category 1 projects will benefit all customers while mitigating risk contingencies in transmission and distribution system. These projects will reduce 2,346 MW of loss of load in contingency situation. The number total of problems to be addressed is 86.

Table 4.2 also shows the portion of the investment for transmission (T) and for Distribution (D) in this category.

Category 1 only includes reliability projects with total cost more than $100,000. Individual reliability projects of less than $100,000 are part of Division Projects that are included in Category 3.

Table 4.2 Category 1 - Electric Network Reinforcement ($000)

	2012	2013	2014	2015	2016	TOTAL
NYSEG –T	43,749	35,069	54,223	62,425	67,243	**262,709**
NYSEG-D	11,637	3,152	11,149	8,795	4,525	**39,258**
TOTAL NYSEG	55,386	38,220	65,372	71,220	71,768	**301,966**
RG&E-T	68,648	78,786	118,046	93,743	96,342	**455,565**
RG&E-D	7,312	2,475	8,646	10,886	8,532	**37,851**
TOTAL RG&E	75,960	81,260	126,692	104,629	104,874	**493,416**
TOTAL	**131,346**	**119,480**	**192,064**	**175,849**	**176,642**	**795,382**

A description of the most significant projects in this category is included in Attachment 3.

Table 4.3 and Table 4.4 show the total investment for each company divided into the following subcategories:

- Area Reinforcement → Improvement of network infrastructure in an area (almost all these projects include new substations).
- New Line → New line construction
- Improvements in Line → Upgrade existing lines
- Improvements in Substations → Upgrade in substations, primarily new capacitor banks

A list of projects over $1M included in Category 1 is included in Attachment 4.

Table 4.3. Category 1 - NYSEG Electric Projects - Network Reinforcement ($000)

	2012	2013	2014	2015	2016
Area Reinforcement	17,219	12,015	24,501	43,800	41,500
New Lines	1,700	1,570	4,775	775	2,525
Improvements in Lines	6,449	3,732	5,714	1,350	300
Improvements in Substations	30,018	20,903	30,382	25,295	27,443
TOTAL NYSEG	**55,386**	**38,220**	**65,372**	**71,220**	**71,768**

Table 4.4. Category 1 - RG&E Electric Projects - Network Reinforcement ($000)

	2012	2013	2014	2015	2016
Area Reinforcement	23,713	57,428	86,158	73,000	55,330
New Lines	5,642	13,324	11,173	9,700	24,200
Improvements in Lines	1,300	1,089	10,291	5,730	4,300
Improvements in Substations	45,305	9,419	19,070	16,199	21,044
TOTAL RG&E	**75,960**	**81,260**	**126,692**	**104,629**	**104,874**

4.1.1 Customer Benefits

The Companies recognize that there are a number of concerns that could result under a 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, as shown in the next section.

Many of the Appendix L projects address the following concerns found in the assessment of the system.

4.1.1.1 Transmission

Transmission System Planning has development Five-Year Reliability-Based Transmission and Substation Capital Projects in order to solve the concerns shown in Table 4.5.

This Plan has been developed to address the concerns shown in Table 4.5, but some of them require modifications in the network which require several years to complete. All the projects to address these concerns will be executed during the 2012 through 2016 period, but some of the projects will be placed in service after 2016.

Table 4.5 Transmission System Concerns 2012-2016

	# Problems			MW			# Customers		
	NYSEG	RG&E	TOTAL	NYSEG	RG&E	TOTAL	NYSEG	RG&E	TOTAL
N-1 in Line	11	11	22	306	231.8	537.8	82,328	47,260	129,588
N-1 in Transformer	17	14	31	586	525.2	1111.2	134,379	119,185	253,564
Voltage quality	17	6	23	349	107	456	104,618	28,760	133,378
Transformer overload	2	4	6	22.7	97.6	120.3	6,111	15,441	21,552
Line Overload	2	2	4	71.9	48.4	120.3	11,710	14,017	25,727
TOTALS	49	37	86	1,336	1,010	2,346	339,146	224,663	563,809

Please note that one customer could have been counted more than one time, if the same customer is affected by more than one problem.

[**THIS SECTION HAS BEEN REDACTED BECAUSE IT CONTAINS CONFIDENTIAL, CRITICAL INFRASTRUCTURE INFORMATION THAT IS PROTECTED FROM PUBLIC DISCLOSURE.**]

[**THIS SECTION HAS BEEN REDACTED BECAUSE IT CONTAINS CONFIDENTIAL, CRITICAL INFRASTRUCTURE INFORMATION THAT IS PROTECTED FROM PUBLIC DISCLOSURE.**]

4.1.1.2 Distribution

Distribution System Planning has developed a Reliability Based Distribution approach to solve the concerns shown in Table 4.6. This table also shows the distribution concerns that will be solved by projects with total investment less than $100,000 that are part of Division Projects and included in Category 3.

This Plan has been developed to address the concerns shown in Table 4.6, but some of them require modifications in the network which require several years to complete. All the projects to address these concerns will be executed during the 2012 through 2016 period, but some of the projects will be placed in service after 2016.

Table 4.6 Distribution System Concerns 2012-2016

	# Problems			MW			# Customers		
NY	NYSEG	RG&E	TOTAL	NYSEG	RG&E	TOTAL	NYSEG	RG&E	TOTAL
Transformer overload	15	5	**20**	120	38	158	24,000	7,600	31,600
Line overload	1	52	**53**	13	244	257	2,600	48,800	51,400
N-1	54	39	**93**	582	662	1,244	116,400	132,400	248,800
TOTALS	**70**	**96**	**166**	**715**	**944**	**1659**	**143,000**	**188,800**	**331,800**

Please note that one customer could have been counted more than one time, if the same customer is affected by more than one problem.

[**THIS SECTION HAS BEEN REDACTED BECAUSE IT CONTAINS CONFIDENTIAL, CRITICAL INFRASTRUCTURE INFORMATION THAT IS PROTECTED FROM PUBLIC DISCLOSURE.**]

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NYSEG and RG&E have numerous substations serving distribution circuits where the failure of a transformer would result in the loss of customers and load. Prior to the projects which solve the concern being placed into service, the Companies address these distribution risks by installing a mobile substation as a temporary replacement until the permanent transformer is repaired or replaced.

4.1.2 New Substations

The new substations that address the transmission and distribution system problems and that will be added during the 2012 through 2016 period in this category are as follows:

NYSEG

Klinekill/Valkin Substation 115 kV transmission line project, in service 2014, Mechanicville Division: 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, with a three-breaker ring bus, will be constructed on National Grid Trunk #15. A new 115 kV line Klinekill/Valkin 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 Substation Project, in service 2013, Hornell Division: Construct a new three-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 in the event of an outage of the Federal Street to Perry Center 34.5 kV line.

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

Luther Forest Substation (Mechanicville System Reinforcement Project), in service 2012, Mechanicville Division: A New 115/34.5 kV Substation, with two 30/40/50 (56) MVA, three phase 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, in service 2016, Auburn Division: A new 345/115 kV substation 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.

Dysinger, Contruct 345kV Switching Station, in service in 2018, Auburn Division: A new 345kV switching station at Dysinger, and a new 345kV line from the new Dysinger Substation to Stolle Rd Substation. This project will begin in 2013 and be completed in 2018. The objective is to increase the voltage stability of the 345kV transmission system and allow for increased power transfers across New York State.

RG&E

New Bulk Power Substation (Station 255, part of Rochester Area Reliability Project), in service 2016: 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 with the loss of Ginna Station.

Station 262, in service 2013: A new 115/34.5 kV, 57 MVA substation with one transformer 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 Rochester Central District.

A description of the most significant projects in this category is included in the Attachment 3.

4.2 PROJECT CATEGORY 2 –NEW CUSTOMERS AND STATUTORY REQUIREMENTS

This category is related to meeting the electrical and natural gas requirements of new customers or load additions for specific customer and for projects required by municipalities or other statutory reasons. This includes the projects and programs done for the following investment reasons:

Growth

Projects done specifically to accommodate new services or to 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
- System upgrades required to meet specific customer load additions
- Customer requested relocation of facilities

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

The Companies propose to invest in this category during the 2012 through 2016 as is shown in Table 4.7, which divides the investment into Transmission (T) and Distribution (D):

Table 4.7 Category 2 - Electric – New Customers and Statutory Requirements ($000)

	2012	2013	2014	2015	2016	TOTAL
NYSEG –T	11,193	7,175	1,799	100	1,900	**22,168**
NYSEG-D	4,725	2,901	20,829	6,125	5,305	**39,884**
TOTAL NYSEG	15,918	10,076	22,628	6,225	7,205	**62,052**
RG&E-T	8,951	2,908	8,594	525	525	**21,503**
RG&E-D	12,116	1,714	2,975	2,975	2,975	**22,755**
TOTAL RG&E	21,067	4,622	11,569	3,500	3,500	**44,258**
TOTAL	**36,986**	**14,698**	**34,197**	**9,725**	**10,705**	**106,311**

Table 4.8 shows the total investment for each company by Investment Reason and includes the NERC Alert Project.

Table 4.8. Category 2 - Electric - Growth and Statutory ($000)

	2012	2013	2014	2015	2016
NYSEG Growth	**2,100**	**394**	**5,839**	**6,100**	**7,125**
RG&E Growth	**4,464**	**2,139**	**8,069**	**-**	**-**
TOTAL Growth	**6,565**	**2,533**	**13,908**	**6,100**	**7,125**
NYSEG Statutory	**4,612**	**4,204**	**16,789**	**125**	**80**
RG&E Statutory	**16,603**	**2,483**	**3,500**	**3,500**	**3,500**
TOTAL Statutory	**21,215**	**6,687**	**20,289**	**3,625**	**3,580**
NERC Alert Program - NYSEG	**9,206**	**5,478**	**-**	**-**	**-**
TOTAL	**36,986**	**14,698**	**34,197**	**9,725**	**10,705**

A list of projects over $1M included in Category is provided in Attachment 5, and a description of the most significant projects is included in Attachment 3.

The only program included in this category is System Security, which is included in Appendix L. This program expands the 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 will continue to replace and upgrade the perimeter fencing around substations.

The new substations, which are part of the projects included in this category, are the following:

University of Rochester (U of R Project), in service 2014: 115/34.5kV substation with 2-75MVA 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.

Luther Forest Substation (Mechanicville System Reinforcement Project), in service 2012: A New 115/34.5 kV Substation, with two 30/40/50 (56) MVA, 3 phase 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. (Note: this project is also included in Category 1: 90% System Capacity and here: 10% Growth).

4.2.1 NERC Facilities Rating Alert Update

The NERC Alert project is a federally mandated initiative for NYSEG to verify ground to conductor clearances for all of its transmission lines that are part of the bulk power system. NERC and the Regional Transmission Entities have become aware of discrepancies between the design and actual field conditions of transmission facilities, including conductors. The verification process is currently being conducted by collecting and analyzing LIDAR (Light Imaging Detection and Ranging) data and field checking all suspected points of clearance violations.

The estimated cost for 2012 and 2013 are included in Table 4.9. This cost is included in Category 2.

Table 4.9 NERC Alert Project ($000)

	2012	2013
NYSEG	9,206	5,478

4.2.2 FERC Bright Line Bulk Electric System

As mentioned in the Introduction, Section 1.1, the FERC has directed 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 regional discretion and has ordered that NERC adopt a definition of the BES that included all non-radial facilities at 100 kV 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 filed a revised BES Definition and Transition Plan with FERC on 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 2014. The following table shows the impact that this change will likely have on the Companies.

Table 4.10 FERC Bright line Impacts

	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 anticipated change.

A very preliminary estimate of costs for 2012 and 2013 are included in Table 4.11. Preliminary results from system studies will be needed to better estimate the these costs. These very preliminary estimate of these costs below are not included in this Plan.

Table 4.11 FERC Bright line Impacts ($000)

	2012	2013
NYSEG	0	10,500
RG&E	300	6,000
TOTAL	**300**	**16,500**

4.3 PROJECT CATEGORY 3 – MODERNIZATION & RENOVATION

This category is related to replacing obsolete equipment and facilities and improving effectiveness and efficiency of the network. The Companies need to replace equipment that is obsolete either because it is at end of life or it is technologically obsolete. Obsolete equipment can cause safety issues, risk of environmental incidents and lack of reliability, and such equipment is difficult and costly to maintain and to obtain spares. The major types of facilities

included in this category are: poles, batteries, AC & DC panels, relays, switches and substation breakers and some indoor substations. This includes the projects and programs done for the following investment reasons:

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. This work is informed by emerging asset condition assessments using a health index and risk assessment approach. Examples are:

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

The Companies completed a thorough analysis of three asset categories during 2011 using new competencies. The categories analyzed were substation breakers, substation batteries and distribution poles. The results of these analyzes are included in this Plan.

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

The Companies propose to invest in projects and programs in this category during 2012 through 2016 as follows:

Table 4.12 Category 3 - Electric – Modernization & Renovation ($000)

	2012	2013	2014	2015	2016	TOTAL
NYSEG –T	6,790	6,605	20,764	20,294	14,634	69,086
NYSEG-D	44,460	42,646	49,711	50,831	51,816	239,564
TOTAL NYSEG	51,250	49,250	70,475	71,125	66,450	308,550
RG&E-T	11,275	8,536	16,251	12,195	12,071	60,328
RG&E-D	27,276	24,793	30,135	29,805	30,430	142,439
TOTAL RG&E	38,551	33,329	46,387	42,000	42,500	202,767
TOTAL	**89,801**	**82,580**	**116,862**	**113,125**	**108,950**	**511,317**

Table 4.13 shows the total investment for each company by projects and programs.

A list of projects over $1M and programs included in this category is included in Attachment 6.

Table 4.13 Category 3 – Electric - Projects and Programs ($000)

	2,012	2,013	2,014	2,015	2,016
NYSEG Projects	2,000	-	11,975	12,625	7,950
RG&E Projects	4,701	1,148	3,932	-	-
TOTAL Projects	**6,701**	**1,148**	**15,907**	**12,625**	**7,950**
NYSEG Programs	49,250	49,250	58,500	58,500	58,500
RG&E Programs	33,850	32,181	42,455	42,000	42,500
TOTAL Programs	**83,100**	**81,431**	**100,955**	**100,500**	**101,000**
TOTAL	**89,801**	**82,579**	**116,862**	**113,125**	**108,950**

The description of the most significant projects and programs of this category is provided below:

New mobile substation: Purchase a new NYSEG Mobile Substation #22, 15 MVA, 34.5 kV to 4.8/12.5 kV. This new 15 MVA mobile will replace existing NYSEG Mobile #3. Mobile #3 is rated

at 5 MVA, is 53 years old, and does not have a load tap changer. It is nearing the end of life and there is difficulty in obtaining spare parts.

RG&E Line 727 – 35 kV Gas Filled Cable - Replace the double circuit 727 (gas filled cable) and line 762 between Station 42 and 91. Replace line 727 between Station 91 and 56. Establish fiber connectivity between the stations. This project will improve reliability within the City of Rochester 35 kV transmission system by replacing overhead nitrogen gas filled transmission cable on circuit 727and a section of the 792 circuit with solid dielectric EPR cable. These nitrogen gas filled cables have experienced numerous failures.

Station 23 Transformer and 11 kV switchgear - Add 11 kV GIS and two 115/11 kV transformers to Station 23. Add double bus configuration to the 115 kV GIS. Transformer replacements are due to poor health - 1T and 2T are leaking and reaching end of life. Two of the four bus sections of 11 kV are overdutied and need to be upgraded for proper fault current ratings. Bus 3 and 4 are at 96% of rated interrupt capacity.

Station 80 – Replace 1T and 3T - Replace 1T and 3T Transformers with a two new 345/115kV 400 MVA units; replace six 115 kV disconnect switches; replace two 115 kV circuit breakers; and replace one section of 115 kV bus. This will alleviate known maintenance issues with the existing 50 year old units.

TDIRP, Transmission, Distribution Infrastructure Replacement Program- Circuit Breaker Replacement Program: A condition assessment performed by Asset Management of circuit breakers found 68 to be in very poor health and 690 to be in poor health at NYSEG, and 99 to be in very poor health and 368 to be in poor health at RG&E. This program addresses these very poor and poor condition circuit breakers. Replacements will eliminate units most at risk of failure and improve reliability of the system.

TDIRP- Battery Replacement Program: This program replaces current lead-acid systems with engineered Ni-Cd replacements as identified by a condition assessment by Asset Management. As a critical component of a substation, battery systems that fail to perform or are in poor working condition can hinder operational capability. These systems are nearing their end of life and are being replaced to reduce risk of failure and negative impacts on system operations.

TDIRP- Distribution Pole Replacement Program: The Companies plan to replace over a five-year period all poles greater than 75 years old. A condition assessment performed by Asset Management found 22,836 poles at NYSEG greater than 75 years old. Pole inspections show rejection rates increasing rapidly at 50-60 years. RG&E has 3,832 poles greater than 75 years old. The Companies plan a systematic replacement of these higher risk, older poles.

TDIRP- Sectionalizer Replacement Program: This initiative improves distribution system reliability and involves replacing mechanical sectionalizers with electronic reclosers.

TDIRP- Other: The remaining portion of the TDIRP is to replace transmission, substation and distribution equipment based on age and condition for assets on which the Companies have not yet completed a detail condition assessment. These replacements will help maintain system reliability for customers.

Division Projects: Individual projects that are less than $100,000 and not included in other special programs such as TDIRP. Jobs include circuit betterment projects, streetlight head replacements, establishing services for individual customers, underground residential developments, commercial services, voltage conversions, and capital storm damage. Also included here are meters, transformers and voltage regulators.

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

Substation Modernization Program: Rebuild several Downtown Rochester substations and NYSEG substations to current standards. These substations are old with deteriorating structures. They are difficult on which to do maintenance work and are potentially unsafe for employees and the public. The number of these substations for which the rebuilding will begin each year is shown in Table 4.14 below. One-half of the costs of this program are included in this category and one-half are included in Category 4, Automation.

The Substation Modernization Program includes the modernization of the following substations:

Modernization of 40 substations in NYSEG: Adams Corners, Bedford Hill, Bodle Hill, Canaan, Cayuga, Cincinnatus, Burdett Clintonville, Colliers, Concord, Chenango Forks, Delhi, Ebenezer, Endicott Railway, Federal Street, Genoa, Gorham, Goulds, Hill Street, Liberty, Marcellus Milo, Monticello, Montour Falls, New Albion, Norton,O'Brien Road, Orchard Park. Raquette Lake, Rein Road, Sampson, Salem, Snyders Lake, South Owego, Swift Street, Tuttle Place, Valois, West Hill and Wynantskill.

Modernization of 11 substations in RG&E: Station 5, 29, 34, 37, 38, 43, 156, 174, 204, 205 and 210.

Other substations will be evaluated during the next several years.

Table 4.14. Substation Modernization

#	2012	2013	2014	2015	2016
Substation modernization NYSEG	2	2	10	13	13
Substation modernization RG&E	3	2	5	5	5

The following assets are expected to be replaced during the 2012 through 2016 period:

Table 4.15. # Assets to be replaced

#	2012	2013	2014	2015	2016
Poles *	10,800	10,600	16,000	16,000	16,000
Batteries	23	23	23	23	23
Breakers	90	141	145	148	152
Sectionalizers	72	58	58	58	58
Transformers (serving customers)	4,500	4,500	4,500	4,500	4,500
Regulators	127	127	127	127	127
Meters	25,000	25,000	25,000	25,000	25,000

* Includes replacements under the Distribution Pole Replacement Program, Division Projects and other projects and programs included in this Plan.

4.4 PROJECT CATEGORY 4 – AUTOMATION

This category includes the projects and programs done to control and monitor the circuits in substations, transformers and major points of the electric system.

Currently there are many RTUs whose capacity has been exceeded, and much of the distribution delivery system does not have RTUs. The majority of the existing RTUs are also difficult to maintain or to obtain spares, as they are an obsolete technology.

Reclosers need to be installed in the overhead lines to improve quality of service and reduce the number of outages and the duration of outages. They help to achieve a faster localization of faults, a higher level of safety and reduce the number of customers out of service for each distribution line fault.

The communications between substations and the Energy Control Center is presently outdated, so the Companies, in order to support increased automation, must upgrade the communications

with new fiber optic lines, links via microwave, additional channels for digital radio or purchase communication pathways from providers.

The Companies propose to invest in this category during 2012 through 2016 as follows:

Table 4.16 Category 4. Electric Automation ($000)

	2012	2013	2014	2015	2016	TOTAL
NYSEG –T	4,580	2,303	3,875	4,025	3,750	**18,532**
NYSEG-D	8,256	2,558	15,250	14,700	15,055	**55,819**
TOTAL NYSEG	12,836	4,860	19,125	18,725	18,805	**74,351**
RG&E-T	6,336	4,874	9,100	8,963	8,450	**37,722**
RG&E-D	4,468	1,994	10,100	10,000	10,000	**36,561**
TOTAL RG&E	10,804	6,867	19,200	18,963	18,450	**74,284**
TOTAL	**23,640**	**11,727**	**38,325**	**37,688**	**37,255**	**148,635**

Investments in automation in the Plan include:

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 total cost of this project is $25M; a description is included in Table 4.18.

Automation of substations. The substation modernization program will prepare substations for the automation through new standards of design and equipment. The Substation Modernization Program currently includes 40 substations in NYSEG and 11 substation in RG&E. Other substation will be identified during the next several years. One-half of the costs of this program is included in this category and one-half is included in Category 3, Modernization and Renovation.

The 40 NYSEG substations included in this program are: Adams Corners, Bedford Hill, Bodle Hill, Canaan, Cayuga, Cincinnatus, Burdett Clintonville, Colliers, Concord, Chenango Forks, Delhi, Ebenezer, Endicott Railway, Federal Street, Genoa, Gorham, Goulds, Hill Street, Liberty,

Marcellus Milo, Monticello, Montour Falls, New Albion, Norton,O'Brien Road, Orchard Park. Raquette Lake, Rein Road, Sampson, Salem, Snyders Lake, South Owego, Swift Street, Tuttle Place, Valois, West Hill and Wynantskill.
The 11 RG&E substations included in this program are: Station 5, 29, 34, 37, 38, 43, 156, 174, 204, 205 and 210.

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Remote Terminal Unit (RTU): Additional and upgraded RTU communication connectivity will be installed in other substations and with switching devices. Over the 2012 to 2016 period, the Companies plan to invest $19.7M in RTUs. The number of RTU that will be installed during the plan is expected to be approximately 81.

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 and facilitate the location of the fault in the lines. The Companies plan to invest $14.4M in reclosers during the next five years. The number of reclosers that are expected to be installed during the Plan is approximately 300.

Telecommunications for remote control. The Companies plan to build or lease 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. The Companies plan to invest $5.7M in RTU communications and $2.5M in reclosers communications during the next five years.

Currently the level of Substation automation in the Companies is 12% (76 substations with full control out of the total of 631 substations). At the end of the Plan (2016), the Companies expect the level of automation to be 35% (76 currently, 60 from Substation Automation, 81 from RTU program and eight new substations out of the total of 639). In addition, currently there are no reclosers with full control in the Companies, and at the end of the plan there will be 300.

Table 4.17 shows the total investment for each company by projects and programs.

Table 4.17. Category 4 – Electric - Projects and Programs ($000)

	2012	2013	2014	2015	2016
Dansville MGP radio tower and equipment	227	-	-	-	-
Energy Control Center	7,683	3,355	-	-	-
879 Line, Create loop feed into Peru Substation	-	-	125	275	-
Coons Crossing - Install auto sectionalizing	-	-	-	300	655
NYSEG Projects	7,910	3,355	125	575	655
Energy Control Center	5,122	2,237			
CEMESH Secondary Network Monitoring			100		
Circuit 765				513	
RG&E Projects	5,122	2,237	100	513	-
Total Projects	**13,032**	**5,592**	**225**	**1,088**	**655**
Substation Modernization (50%)	1,250	1,250	7,500	7,500	7,500
RTU Program	2,677	-	4,200	4,000	4,000
RTU - Communications	1,000	255	1,250	1,250	1,250
Reclosers	*	*	2,800	2,200	2,200
Reclosers - Communications	*	*	450	400	400
Fiber Optic			2,800	2,800	2,800
NYSEG Programs	4,927	1,505	19,000	18,150	18,150
Substation Modernization (50%)	1,750	1,750	7,500	7,500	7,500
RTU Program	2,900	2,880	2,500	2,500	2,500
RTU- Communications	1,032	-	650	650	650
Reclosers			2,800	2,200	2,200
Reclosers - Communications			450	400	400
Fiber Optic			5,200	5,200	5,200
RG&E Programs	5,682	4,630	19,100	18,450	18,450
Total Programs	**10,609**	**6,135**	**38,100**	**36,600**	**36,600**
TOTAL	**23,640**	**11,727**	**38,325**	**37,688**	**37,255**

* The installation of reclosers during 2012-2013 is included in the Sectionalizer Replacement program under Category 3, Asset Condition.

The most significant project in this category is the Energy Control Center which is described below:

Table 4.18 Category 4. Energy Control Center ($000)

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budge
Energy Control Center (Appendix L Project)	12,800	5,592			
Total Costs: $25,000					
Description: 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 **Reasons and Benefits:** New infrastructure that facilitates increased automation in the transmission and distribution system while providing a robust foundation for additional automation of the system. See Section 2 for more information. **Investment Reason:** Automation					
Year started: 2010 **Year in service:** 2013 **Current Status:** In process					

4.5 PROJECT CATEGORY 5 – RENOVATIONS OF HYDRO GENERATING FACILITIES

Listed in Table 4.19 is a summary of the investments that the Companies plan during the period 2012-2016 in this category. These projects help the Companies meet several strategic objectives including cost-effectively improving unit efficiencies and reliability, increasing capacity, maintaining the infrastructure, protecting the safety of employees and the public, and addressing hydro/license regulatory mandates and obligations.

Table 4.19 Category 5 - Renovation of Hydro Generation Facilities

Project Title	2012	2013	2014	2015	2016	TOTAL
Cadyville	326	0	125	100	100	**651**
High Falls	123	51	1,051	222	1,120	**2,567**
Kents Falls	2	166	1,500	1,300	490	**3,458**
Mechanicville	0	0	639	2,561	0	**3,200**
Mill C	0	0	500	0	50	**550**
Rainbow Falls	677	370	571	10	490	**2,118**
Generation Minors and Other Projects	894	713	850	865	875	**4,197**
Total NYSEG	**2,022**	**1,300**	**5,236**	**5,058**	**3,125**	**16,741**
Station 2	1,016	73	7880	6715	250	**15,934**
Station 26	956	1	326	826	0	**2,109**
Station 5 Tunnel Project	21,100	1000	0	0	0	**22,100**
Station 5 Turbine-Generator Major Rebuild (wickets, bushing and bearings)	2,728	750	0	0	0	**3,478**
Generation Minors and Other Projects	4,200	776	6,637	4,882	7,470	**23,965**
Total RG&E	**30,000**	**2,600**	**14,843**	**12,423**	**7,720**	**67,586**
TOTAL	**32,022**	**3,900**	**20,079**	**17,481**	**10,845**	**84,327**

NYSEG

Cadyville: Cadyville is a run-of-river hydro-electric station located on the Saranac River near Plattsburgh, New York. The powerhouse consists of three (3) units with a total rating of 5,525 KW which produce an average of 25,000 MWH/year of renewable electric energy for the direct benefit of NYSEG customers. Major activities during the forecast period include: Unit 2 major rebuild, installing an automatic flood gate in the dam, and rebuilding of the gravity dam construction ports.

High Falls: High Falls is a run-of-river hydro-electric station located on the Saranac River near Plattsburgh, New York. The powerhouse consists of three (3) units with a total rating of 15,000 KW which produce an average 86,000 MWH/year of renewable electric energy for the direct benefit of NYSEG customers. Major activities during the forecast period include: Unit 1 thrust bearing, Unit 2 major rebuild and turbine runner upgrade, Units 1, 2 and 3 draft tube stop logs and gravity dam construction port rebuild.

Kents Falls: Kents Falls is a run-of-river hydro-electric station located on the Saranac River near Plattsburgh, New York. The powerhouse consists of three (3) units with a total rating of 13,680 KW which produce on average 59,500 MWh/yr of renewable electric energy for the direct benefit of NYSEG customers. Major activities during the forecast period include: water conveyance system betterments to replace aging infrastructure (surge tank, penstock trifurcation, ring girders and emergency bypass valve and installing an automated trash racking system and narrower spaced trash racks (regulatory requirement of the FERC hydro license).

Mechanicville: Mechanicville is a run-of-river hydro electric station on the Hudson River north of Albany, New York. It consists of two (2) units with a total rating of 18,500 KW which produce on average 99,500 MWh/year of renewable electric energy for the direct benefit of NYSEG customers. Major activities during the forecast period include: Unit 1 and Unit 2 major rebuilds (each unit has original equipment installed in 1983 and neither unit has had a major rebuild/overhaul), replacement of the existing end of life storage building with a new, smaller building, and a standby electric generator for station power during a loss of offsite power (i.e., during major storm events).

Mill C: Mill C is a run-of-river hydro-electric station located on the Saranac River near Plattsburgh, New York. The powerhouse consists of three (3) units with a total rating of 6,050 KW which produce on average 26,000 MWh/year of renewable electric energy for the direct benefit of NYSEG customers. Major activities during the forecast period include rewinding the Unit 1 generator and installing an automated trash racking system and narrower spaced trash racks (regulatory requirement of the FERC hydro license).

Rainbow Falls: Rainbow Falls is a run-of-river hydro-electric station located on the Ausable River near Plattsburgh, New York. The powerhouse consists of two (2) units with a total rating

of 3,050 KW which produce on average of 20,000 MWh/year of renewable electric energy for the direct benefit of NYSEG customers. Major activities during the forecast period include: Intake and floodgate upgrades, dam/spillway resurfacing, rebuilding of the gravity dam construction ports, environmental improvements required of the FERC hydro license (trash racks and trash removal system, and downstream fish bypass), and restoration of powerhouse that was significantly damaged and taken out of service as a result of the plant flood caused by the Hurricane Irene event on August 28-29, 2011. The capital investment required to restore the powerhouse to service is currently estimated at $3.2 Million, which except for the insurance deductible (estimated at $187,500) the Company expects to fully recover through the pending insurance claim.

RG&E

Station 2: Station 2 is a run-of-river hydro-electric station located on the Genesee River in Rochester, New York. The powerhouse consists of a single unit with a rating of 8,500 KW which produces on average 53,500 MWhr/year of renewable electric energy for the direct benefit of RG&E customers. Major activities during the forecast period include: completing the powerhouse improvements (roof, area security lighting and HVAC system) associated with the Unit 1 upgrade, constructing electrical systems required to interconnect the powerhouse to the newly constructed distribution substation 137, deepening Brown's Race to provide the flow required for the upgraded station generator (pending construction easement from the City of Rochester), installing a high-efficiency static exciter on Unit 1, constructing a spill gate control house and associated electrical systems, replacing the needle dam at the Central Avenue Dam, replacing intake structures and replacing a penstock that is approximately 100 years old and is nearing end of life.

Station 26: Station 26 is a run-of-river hydro-electric station located on the Genesee River in Rochester, New York. The powerhouse consists of a single unit with a rating of 3,000 KW which produces on average 12,000 MWh/year of renewable electric energy for the direct benefit of RG&E customers. Major activities during the forecast period include: completion of the Unit 1 major rebuild (the unit has original equipment installed in 1952) and HVAC system, new water conveyance system betterments to replace/rebuild aging infrastructure (penstock, scroll case, draft tube stop logs and intake shut off gate motor operator) and a new tailrace wall extension.

Station 5: Station 5 is a run-of-river hydro-electric station located on the Genesee River in Rochester, New York. The powerhouse consists of three (3) units with a rating of approximately 46,000 KW which produce an average of 219,000 MWh/year of renewable electric energy for the direct benefit of RG&E customers. Major activities during the forecast period include: completing the necessary betterments to replace end-of-life infrastructure including but not limited to the construction of the water conveyance system (intake shaft, tunnel, surge tank riser shaft, penstocks, etc), turbine-generator major rebuilds, lubricating, cooling water, compressed air, plant electrical distribution and substation interconnect, associated control, monitoring and instrumentation systems, draft tube stop gates, unit 3 draft tube replacement, powerhouse and spill gate control house structures/foundations, river debris removal system, and spill gate betterments such as new operating cylinders and spill apron stabilization for gates 2, 4a, 4b and 5.

Other Projects: The Company will invest in its RG&E fossil facilities only as necessary to sustain plant and public safety, unit availability and reliability through completion of the auction process.

- Allegany Station: The forecast includes completing the control building roof replacement in 2012 as well as replacing the gas turbine combustion section in 2016.
- Station 170: Station 170 (Wiscoy) is a run-of-river hydro-electric station located on the Wiscoy Creek in the Town of Hume, New York. The powerhouse consists of two units with a rating of approximately 1,080 KW and is capable of producing on average 4,000 MWh/year of renewable electric energy. The forecast includes those projects that would be necessary should the station be returned to service. The Company will fully evaluate options for returning the station to service and would implement those projects pending a favorable cost benefit analysis.

4.6 PROJECT CATEGORY 6 – COMMON- ELECTRIC PORTION

Common investments include fleet, improvements to division and office facilities, operational efficiency projects and information technology projects. At NYSEG common investments are

allocated 79.1% to Electric, and at RG&E common investments are allocated 65% to Electric. The most significant component of the common investment is Fleet.

The Companies propose to invest in this category during 2012 through 2016 as follows:

Table 4.20 Category 6 – Common - Electric

	2012	2013	2014	2015	2016	TOTAL
Mobile Radio Project	4,902	-	-	-	-	4,902
Fleet	11,442	11,707	11,865	11,865	11,865	58,744
Facilities-General Services	3,193	2,571	13,031	12,942	14,958	46,695
IT	4,324	3,854	6,744	6,833	4,817	26,572
Total NYSEG Common- E	23,861	18,131	31,640	31,640	31,640	**136,913**
Fleet	2,730	2,352	2,600	2,600	2,600	12,882
Facilities-General Services	845	1,398	4,500	3,775	4,017	14,535
IT	1,881	1,625	1,350	2,075	1,833	8,764
Total RG&E Common- E	5,456	5,375	8,450	8,450	8,450	**36,181**
TOTAL Common- E	**29,317**	**23,506**	**40,090**	**40,090**	**40,090**	**173,093**

Mobile Radio Project: This project is included in Appendix L. It involves replacing the NYSEG Mobile Radio System with a 150 MHz system for 1,500 vehicles, 300 portables and 57 dispatch consoles. The system requires the development of 51 tower sites with connectivity to the ECC and the acquisition the required frequencies. Replacement is required to comply with the new FCC band-width requirements for high-band systems in three divisions and to avoid failure of the current low-band system in 10 divisions. The total cost of this project is $63M (100%), much of which has been done in prior years.

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 and General Services: Improvements to division offices, garages, and other facilities owned or leased by the Companies. Following are the most significant projects, including the total costs (electric and gas portions):

-Kirkwood General Office - renovation, $1M.

The Kirkwood General Office cooling towers 3 and 4 are at the end of their useful lives and need to be replaced. New cooling towers will produce energy savings and provide reliable space temperature control to the Kirkwood General Office facility.

-Geneva - construct garage and transportation facilities, $4.7M.

The existing garage and transportation facilities are inefficient and no longer adequately support business area needs. Construction of a new stand alone structure will provide space for required relocation and renovations to Customer Services.

-Sodus - construct new service center, $6M.

Construct a LEED certified, single story service center on a 10-15 acre commercial property, near NYS Rte 104, close to multiple fuel stations and accessible to public utilities such as water, sanitary and storm sewer. The existing Sodus/Wolcott Service Center site/facility inherently hinders operational logistics, efficiency, and service which translate to energy waste, lost time and added cost.

-Liberty - construct new service center, $20M.

Construct a LEED Certified, single story service center on a 9-10 acre commercial property near NYS Rte 17 (soon to be I-86), close in proximity to multiple fuel stations and accessible to public utilities such as water, sanitary and storm sewer. The existing Liberty Service Center site and facility inherently hinders operational logistics, efficiency, and service which translate to energy waste, lost time and added cost.

Information Technology: Upgrades to computers and other equipment and new systems to improve effectiveness and efficiency of work. In 2012 includes several operational efficiencies programs for the companies and one information technology program:

-Field Automation (operational efficiency):

Efficiency savings, productivity and service improvements due to redesigning, automating and mobilizing field workforce processes. Also includes GIS integrated mobile tool for the design of construction projects.

-Transmission Vegetation Management (operational efficiency)

Efficiency and regulatory adherence.

-SAP Rearchitecture (Information Technology)

Upgrade to SAP

5 GAS CAPITAL INVESTMENT PLAN

TABLES

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

Table 5.1 Gas Capital Investment Plan by Year (Dollars in Millions)

Company	2012	2013	2014	2015	2016	TOTAL
NYSEG Gas	40,346	41,634	59,390	64,585	70,538	276,492
RG&E- Gas	33,260	36,865	55,521	59,802	65,340	250,788
Subtotal- Gas	**73,606**	**78,499**	**114,910**	**124,388**	**135,877**	**527,280**
Appendix L- Gas	**73,606**	**78,499**				

5.1 PROJECT CATEGORY 1-NETWORK REINFORCEMENT

This category is related to Objective 2, achieve service reliability and quality. This includes the projects and programs done to address system capacity and pressure needs.

The Companies propose to make the following capital investments in the natural gas system in this category during 2012 through 2016 as follows:

Table 5.2 Gas - Category 1 - Network Reinforcement ($000)

	2012	2013	2014	2015	2016	TOTAL
NYSEG	5,359	7,020	5,204	4,335	4,017	25,935
RG&E	1,525	3,703	3,652	4,761	4,904	18,545
TOTAL	**6,884**	**10,723**	**8,856**	**9,096**	**8,921**	**44,480**

Table 5.3 shows the projects included in this category.

Table 5.3 Gas - Category 1 - Projects and programs ($000)

Project Name	2012	2013	2014	2015	2016
Chenango Bridge, Install Gas Main and Regulator Station, Binghamton	-	2,100	-	-	-
Seneca West Pipeline Interconnect to Elmira	4,860	540	-	-	-
Install NYS Rt 13 Point of Delivery Dryden/Ithaca Interconnect	-	1,500	-	-	-
Main Street, Install 10 inch Medium Pressure Loop, Mechanicville	-	2,500	-	-	-
Groveland System Reinforcement - Interconnect to RG&E, Install Gas Mains	-	380	-	-	-
Chenango River, Replace Exposed Gas Mains, Binghamton	499	-	-	-	-
Distribution Mains (projects to be identified)	-	-	5,204	4,335	4,017
TOTAL NYSEG	**5,359**	**7,020**	**5,204**	**4,335**	**4,017**
Southwest60 System Improvements Phase 1, Install Pipe and Regulator Station, Livingston County	250	-	-	-	-
Washington St, Extend Gas Mains & Replace Regulator Stations, Rochester	450	-	-	-	-
MF35 Walworth System Improvement, Install Pipe and Regulator Stations	-	950	-	-	-
Distribution Mains (projects to be identified)	-	783	3,652	4,761	4,904
New Empire West Gate Station, Build New Gate Station, Roch (50%System Capacity)	825	1,970	-	-	-
TOTAL RG&E	**1,525**	**3,703**	**3,652**	**4,761**	**4,904**
TOTAL	**6,884**	**10,723**	**8,856**	**9,096**	**8,921**

A description of the most significant projects in this category is provided in Attachment 7.

5.2 PROJECT CATEGORY 2 –NEW CUSTOMERS AND STATUTORY REQUIREMENTS

This category is related to meeting the natural gas requirements of our customers. This includes the projects and programs done to address new customers, specific customer needs and statutory projects, such as relocations to accommodate highway changes.

The Companies propose to make investments in projects and programs in this category during 2012 through 2016 as follows:

Table 5.4 Gas - Category 2 – Customer and Statutory ($000)

	2012	2013	2014	2015	2016	TOTAL
NYSEG	8,781	9,495	9,301	9,811	9,708	47,095
RG&E	17,028	14,938	14,109	14,532	14,968	75,575
TOTAL	**25,809**	**24,433**	**23,410**	**24,343**	**24,676**	**122,670**

A list of projects and programs included in this category is included in the Attachment 8 and a description of the most significant projects in this category (over $1M) is provided in Attachment 7.

Descriptions of the programs included in this category are provided below:

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

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

5.3 PROJECT CATEGORY 3 – MODERNIZATION & RENOVATION

This category is related to replacing obsolete equipment and facilities and improving the effectiveness and efficiency of the delivery network. The Companies need to replace equipment that is obsolete either because it is at end of life or it is technologically obsolete. Obsolete equipment can cause safety issues, risk of environmental incidents and lack of reliability, and such equipment is difficult and costly to maintain and to obtain spares.

The Companies propose investments in this category during 2012 through 2016 as follows:

Table 5.5 Gas - Category 3 – Modernization and Renovation ($000)

	2012	2013	2014	2015	2016	TOTAL
NYSEG	18,276	20,328	35,524	41,080	47,452	162,660
RG&E	11,769	15,001	32,210	34,959	39,918	133,857
TOTAL	**30,045**	**35,329**	**67,735**	**76,039**	**87,370**	**296,517**

Table 5.6 shows the projects and programs included in this category. A description of the most significant projects is provided in Attachment 7 for projects over $1M.

Table 5.6. Category 3 – Gas - Projects and Programs ($000)

Project Name	2012	2013	2014	2015	2016
Distribution Main Replacement, Replace Gas Mains	125	129	133	137	141
Gas Regulator Replacement Program, Replace Regulator Stations	1,792	1,846	1,901	1,958	2,017
Robinson Road Gate Station Rebuild, Lockport	815	1,510	-	-	-
Transmission Mains	-	834	6,000	6,000	6,000
Minor Leak Prone Service Renewals, Replace Gas Service, NYSEG	5,744	5,916	6,094	6,276	6,465
Leak Prone Main Replacement Program	9,800	10,094	10,397	10,709	11,030
Regulator Station Modernization (50%)	-	-	1,000	1,000	1,000
Enhanced Leak Prone Main Replacement	-	-	10,000	15,000	20,800
TOTAL NYSEG	**18,276**	**20,328**	**35,524**	**41,080**	**47,452**
Distribution Main Replacement, Replace Gas Mains	300	309	318	328	338
Minor New C&I Services, Install Gas Service	150	155	159	164	169
Minor New Res Services, Install Gas Service	770	793	817	841	867
Gas Regulator Replacement Program, Replace Regulator Stations	743	765	788	812	836
CM1 Replacement Humphrey to Ballantyne Rd, Replace Gas Main	-	500	2,600	-	-
Transmission Mains	-	1,258	7,000	7,000	7,000
New Empire West Gate Station, Build New Gate Station (50% Asset Condition, 50% Renovations)	825	1,970	-	-	-
Leak Prone Main Replacement Program	8,981	9,250	9,528	9,814	10,108
Regulator Station Modernization (50%)	-	-	1,000	1,000	1,000
Enhanced Leak Prone Main Replacement	-	-	10,000	15,000	19,600
TOTAL RG&E	**11,769**	**15,001**	**32,210**	**34,959**	**39,918**
TOTAL	**30,045**	**35,329**	**67,735**	**76,039**	**87,370**

The most significant programs in this category are:

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

Leak Prone Services Replacement Program: 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 and all service replacements.

Gas Regulator Station Replacement Program: 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.

Regulator Station Modernization: Utilize standardized templates for regulator station design that considers safety, obsolescence, operability, capacity and future growth. This program will increase the reliability of our pressure systems.

Enhanced Leak Prone Main Replacement: Supplementing existing leak prone main replacement, this program includes a proactive replacement program to focus on eliminating medium and high risk piping more expeditiously within the RG&E and NYSEG franchises. This program significantly reduces the replacement timeframe (by 50% based upon the regular leak prone main replacement program) and will improve the safety and reliability of our gas infrastructure. This program will eliminate the highest risk pipe in 10 years and the medium risk pipe in 15 years.

5.4 PROJECT CATEGORY 4 – AUTOMATION

This category includes the projects and programs done to monitor and control the major points of the gas system.

The Companies propose to make the following capital investments in the natural gas system in this category during 2012 through 2016 as follows:

Table 5.7 Gas- Category 4 - Automation

	2012	2013	2014	2015	2016
NYSEG- Binghamton Gas SCADA System	1,626				
NYSEG- Regulator Station Automation	-	-	1,000	1,000	1,000
RG&E- New RTU Project, New and Relocate RTU Endpoints, Rochester		330			
RG&E- Regulator Station Automation	-	-	1,000	1,000	1,000
TOTAL	**1,626**	**330**	**2,000**	**2,000**	**2,000**

The most significant project in this category is the Binghamton Gas SCADA System which is described in Table 5.8.

Table 5.8 Category 4. Binghamton Gas SCADA System

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Binghamton Gas SCADA System (Appendix L Project)	1,626	0	0	**0**	**0**
Total Costs: $ 2,399					
Description: Upgrade to current release of Televent Gas SCADA System Product **Reason and benefits:** SCADA systems require regular upgrades due to hardware, operating system and software age and obsolescence as well as vendor support and cyber security requirements. The current SCADA System was installed in 1999 and has reached the end of life. The Companies have begun to experience an increasing number of hardware failures. A major system failure will require, at a minimum, having personnel stationed at major regulator stations 24x7 until the system could be restored. **Investment Reason:** Automation					
Year started: 2010 **Year in service:** 2012 **Current Status:** The project is underway with completion by end of 2012**.**					

Regulator Station Automation: This will enable the Companies to remotely control regulator stations and to have instantaneous pressure measurements. This will eliminate operations employees having to go to the station to make operational changes and obtain pressure measurements, which are currently recorded at the station on paper charts.

5.5 PROJECT CATEGORY 6 – COMMON- GAS PORTION

Common investments include fleet, improvements to division and office facilities, operational efficiency projects and information technology projects. At NYSEG common investments are allocated 20.9% to Gas, and at RG&E common investments are allocated 35% to Gas. The most significant component of the common investment is Fleet.

The Companies propose to invest in this category during 2012 through 2016 as follows:

Table 5.9 Category 6. Common- Gas portion

	2,012	2013	2,014	2015	2016	TOTAL
Mobile Radio Project	1,295	-	-	-	-	1,295
Fleet	3,023	3,093	3,135	3,135	3,135	15,521
Facilities and General Services	844	679	3,443	3,420	3,952	12,338
IT	1,143	1,018	1,782	1,805	1,273	7,021
Total NYSEG Common- Gas	6,305	4,791	8,360	8,360	8,360	**36,175**
Fleet	1,470	1,266	1,400	1,400	1,400	6,936
Facilities and General Services	455	753	2,423	2,033	2,163	7,827
IT	1,013	875	727	1,117	987	4,719
TOTAL RG&E Common- Gas	2,938	2,894	4,550	4,550	4,550	**19,482**
TOTAL Common- Gas	**9,242**	**7,685**	**12,910**	**12,910**	**12,910**	**55,657**

Mobile Radio Project: This project is included in Appendix L. It involves replacing the NYSEG Mobile Radio System with a 150 MHz system for 1,500 vehicles, 300 portables and 57 dispatch consoles. The system requires the development of 51 tower sites with connectivity to the ECC and the acquisition the required frequencies. Replacement is required to comply with the new FCC band-width requirements for high-band systems in three divisions and to avoid failure of the current low-band system in 10 divisions. The total cost of this project is $63M (100%). Much of this project has been completed in prior years

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 and General Services: Improvements to division offices, garages, and other facilities owned or leased by the Companies. Following are the most significant projects including the total costs (both electric and gas):

-Kirkwood General Office - renovation, $1M.

The Kirkwood General Office cooling towers 3 and 4 are at the end of their useful lives and need to be replaced. New cooling towers will produce energy savings and provide reliable space temperature control to the Kirkwood General Office facility.

-Geneva - construct transportation facilities including garage, $4.7M.

The existing garage and transportation facilities are inefficient and no longer adequately support business area needs. Construction of a new stand alone structure will provide swing space for required relocation and renovations to Customer Services.

-Sodus - construct new service center, $6M.

Construct a LEED certified, single story service center on a 10-15 acre commercial property, near NYS Rte 104, close to multiple fuel stations and accessible to public utilities such as water, sanitary and storm sewer. The existing Sodus/Wolcott Service Center site/facility inherently hinders operational logistics, efficiency, and service which translate to energy waste, lost time and added cost.

-Liberty - construct new service center, $20M

Construct a LEED Certified, single story service center on a 9-10 acre commercial property near NYS Rte 17 (soon to be I-86), close in proximity to multiple fuel stations and accessible to public utilities such as water, sanitary and storm sewer. The existing Liberty Service Center site and facility inherently hinders operational logistics, efficiency, and service which translate to energy waste, lost time and added cost.

Information Technology: Upgrades to computers and other equipment and new systems to improve effectiveness and efficiency of work. In 2012 includes several operational efficiencies programs for the companies and one information technology program:

-Field Automation (operational efficiency):

Efficiency savings, productivity and service improvements due to redesigning, automating and mobilizing field workforce processes. Also includes GIS integrated mobile tool for the design of construction projects.

-Gas IMP Solution (operational efficiency)

This proposed Gas (pipeline) Integrity Management Program (IMP) system will provide the ability to track and report on information related to the operation and maintenance of natural gas pipelines for both regulatory and internal management needs. Information will be integrated from multiple sources including SAP and ESRI GIS to provide the tools

to identify, evaluate and report on threats to the integrity our the company's gas pipelines.

-Smartrac Replacement (operational efficiency)

A replacement of the existing system that is used to manage all gas retail access interactions with market participants including pipelines, suppliers and customers. The new system will resolve functional shortcomings in the current solution, provide greater automation and replace the aging and unsupported technology.

-SAP Rearchitecture (Information Technology)

Upgrade to SAP

6 2011 INFORMATION

TABLES

6.1 CAPITAL BUDGET

During 2011 the Companies invested $415.5M in the electric and natural gas delivery systems (including generation investments). This represents 98% of the 2011 Plan included in the Five Year Capital Investment Plan dated April 1, 2011.

Table 6.1 below includes 2011 capital investment information by operating company and line of business.

Table 6.1 2011 Capital Investment

Company	Actual	2011 Plan	%
NYSEG Electric	179.3	174.2	103%
RG&E Electric	152.0	171.5	89%
Subtotal- Electric	**331.3**	**345.7**	96%
Appendix L - Electric		**283.7**	
NYSEG Gas	46.1	45.2	102%
RG&E Gas	38.1	34.4	111%
Subtotal- Gas	**84.2**	**79.6**	106%
Appendix L - Gas		**77.6**	
TOTAL	**415.5**	**425.3**	98%

6.2 FACILITIES PLACED INTO SERVICE

Table is 6.2 shows the facilities related to major projects placed into service in 2011.

Table 6.2 Facilities Placed into Service in 2011

Project	Ground Bank	Transformers	Breakers	Control House	Switchgear	Miles	Total Cost (millions)
Stoney Ridge Substation:		1 - 230/115kV/ 200MVA	3 - 230kV	1 New			
Sullivan Park Substation:		2 - 115/12.5kV/ 33MVA	4 - 115kV	1 New	1 - 15kV		
Corning Valley Line						9.3 115kV	Corning Valley
West Erie Substation Upgrade:			1 - 115kV	1 - Expansion			
Hickling Substation Upgrade:			2 - 115kV				
Campbell Substation Upgrade:			2 - 34.5kV 2 - 12.5kV	1 New			46.6
Substation 13A:			1 - 115kV	1- Modification			3.40
Substation 424:		2 - 115/34kV/ 112MVA	2 - 115kV	1- Modification			14.00
Station 135 Substation:			5 - 115kV	1- Modification			Included in Station 424
New Substation 137		2 - 34/11kV/ 37.3MVA		1 New	1- 34 kV 2- 11 kV		26.6
Watercure project		1-230kV/400MVA					0.6
Greenidge	115/34.5kV		2 - 115kV				2.20
Fall Brook			2- 12.5kV				0.40

7 PROJECTS EXTENDING BEYOND THIS PLAN

There are a number of projects that start during the next five years that address transmission and distribution issues, but these projects will be completed after 2016. Table 7.1 and Table 7.2 show the estimation of the yearly cash flow of each of these projects and the total investment during the Plan.

Table 7.1 NYSEG- Projects with Investment Requirements after 2016 ($000)

	2013	2014	2015	2016	After 2016	TOTAL PROJECT COST
Amenia 2nd Bank & 13.2 KV Conversion - Brewster	-	-	1,000	1,200	1,000	3,200
Auburn, Reconductor 35kV Line 525 (Centerport - State St)	-	-	-	1,600	1,000	2,600
Auburn, Replace State St 115-35kV Transformer 1	-	-	-	2,000	2,800	4,800
Auburn, Replace Wright Ave 115-35kV Transformer 1	-	-	-	3,200	4,000	7,200
Coopers Corners, Add 2nd 115/34.5 kV Transformer	-	-	415	1,810	1,000	3,225
Dingle Ridge 2nd Bank & 13.2 KV Conversion - Brewster	-	-	1,000	1,000	4,200	6,200
Erie Street, Add 3rd 115/34.5 kV Transformer	-	-	-	1,027	2,500	3,527
Kent 2nd 13.2 KV Circuit and Bank Upgrade - Brewster	-	-	1,000	1,000	3,400	5,400
North Broadway, Add 2nd 115/34.5 kV Transformer	-	-	-	2,000	5,200	7,200
Stolle - Dysinger, Construct 345kV Transmission Line and Switching Station	1,800	3,200	10,000	20,000	65,800	100,800
Wood Street, Add 3rd 345/115 kV Transformer	-	700	3,506	3,000	5,000	12,206
TOTAL NYSEG					**95,900**	

Table 7.2 RG&E- Projects with Investment Requirements after 2016 ($000)

	2013	2014	2015	2016	After 2016	TOTAL PROJECT COST
Rochester - Add 35kV Circuit - Offload Circuit 701	-	-	-	5,000	22,700	27,700
Rochester - Add 35kV Circuit - Offload Circuit 761	-	-	-	2,000	6,900	8,900
Rochester - Add 35kV Circuit - Offload Circuit 775	-	-	-	2,000	10,400	12,400
Rochester - Add 35kV Circuit - Offload Circuit 778	-	-	-	2,000	17,200	19,200
Rochester - Sectionalize and Reconductor 115kV Circuit 917 (S7 - S418)	-	731	3,000	6,000	9,469	19,200
Rochester - Station 204, Add 115-35kV 75 MVA LTC Transformer	-	500	700	1,600	3,500	6,300
Rochester - Upgrade 11kV Circuit 641 (Station 3 - Station 34)	-	-	-	100	420	520
Rochester, Upgrade 11kV Circuit 676 (Station 46 - Station 403)	-	-	-	300	450	750
Sta 110, Replace #1T & Convert Circuits to 12kV	-	-	-	932	3,443	4,375
Sta 246 Add Second Transformer and Circuits	-	-	-	600	4,861	5,461
Station 121, Add 2nd 115/34.5 kV Transformer	-	-	833	1,000	2,468	4,301
Station 149 transformer/facilities upgrade and secondary source addition	-	-	500	2,500	5,700	8,700
Station 158, Replace Existing 115/34.5 kV Transformers with a 50 MVA LTCs	-	-	1,600	1,000	1,600	4,200
Station 16 transformer and sub-transmission upgrade	-	-	-	1,800	4,500	6,300
Station 48 - Replace (2) 115-34.5kV Transformers - Rochester	-	-	-	2,600	7,400	10,000
Station 50 transformer and sub-transmission upgrade	-	-	-	1,000	5,300	6,300
Station 67 - Add 115-34.5kV Transformer - Rochester	-	-	-	1,450	2,150	3,600
Station 89, Replace #2 Transformer	-	-	-	2,000	4,800	6,800
TOTAL RG&E					**113,261**	

Attachment 1

Detail Project List for 2012 to 2016

NYSEG- Electric List	Investment Reason	%	2012	2013	2014	2015	2016
Afton Substation - Add new 34.5kV Circuit	System Capacity	100	100	-	-	-	-
Agro-Farma, Inc. New 46kV Transmission Line & Substation - 100% Reimbursable	Growth	100	12,859	-	-	-	-
Agro-Farma, Inc. New 46kV Transmission Line & Substation - 100% Reimbursable	Growth	100	(12,859)	-	-	-	-
Biogas 34.5kV Collector System	Power Quality	100	1,550	1,500	3,250	-	-
Cantitoe - Add 2nd 13.2 kV Cir - Elec - Brewster	System Capacity	100	50	70	-	-	-
Circuit 426 - Upgrade Conductor - Binghamton	Power Quality	50	687	147	-	-	-
Circuit 426 - Upgrade Conductor - Binghamton	System Capacity	50	687	147	-	-	-
Circuit 512 (Vestal - Goudey) - Upgrade Conductor - Binghamton	System Capacity	100	-	-	787	-	-
City of Corning - Replace Electric Distribution Overhead with Underground (100% Reimbursable)	Growth	100	400	-	-	-	-
City of Corning - Replace Electric Distribution Overhead with Underground (100% Reimbursable)	Growth	100	(400)	-	-	-	-
Coddington Add LTC Capability to 115/34.5kV Transformer	System Capacity	100	2,400	-	-	-	-
Dansville - MGP radio tower and equipment relocation	Automation	100	227	-	-	-	-
Deposit #1 Sub - Add 2nd 12.5KV circuit and convert distribution to 12.5KV - (100% Reimburseable)	Growth	100	1,140	-	-	-	-
Deposit #1 Sub - Add 2nd 12.5KV circuit and convert distribution to 12.5KV - (100% Reimburseable)	Growth	100	(1,140)	-	-	-	-
DOE- Stimulus Program- Capacitor Banks NYSEG(Ashley, Morgan, Ridge Rd., Mountaindale, Amawalk, Big Tree) - 50% Reimb	Power Quality	100	5,540	-	-	-	-
DOE- Stimulus Program- Capacitor Banks NYSEG(Ashley, Morgan, Ridge Rd., Mountaindale, Amawalk, Big Tree) - 50% Reimb	Power Quality	100	(2,770)	-	-	-	-
Eelpot New Transformer	System Capacity	100	2,600	1,175	-	-	-
Energy Control Center	Automation	100	7,683	3,355	-	-	-
Flat Street Substation New Transformer	System Capacity	100	4,300	-	-	-	-
Glenwood - Replace Substation Transformers	System Capacity	100	1,678	-	-	-	-
Kattelville 422/426 Load Relief and Reliability Improvement	System Capacity	100	75	-	117	-	-
Klinekill - Valkin New 115 kV Transmission Line	System Capacity	100	2,360	2,958	5,183	-	-
Line 521, Willet extend and reconfigure 34.5 kV	System Capacity	100	-	-	400	-	-
Line 807, Convert to 115kV Operation	System Capacity	100	3,000	-	-	-	-
Line 877, Rebuild electric facilities	Asset Condition	100	-	-	250	-	-

	Investment Reason	%	2012	2013	2014	2015	2016
Mechanicville Reinforcement Project, Construct New Luther Forest Substation	Growth	10	1,506	-	-	-	-
Mechanicville Reinforcement Project, Construct New Luther Forest Substation	System Capacity	90	13,550	-	-	-	-
Meyer - Add 115kV Capacitor Bank	Power Quality	100	510	-	-	-	-
Meyer Substation New Transformer	System Capacity	100	100	3,510	-	-	-
MTA - New Circuits - Electric - Brewster (need to find out if we committed to MTA)- 100% Reimbursable	Growth	100	45	-	1,293	-	-
MTA - New Circuits - Electric - Brewster (need to find out if we committed to MTA)- 100% Reimbursable	Growth	100	(45)	-	-	-	-
NERC Alert Program	Statutory	100	9,206	5,478	-	-	-
New Mobile Substation (#22)	Asset Condition	100	800	-	-	-	-
NYCDEP Cross River Shaft 13 Substation - Brewster Division - 100% Reimbursable	Growth	100	500	-	-	-	-
NYCDEP Cross River Shaft 13 Substation - Brewster Division - 100% Reimbursable	Growth	100	(500)	-	-	-	-
NYCDEP Croton Falls Shaft 11 New Circuit - Brewster - 100% Reimbursable	Statutory	100	117	-	291	-	-
NYCDEP Croton Falls Shaft 11 New Circuit - Brewster - 100% Reimbursable	Statutory	100	(117)	-	-	-	-
NYSEG Binghamton Division Afton 429 Split Circuit	System Capacity	100	-	-	180	-	-
NYSEG, Install PMUs (DOE Project) - 50% Reimbursable	Power Quality	100	1,682	-	-	-	-
NYSEG, Install PMUs (DOE Project) - 50% Reimbursable	Power Quality	100	(841)	-	-	-	-
Peach Lake, Add 46 kV Switched Capacitor Bank	Power Quality	100	-	-	368	-	-
Perry Center Area Install New 34.5kV Substation	System Capacity	100	109	2,342	-	-	-
Richfield Springs Substation New Transformer	System Capacity	100	1,700	201	-	-	-
Seneca Ord. DEP upgrade (7500KVA xfmt & Convert Circuit #203) - 100% Reimbursable	Growth	100	140	-	-	-	-
Seneca Ord. DEP upgrade (7500KVA xfmt & Convert Circuit #203) - 100% Reimbursable	Growth	100	(140)	-	-	-	-
Silver Creek Substation New Transformer	System Capacity	100	586	-	-	-	-
South Park, Install New Transformer	System Capacity	100	400	-	-	-	-
South Perry New 115kV Transformer	System Capacity	100	1,000	1,000	1,232	-	-
South Perry New 230kV Transformer	System Capacity	100	5,100	5,206	5,596	-	-
Spaulding Green URD - Electric - Lancaster (50% Reimbursable)	Growth	100	100	-	-	-	-
Spaulding Green URD - Electric - Lancaster (50% Reimbursable)	Growth	100	(50)	-	-	-	-
Stephentown Substation New Transformer	System Capacity	100	600	1,360	-	-	-

	Investment Reason	%	2012	2013	2014	2015	2016
Tom Miller Rd New Substation	Power Quality	100	200	2,333	-	-	-
Transit St Substation MGP Remediation	Statutory	100	1,660	259	14,418	-	-
Under Frequency Load Shedding Project	Power Quality	100	24	-	24	-	-
Walden 69kV Transmission Line Upgrade	System Capacity	100	2,000	2,989	-	-	-
Watercure Rd. - 2nd 345 kV Transformer	System Capacity	100	400	778	8,746	-	-
Wehrle Dr, Replace Cable, Terminations & Switch Gear	Damage	100	1,000	-	-	-	-
West Woodbourne - Add 34.5kV Capacitor - Liberty	Power Quality	100	98	-	198	-	-
Westover Substation New 115kV Transformer and Binghamton Division Capacitors	System Capacity	80	1,520	3,418	-	-	-
Westover Substation New 115kV Transformer and Binghamton Division Capacitors	Power Quality	20	380	855	-	-	-
Willet Substation New Transformer	System Capacity	100	2,800	171	-	-	-
Windham Substation 115 KV Capacitor Bank Addition	Power Quality	100	100	893	-	-	-
Line 601, replace existing facilities	System Capacity	100	-	-	500	500	-
Line 611, relocate electric facilities- Mech'ville	Asset Condition	100	200	-	-	-	-
Line 613, Purchase line from National Grid & rebuild	Asset Condition	100	-	-	200	-	-
Line 620 Part 1, rebuild electric facilities, Brainard Tap to W. Lebanon	Asset Condition	100	-	-	300	1,100	-
Line 620 Part 2, rebuild electric facilities, Canaan to W. Lebanon Rebuild	Asset Condition	100	-	-	-	-	1,700
871 / 872 Phase 1: Rebuild electric facilities, Route 3 to High Falls	Asset Condition	100	-	-	1,700	-	-
871 / 872 Phase 2: Rebuild electric facilities, Kents to Cadyville	Asset Condition	100	-	-	600	-	-
Line 878, Create loop feed into Hyde Road Substation	Automation	50	-	-	-	-	-
Line 878, Create loop feed into Hyde Road Substation	System Capacity	50	-	-	-	-	-
Line 878, Rebuild electric facilities - Phase 1	Asset Condition	100	-	-	2,300	-	-
Line 878, Rebuild electric facilities - Phase 2	Asset Condition	100	-	-	-	-	2,850
Line 879, Create loop feed into Peru Substation	System Capacity	50	-	-	125	275	-
Line 879, Create loop feed into Peru Substation	Automation	50	-	-	125	275	-
Line 879, Rebuild electric facilities, Ausable Town Line to Rainbow Falls	Asset Condition	100	-	-	-	800	-
Line 879, Rebuild electric facilities, South Junction to Ausable Town Line	Asset Condition	100	-	-	-	-	1,700
Line 880, Rebuild electric facilities	Asset Condition	100	-	-	1,000	2,400	-
Line 884, Rebuild electric facilities, Norton to Jay Rebuild, 10 miles, 46kV	Asset Condition	100	-	-	250	2,750	-
Line 887, rebuild electric facilities	Asset Condition	100	-	-	-	-	1,700
Line 909, rebuild electric facilities	Asset Condition	100	-	-	400	-	-
Line 911, Install 115kV switches	Power Quality	100	-	-	250	-	-

	Investment Reason	%	2012	2013	2014	2015	2016
Line 914, replace electric facilities	Asset Condition	100	-	-	-	400	-
Line 984, replace electric facilities	Asset Condition	100	-	-	400	-	-
Amenia 2nd Bank & 13.2 kV Conversion - Brewster	System Capacity	100	-	-	-	1,000	1,200
Auburn 345kV Source	System Capacity	20	200	516	3,224	6,760	4,300
Auburn 345kV Source	Power Quality	80	800	2,066	12,894	27,040	17,200
Auburn, Add 35kV Line Segment (Grant Avenue Tap - State St)	System Capacity	100	-	-	-	-	1,300
Auburn, Add 35kV Line Segment (State St - Miller Tap)	System Capacity	100	-	-	-	-	1,000
Auburn, Reconductor 35kV Line 505 (Green St - Alco)	System Capacity	100	-	-	-	-	300
Auburn, Reconductor 35kV Line 525 (Centerport - State St)	Growth	100	-	-	-	-	1,600
Auburn, Replace State St 115-35kV Transformer 1	System Capacity	100	-	-	-	-	2,000
Auburn, Replace Wright Ave 115-35kV Transformer 1	System Capacity	100	-	-	-	-	3,200
Auburn, Replace Wright Ave 115-35kV Transformer 2	Growth	100	-	-	-	-	-
Axtell Rd 510 Create loop on 34.5kV distribution	System Capacity	100	-	-	-	-	225
Bellayre Ski Center Install new 34.5kv distribution feed for upgrade at Ski Center (contribution)	Growth	100	85	394	3,021	-	-
Burdett/Meck 508, Install and convert Electric Distribution Bergin farms	Growth	100	350	-	-	-	-
Calicoon Sub CKT 285 Convert Approx 6 miles of 4.8kv to 12.5kv	System Capacity	100	-	-	450	450	-
Canada Rd 562, Darlymple Gravel, reconfigure distribution facilities (100% contribution)	Growth	100	100	-	-	-	-
Canada Rd 562, Darlymple Gravel, reconfigure distribution facilities (100% contribution)	Growth	100	(100)	-	-	-	-
Clark Street MGP Remediation - Auburn	Statutory	100	-	-	1,000	-	-
Clinton County Highways, Relocate Electric Facilities	Statutory	100	-	125	-	-	-
Cobb Hill Tap (Ckt 609), Electric conversion, Mechanicville	System Capacity	100	-	-	350	-	-
Cobble Hill, Add 2nd 115/34.5 kV Transformer	Power Quality	100	-	-	1,650	2,000	-
Colliers, Replace existing 115/46 kV Non-LTC Transformers with new LTC Transformers	Power Quality	100	-	-	2,000	2,750	-
Coons Crossing - Install auto sectionalizing equipment	Automation	100	-	-	-	300	655
Coons Crossing 211, Conversion to 34.5 kV (100% Reimbursable)	Growth	100	350	-	-	-	-
Coons Crossing 211, Conversion to 34.5 kV (100% Reimbursable)	Growth	100	(350)	-	-	-	-
Coopers Corners Ground Bank Transformer Replacement	Asset Condition	100	-	-	375	375	-
Coopers Corners, Add 2nd 115/34.5 kV Transformer	Power Quality	100	-	-	-	415	1,810
Coopers Corners, Add 3rd 345/115 kV Transformer	Power Quality	100	-	-	2,100	3,000	6,800
Cowlesville, Add 34.5 kV Switched Capacitor Bank	Power Quality	100	-	-	356	-	-
Dingle Ridge 2nd Bank & 13.2 KV Conversion - Brewster	Growth	100	-	-	-	1,000	1,000
Dingle Ridge, Add 46 kV Switched Capacitor Bank	Power Quality	100	-	-	-	378	-

	Investment Reason	%	2012	2013	2014	2015	2016
Dryden Bank #1 Transformer Replacement	Asset Condition	100	-	-	750	750	-
Earlville Bank #1 Transformer Replacement	Asset Condition	100	-	-	750	750	-
East Norwich 516 Close 34.5Kv loop to improve reliability and outage time	System Capacity	100	-	-	400	-	-
Erie Street, Add 3rd 115/34.5 kV Transformer	System Capacity	100	-	-	-	-	1,027
Fraser, Add 2nd 345/115 kV Transformer	Power Quality	100	-	-	700	2,000	2,200
Gardenville, Add 3rd 230/115 kV Transformer	Power Quality	100	-	-	-	-	-
Geneva General Hospital, Relocate electric service and provide redundant feed - 100% Reimbursable	Growth	100	300	-	-	-	-
Geneva General Hospital, Relocate electric service and provide redundant feed - 100% Reimbursable	Growth	100	(300)	-	-	-	-
Geneva, Add Switched Capacitor Bank at Five Points Prison Substation	Power Quality	100	-	-	356	-	-
Geneva, Goulds Pump, Add 2.4 MVAr Switched Capacitors	Power Quality	100	-	-	356	-	-
Geneva, Uprate Line 542 (Sleight Rd - Van Buren Tap)	System Capacity	100	-	-	300	-	-
Goodrich Rd. 5MVA padmount step installation	Growth	100	-	-	175	-	-
Grand Gorge #1 Sub - Replace with transformer with 12/16/20MVA	Growth	100	-	-	300	2,500	2,800
Harford Mills Bank #1 Transformer Replacement	Asset Condition	100	-	-	500	500	-
Harris Lake Source Upgrade	System Capacity	100	-	2,336	-	-	-
Kent 2nd 13.2 KV Ckt and Bank Upgrade - Brewster	Growth	100	-	-	-	1,000	1,000
King Ferry Tap 528, Reconfigure Electric distribution 4800V to 34.5 kV	System Capacity	100	-	-	600	-	-
Luther Forest, Technology Campus, LFTC - Pod 8, Install Electric Service (100% Reimbursable)	Growth	100	700	-	-	-	-
Luther Forest, Technology Campus, LFTC - Pod 8, Install Electric Service (100% Reimbursable)	Growth	100	(700)	-	-	-	-
Luther Forest, Technology Campus, LFTC - Rocket Way, Install Electric Conduit System (100% Reimbursable)	Growth	100	450	-	-	-	-
Luther Forest, Technology Campus, LFTC - Rocket Way, Install Electric Conduit System (100% Reimbursable)	Growth	100	(450)	-	-	-	-
Line 526, Rebuild Coddington-South Hill 34.5 kV Line	System Capacity	100	-	-	-	900	-
Line 810, Rebuild Carmel-Adams Corners 46 kV Line	System Capacity	100	-	-	900	-	-
Main St, V/Warsaw Circuit Reconductor - Warsaw Sub circuit 381 Phase #2	System Capacity	100	-	-	170	-	-
Marcellus Transformer Replacement - Auburn	System Capacity	100	-	-	-	325	-
Mechanicville, Circuit 620 (BRAINARD TAP - WEST LEBANON Sw. Sta.), Install Static and Ground Wires	Asset Condition	100	-	-	400	1,000	-

	Investment Reason	%	2012	2013	2014	2015	2016
Mechanicville, Circuit 625 & 626 (COMSTOCK - Franchise Line), Upgrade Conductor	Power Quality	20	-	-	80	-	-
Mechanicville, Circuit 625 & 626 (COMSTOCK - Franchise Line), Upgrade Conductor	System Capacity	80	-	-	320	-	-
Milford circuit 258 - Install Substation in Location to Improve Reliabiltiy	System Capacity	100	-	-	-	2,500	-
Moog World Headquarters 34.5KV Primary service installation.	System Capacity	50	110	-	-	-	-
Moog World Headquarters 34.5KV Primary service installation.	Growth	50	110	-	-	-	-
Morrisville, Add 46 kV Switched Capacitor Bank	Power Quality	100	-	-	390	-	-
North Broadway, Add 2nd 115/34.5 kV Transformer	System Capacity	100	-	-	-	-	2,000
NYSEG Binghamton Division - Fourth Circuit out of Fuller Hollow Sub (future 618 ckt)	Growth	100	-	-	-	-	500
NYSEG Binghamton Division North Endicott 361 35KV Conversion, Relocation and Field Tie Recloser	System Capacity	100	-	450	-	-	-
NYSEG Binghamton Glenwood 686 12KV conversion for Load Relief	Growth	100	-	-	-	-	145
NYSEG Binghamton Relocate Network Facilities for Round About	Statutory	100	150	-	-	-	-
Old Falls Sub - Relieve load on substation transformers	System Capacity	100	-	-	500	-	-
Plattsburgh, Lyon Mt, Upgrade Transformer-Regulator	Power Quality	50	-	-	375	500	-
Plattsburgh, Lyon Mt, Upgrade Transformer-Regulator	System Capacity	50	-	-	375	500	-
Spaulding Lakes Sub, Lock Lea sub and Meadow Lakes sub. Replace overloaded URD primary.	System Capacity	100	-	-	210	-	-
River Rd Sub - Replace sub transformer wth non-LTC 10/12/14MVA	System Capacity	100	-	-	1,500	1,500	2,500
Roll Road, Add 34.5 kV Switched Capacitor Bank	System Capacity	100	-	-	-	-	356
Route 12 DOT Relocation - 30% Reimbursible	Statutory	100	260	-	-	-	-
Route 12 DOT Relocation - 30% Reimbursible	Statutory	100	(78)	-	-	-	-
Saratoga County Highways, Relocate Electric Facilities	Statutory	100	-	125	-	-	-
Saratoga County, URD, Install underground electric	Statutory	100	-	-	-	125	-
South Perry, Replace 115/34.5 kV Transformer	System Capacity	100	-	-	1,100	2,321	-
Southerly Hills URD Phase I of III	Growth	100	-	-	-	-	80
Southerly Hills URD Phase II	Statutory	100	-	-	-	-	80
Southerly Hills URD Phase III	Statutory	100	-	-	80	-	-
Spruce Havens, Extend and Reconfigure electric distribution system	System Capacity	100	-	-	600	-	-
State Street 3rd 12.5 KV Circuit - Auburn	System Capacity	100	-	-	210	-	-
Stolle - Dysinger, Construct 345kV Transmission Line and Switching Station	Power Quality	20	-	360	640	2,000	4,000

	Investment Reason	%	2012	2013	2014	2015	2016
Stolle - Dysinger, Construct 345kV Transmission Line and Switching Station	System Capacity	80	-	1,440	2,560	8,000	16,000
Town of Jay, Electric relocation	Statutory	100	-	150	-	-	-
Town of Keene, Relocate Electric	Statutory	100	-	150	-	-	-
Tuttle Place Bank #1 Transformer Replacement	Asset Condition	100	-	-	750	750	-
URD Installation Reed Hill Heights subdivision	Growth	100	-	-	-	200	-
Van Buren Reliability Improvement - Geneva	System Capacity	100	-	-	1,000	1,200	1,200
VanBuren Bank #2 Transformer Replacement	Asset Condition	100	-	-	1,050	1,050	-
West Davenport Sub - Replace sub transformer with non-LTC 7.5/10.5MVA unit.	Growth	50	-	-	1,050	1,400	-
West Davenport Sub - Replace sub transformer with non-LTC 7.5/10.5MVA unit.	System Capacity	50	-	-	1,050	1,400	-
White Lake Sub add circuit to existing open bay on transformer	System Capacity	100	-	-	-	-	150
Wood Street, Add 3rd 345/115 kV Transformer	System Capacity	100	-	-	700	3,506	3,000
TOTAL Projects			**78,593**	**48,256**	**99,100**	**90,645**	**87,578**
Brewster RTU Substation Project	Automation	100	2,677	-	1,600	-	-
Division Projects	Asset Condition	100	23,000	23,000	26,000	26,000	26,000
Oil Containment Projects	Statutory	100	120	-	-	-	-
RTU Communications	Automation	100	1,000	255	1,250	1,250	1,250
RTU Program	Automation	100	-	-	2,600	4,000	4,000
Recloser	Automation	100			2,800	2,200	2,200
Recloser - Communications	Automation	100			450	400	400
Fiber Optic	Automation	100			2,800	2,800	2,800
Security Projects	Statutory	100	2,500	3,395	1,000	-	-
Substation Modernization	Asset Condition	50	1,250	1,250	7,500	7,500	7,500
Substation Modernization	Automation	50	1,250	1,250	7,500	7,500	7,500
Transmission, Distribution, Infrastructure Reliability Program, TDIRP - Other	Asset Condition	100	8,927	7,410	5,218	2,623	326
TDIRP- Breaker Replacement Program	Asset Condition	100	2,050	3,690	3,782	3,877	3,974
TDIRP- Sectionalizer Replacement	Asset Condition	100	1,500	1,000	1,000	1,000	900
TDIRP- Distribution Poles Replacement	Asset Condition	100	11,600	12,100	14,200	16,700	19,000
TDIRP- Substation Battery Replacement	Asset Condition	100	923	800	800	800	800
TOTAL Programs			**56,797**	**54,150**	**78,500**	**76,650**	**76,650**
TOTAL NYSEG Electric			**135,390**	**102,406**	**177,600**	**167,295**	**164,228**

NYSEG- Generation List	Investment Reason	%	2012	2013	2014	2015	2016
Cadyville	Generation	100	326	-	125	100	100

	Investment Reason	%	2012	2013	2014	2015	2016
High Falls	Generation	100	123	51	1,051	222	1,120
Kents Falls	Generation	100	2	166	1,500	1,300	490
Mechanicville	Generation	100	-	-	639	2,561	-
Mill C	Generation	100	-	-	500	-	50
Rainbow Falls	Generation	100	677	370	571	10	490
Generation Minors and Other Projects	Generation	100	894	713	850	865	875
Total NYSEG Generation	**Generation**	**100**	**2,022**	**1,300**	**5,236**	**5,058**	**3,125**

NYSEG- Gas List	Investment Reason	%	2012	2013	2014	2015	2016
Chenango Bridge, Install Gas Main and Regulator Station, Binghamton	System Capacity	100	-	2,100	-	-	-
Seneca West Pipeline Interconnect to Elmira	System Capacity	100	4,860	540	-	-	-
NYS Rt 13 Install Point of Delivery Dryden/Ithaca Interconnect	System Capacity	100	-	1,500	-	-	-
Main Street, Install 10 inch Medium Pressure Loop, Mechanicville	System Capacity	100	-	2,500	-	-	-
Groveland System Reinforcement - Interconnect to RG&E, Install Gas Mains, NYSEG	System Capacity	100	-	380	-	-	-
Chenango River, Replace Exposed Gas Mains, Binghamton	System Capacity	100	499	-	-	-	-
Distribution Mains (projects to be identified)	System Capacity	100	-	-	5,204	4,335	4,017
Minor Government Jobs, Relocate Gas Mains, NYSEG	Statutory	100	180	185	191	197	203
Minor Distribution Mains, Install Gas Mains, NYSEG	Statutory	100	625	644	663	683	703
Minor Services, Install Gas Service, NYSEG	Statutory	100	3,700	3,811	3,925	4,043	4,164
Minor Leak Prone Service Renewals, Replace Gas Service, NYSEG	Asset Condition	100	5,744	5,916	6,094	6,276	6,465
Leak Prone Main Replacement Program, 20XX NYSEG	Asset Condition	100	9,800	10,094	10,397	10,709	11,030
Gas Meters	Statutory	100	2,805	2,889	2,976	3,065	3,157
Gas Regulators	Statutory	100	290	299	308	317	326
Transmission Casing Replacement Program, NYSEG	Statutory	100	1,026	1,057	1,088	1,121	1,155
Front St, Relocate 124 psi Gas Main, Binghamton	Statutory	100	155	-	-	-	-
Croton River Crossing Replace	Statutory	100	-	460	-	-	-
MGP Site Remediations - Relocate Regulator Stations and Mains, Goshen	Statutory	100	-	-	-	385	-
Critical Valve Installations, Binghamton	Statutory	100	-	150	150	-	-
Distribution Main Replacement, Replace Gas Mains	Asset Condition	100	125	129	133	137	141
Gas Regulator Replacement Program, Replace Regulator Stations	Asset Condition	100	1,792	1,846	1,901	1,958	2,017
Robinson Road Gate Station Rebuild, Lockport	Asset Condition	100	815	1,510	-	-	-
Transmission Mains (projects to be identified)	Asset Condition	100	-	834	6,000	6,000	6,000
Binghamton Gas SCADA System Migration Project	Automation	100	1,626	-	-	-	-

	Investment Reason	%	2012	2013	2014	2015	2016
Regulator Station Modernization	Asset Condition	50			1,000	1,000	1,000
Regulator Station Modernization	Automation	50			1,000	1,000	1,000
Enhanced Leak Prone Main	Asset Condition	100			10,000	15,000	20,800
Total NYSEG Gas			**34,042**	**36,843**	**51,029**	**56,226**	**62,178**

NYSEG- Common List	Investment Reason	%	2012	2013	2014	2015	2016
Mobile Radio Project	Other	100	6,197	-	-	-	-
Fleet	Other	100	14,465	14,800	15,000	15,000	15,000
Facilities and General Services	Other	101	4,037	3,250	16,474	16,362	18,911
Information Technology and Operatinal Efficiency	Other	102	5,467	4,872	8,526	8,638	6,089
Total NYSEG Common			**30,166**	**22,922**	**40,000**	**40,000**	**40,000**

TOTAL NYSEG			**201,620**	**163,471**	**273,865**	**268,579**	**269,531**

RG&E- Electric List	Investment Reason	%	2012	2013	2014	2015	2016
Broad Street (Court St - Chestnut St) - Relocate Electric Facilties - Rochester	Statutory	100	400	-	-	-	-
Broad Street Tunnel - Highway Relocation - Rochester	Statutory	100	40	-	-	-	-
Capacitors - DOE Stations 121 & 168- 50% Reimbursable	Power Quality	100	1,729	-	-	-	-
Capacitors - DOE Stations 121 & 169- 50% Reimbursable	Power Quality	100	(865)	-	-	-	-
CEMESH Secondary Network Monitoring System Expansion	Automation	100	-	-	100	-	-
Charlotte St Hwy, Relocate Electric Facilities	Statutory	100	100	340	-	-	-
Circuit 430 - Rebuild and Convert to 12kV - Rochester	Statutory	100	50	-	-	-	-
Cobbs Hill Hwy Reloc Electric Facilities	Statutory	100	250	-	-	-	-
East Ridge Rd.Hwy, Relocate Electric Facilities	Statutory	100	3,388	-	-	-	-
Energy Control Center (Integrated EMS/DMS/OMS Project)	Automation	100	5,122	2,237	-	-	-
Jefferson Ave., Relocate Electric Facilities	Statutory	100	100	-	-	-	-
Line 926 - Upgrade 115kV Line - Rochester	System Capacity	100	1,000	1,089	3,121	-	-
Lines 911 - 932 - Add Oil Circulation to Pipe Cable - Rochester	System Capacity	100	300	-	-	-	-
Long Pond Rd. Hwy Relocate Electric Facilities	Statutory	100	875	-	-	-	-
Midtown Relocate Electric Facilities	Statutory	100	500	500	-	-	-
Mobile Switchgear Unit 11.5kV	System Capacity	100	-	-	1,190	-	-
Mobile Switchgear Unit 34.5kV	System Capacity	100	-	-	1,135	-	-
Downtown New 115kV Source	System Capacity	100	11,393	6,375	5,016	-	-
Portland Ave. Highway, Relocate Electric Facilities	Statutory	100	499	-	-	-	-
RG&E, Install PMUs (DOE Project) - 50% Reimbursable	Power Quality	100	420	-	-	-	-
RG&E, Install PMUs (DOE Project) - 50% Reimbursable	Power Quality	100	(210)	-	-	-	-
RGE Line 727 -35 kV Gas filled cable	Damage	100	1,530	-	-	-	-
Ridgeway Ave Hwy Reloc	Statutory	100	70	-	-	-	-
Rochester Area Reliability Project (New Bulk Power Sta - 345kV Source and 115kV Transmission Lines)	System Capacity	100	7,000	44,670	70,000	73,000	55,330
Seneca Ave Hwy, Relocate Electric Facilities	Statutory	100	300	-	-	-	-
South Lincoln Rd Hwy Relocate Electric Facilities.	Statutory	100	400	-	-	-	-
Station 56 - Replace (2) 115-34.5kV transformer	System Capacity	100	2,370	-	-	-	-
Station 120 - New 34.5kV Capacitors	Power Quality	100	776	-	-	-	-
Station 124 New Phase Shifter Transformer	System Capacity	100	12,254	-	-	-	-
Station 124 New SVC	Power Quality	100	8,019	3,876	-	-	-
Station 168 Service Area Reinforcement	System Capacity	100	2,000	547	11,142	-	-
Station 173 34.5 kV Switched Capacitor Bank Addition	Power Quality	100	180	-	-	-	-
Station 178 - 34kV Cap banks	Power Quality	100	718	-	-	-	-
Station 180 - 34kV cap Bank	System Capacity	100	363	-	-	-	-
Station 181 - 34kv Cap bank	Power Quality	100	475	-	-	-	-

	Investment Reason	%	2012	2013	2014	2015	2016
Station 194 - 34kV Cap Bank	System Capacity	100	457	-	-	-	-
Station 218 - 34kV Cap Bank	Power Quality	100	475	-	-	-	-
Station 218 to Clyde New 34.5kV Transmission Line	System Capacity	100	2,355	3,475	-	-	-
Station 23 Transformer & 11kV Switchgear	System Capacity	20	550	227	723	-	-
Station 23 Transformer & 11kV Switchgear	Asset Condition	80	2,200	906	2,894	-	-
Station 262- New 115kV/34.5kV Substation	System Capacity	100	3,320	5,836	-	-	-
Station 42 - Add (4) 20MVAR Cap Banks	Power Quality	50	474	-	-	-	-
Station 42 - Add (4) 20MVAR Cap Banks	System Capacity	50	474	-	-	-	-
Station 42 - Replace 115-11kV 4T Transformer	System Capacity	100	1,905	-	-	-	-
Station 42 - Replace 34.5-11.5kV 3T Transformer - New 12T	System Capacity	100	1,660	-	-	-	-
Station 49 - Replace 34.5-11.5kV Transformer	System Capacity	100	991	300	691	-	-
Station 56 Additional 12kV Source	System Capacity	100	5,638	2,615	377	-	-
Station 56, Add (2) 34.5kV Cap Banks	System Capacity	100	100	700	-	-	-
Station 80 - Replace 1T and 3T Transformers	Asset Condition	50	971	242	-	-	-
Station 80 - Replace 1T and 3T Transformers	System Capacity	50	971	242	-	-	-
Stations 127 New 34.5kV Capacitors	Power Quality	100	738	-	-	-	-
Stations 180 & 128, Add 115 kV Capacitors	Power Quality	100	1,936	-	-	-	-
Stations 198 New 34.5kV Capacitors	Power Quality	100	537	2	-	-	-
Stations 67 to 418 New 115kV Transmission Line	Power Quality	100	3,287	9,849	713	-	-
University Avenue (Union -Goodman) Hwy Reloc, Elec	Statutory	100	125	-	-	-	-
Webster East New 12 kV Source	System Capacity	50	997	-	-	-	-
Webster East New 12 kV Source	Power Quality	50	997	-	-	-	-
Westfall Rd. Highway Relocation, Relocate Electric Facilities	Statutory	100	700	-	-	-	-
Alpha St Rehab Group (Alpha,Braddock,Meridn, Wilder), Relocate Electric Facilities	Statutory	100	360	-	-	-	-
Fiber Optic Cable Replacement Between Stations 42, 124, 204	Asset Condition	100	-	-	1,038	-	-
Hincher St Group (Hincher, Corrign, Fleming, Rugl), Relocate Electric Facilites	Statutory	100	200	80	-	-	-
I390 Interchange @ East River Road (exit 16a), Relocate Electric Facilities	Statutory	100	376	-	-	-	-
Lake Ave (Merrill St to 600' S of Burley St). Relocate Electric Facilities	Statutory	100	2,750	-	-	-	-
Line 735,Upgrade 34.5kV Cable, Rochester	System Capacity	100	-	-	2,000	2,000	1,900
Maiden Lane Reconstruction (11) from Mt Read Blvd. to Fetzner Rd, Relocate Electric Facilities	Statutory	100	577	-	-	-	-
Melville St Group (Melville, Berwyn, Shafer), Relocate Electric Facilties	Statutory	100	200	-	-	-	-
Paul Rd Corridor, Relocate Electric Facilities	Statutory	100	500	-	-	-	-

	Investment Reason	%	2012	2013	2014	2015	2016
Reduce Outage Size - Circuit 765	Automation	100	-	-	-	513	-
Relocate Electric Facilities	Statutory	100	-	-	3,500	3,500	3,500
Add 35kV Circuit - Offload Circuit 701	System Capacity	100	-	-	-	-	5,000
Add 35kV Circuit - Offload Circuit 739	System Capacity	100	-	-	1,800	2,000	1,400
Add 35kV Circuit - Offload Circuit 740	System Capacity	100	-	-	2,000	3,000	2,300
Add 35kV Circuit - Offload Circuit 761	System Capacity	100	-	-	-	-	2,000
Add 35kV Circuit - Offload Circuit 765	System Capacity	100	-	-	2,700	3,000	7,000
Add 35kV Circuit - Offload Circuit 772	System Capacity	100	-	-	460	-	-
Add 35kV Circuit - Offload Circuit 775	System Capacity	100	-	-	-	-	2,000
Add 35kV Circuit - Offload Circuit 778	System Capacity	100	-	-	-	-	2,000
Add 35kV Circuit - Offload Circuit 783	System Capacity	100	-	-	500	1,700	2,500
Add 35kV Circuit - Offload Circuit 784	System Capacity	100	-	-	3,000	-	-
Sectionalize and Reconductor 115kV Circuit 917 (S7 - S418)	System Capacity	40	-	-	748	732	-
Sectionalize and Reconductor 115kV Circuit 917 (S7 - S418)	Power Quality	60	-	-	1,122	1,098	-
Station 204, Add 115-35kV 75 MVA LTC Transformer	System Capacity	100	-	-	500	700	1,600
Upgrade 11kV Circuit 542 (Station 26 - Station 6)	System Capacity	100	-	-	500	600	-
Upgrade 11kV Circuit 616 (Station 3 - Station 18)	System Capacity	100	-	-	1,400	-	-
Upgrade 11kV Circuit 641 (Station 3 - Station 34)	System Capacity	100	-	-	-	-	100
Upgrade 11kV Circuits 612KN (Station 3 - Station 38)	System Capacity	100	-	-	900	-	-
Upgrade 35kV Circuit 726 (Station 42 - Station 43)	System Capacity	100	-	-	500	800	2,000
Upgrade 11kV Circuit 676 (Station 46 - Station 403)	System Capacity	100	-	-	-	-	300
Route 33 Widening and Rehab from I490 to Marway Circle, Relocate Electric Facilities	Statutory	100	50	200	-	-	-
Rt 441(from Dublin Rd to Wayne County Line), Relocate Electric Facilities	Statutory	100	206	175	-	-	-
Station 110, Replace #1T & Convert Circuits to 12kV	System Capacity	100	-	-	-	-	932
Station 155 Canandaigua, Cir 248 Lakeshore Dr 12kV Conversion	System Capacity	100	-	-	-	500	-
Station 246 Add Second Transformer and Circuits	System Capacity	100	-	-	-	-	600
Station 419- Add new 12kv circuit	System Capacity	100	-	-	60	440	-
Station 121, Add 2nd 115/34.5 kV Transformer	System Capacity	100	-	-	-	833	1,000
Station 122 - relay Upgrades	Asset Condition	0	-	-	-	-	-
Station 125 - New 34.5kV Cap Bank	Power Quality	100	175	-	-	-	-
Station 136, Add 2nd Transformer	System Capacity	100	-	-	1,000	2,526	-
Station 14 transformer and sub-transmission upgrade	System Capacity	100	-	-	1,600	1,600	3,600

	Investment Reason	%	2012	2013	2014	2015	2016
Station 149 transformer/facilities upgrade and secondary source addition	System Capacity	100	-	-	-	500	2,500
Station 158, Replace Existing 115/34.5 kV Transformers with a 50 MVA LTCs	System Capacity	100	-	-	-	1,600	1,000
Station 16 transformer and sub-transmission upgrade	System Capacity	100	-	-	-	-	1,800
Station 178, Replace the existing 115/34.5 kV transformer with a new 20/26/33/37 MVA LTC	System Capacity	100	-	-	1,650	1,100	-
Station 192 transformer/facilities upgrade	System Capacity	100	-	-	-	-	-
Station 210 transformer replacement and 4kV circuit conversion to 12kV	System Capacity	100	-	-	975	1,600	-
Station 215 transformer/facilities upgrade	System Capacity	100	-	-	-	-	-
Station 216 - Add (2) 34.5kV Capacitor Banks - Lakeshore	Power Quality	100	-	-	680	-	-
Station 48 - Add (2) 34.5kV Capacitor Banks - Rochester	System Capacity	100	-	-	-	-	962
Station 48 - Replace (2) 115-34.5kV Transformers - Rochester	System Capacity	100	-	-	-	-	2,600
Station 50 transformer and sub-transmission upgrade	System Capacity	100	-	-	-	-	1,000
Station 51 transformer/facilities upgrade and secondary source addition	System Capacity	100	-	-	7,200	5,300	-
Station 67 - Add 115-34.5kV Transformer - Rochester	System Capacity	100	-	-	-	-	1,450
Station 71 New 115kV Capacitor	Power Quality	100	-	1,458	-	-	-
Station 89, Replace #2 Transformer	System Capacity	100	-	-	-	-	2,000
Station 95 - Add 2nd 34.5-11.5kV Transformer - Rochester	System Capacity	100	-	-	1,289	-	-
U of R New 115-34kV Substation 251-50% reimbursable	Growth	100	8,928	2,139	8,069	-	-
U of R New 115-34kV Substation 251-50% reimbursable	Growth	100	(4,464)	-	-	-	-
TOTAL Projects			**103,263**	**88,080**	**142,293**	**108,642**	**108,374**
RG&E Pilot Wire Replacement Program	Asset Condition	100	2,600	1,386	-	-	-
Cablecure	Asset Condition	100	1,500	1,045	1,955	1,500	2,000
Division Projects	Asset Condition	100	13,000	13,000	18,000	18,000	18,000
Oil Containment Compliance with EPA Rgulations (SPCC)	Statutory	100	587	-	-	-	-
Security Projects	Statutory	100	3,000	1,188	-	-	-
RTU Program	Automation	100	2,900	2,880	2,500	2,500	2,500
RTU Communications Projects	Automation	100	1,032	-	650	650	650
Reclosers	Automation	100		-	2,800	2,200	2,200
Reclosers Communications	Automation	100			450	400	400
Fiber Optic	Automation	100			5,200	5,200	5,200
Substation Modernization	Asset Condition	50	1,750	1,750	7,500	7,500	7,500
Substation Modernization	Automation	50	1,750	1,750	7,500	7,500	7,500
Transmission Distribution Infrastructure Reliabilty Program, TDIRP-Other	Asset Condition	100	8,564	7,435	7,068	6,700	6,330

	Investment Reason	%	2012	2013	2014	2015	2016
TDIRP- Circuit Breaker Replacement Program	Asset Condition	100	2,000	2,665	2,732	2,800	2,870
TDIRP- Sectionalizer Replacement Program	Asset Condition	100	1,000	1,000	1,000	1,000	1,000
TDIRP- Distribution Poles Replacement	Asset Condition	100	2,000	2,400	2,700	3,000	3,300
TDIRP- Substation Battery Replacement	Asset Condition	100	1,436	1,500	1,500	1,500	1,500
TOTAL Programs			**43,119**	**37,999**	**61,555**	**60,450**	**60,950**
TOTAL RG&E Electric			**146,382**	**126,079**	**203,848**	**169,092**	**169,324**

RG&E- Generation	Reason	%	2012	2013	2014	2015	2016
Station 2	Generation	100	1,016	73	7,880	6,715	250
Station 26	Generation	100	956	1	326	826	-
Station 5 Tunnel Project	Generation	100	21,100	1,000	-	-	-
Station 5 Turbine-Generator Major Rebuild (wickets, bushing and bearings)	Generation	100	2,728	750	-	-	-
Generation Minors and Other Projects	Generation	100	4,200	776	6,637	4,882	7,470
TOTAL RG&E Generation	**Generation**	**100**	**30,000**	**2,600**	**14,843**	**12,423**	**7,720**

RG&E- Gas	Reason	%	2012	2013	2014	2015	2016
Southwest60 System Improvements Phase 1, Install Pipe and Regulator Station, Livingston County	System Capacity	100	250	-	-	-	-
Washington St, Extend Gas Mains & Replace Regulator Stations, Roch	System Capacity	100	450	-	-	-	-
MF35 Walworth System Improvement, Install Pipe and Regulator Stations	System Capacity	100	-	950	-	-	-
Distribution Mains (projects to be identified)	System Capacity	100	-	783	3,652	4,761	4,904
New Empire West Gate Station, Build New Gate Station, Roch (50%System Capacity)	System Capacity	50	825	1,970	-	-	-
New Empire West Gate Station, Build New Gate Station, Roch (50% of project is Asset Condition)	Asset Condition	50	825	1,970			
Minor Government Jobs, Relocate Gas Mains, Roch	Statutory		350	361	371	382	394
Minor Distribution Mains, Install Gas Mains, Roch	Statutory		750	773	796	820	844
Minor Services Blanket, Replace Gas Service, Roch	Statutory		4,388	4,520	4,655	4,795	4,939
Leak Prone Main Replacement Program, 20XX RG&E	Asset Condition		8,981	9,250	9,528	9,814	10,108
Gas Meters	Statutory		2,535	2,611	2,689	2,770	2,853
Gas Regulators	Statutory		170	175	180	186	191
Transmission Casing Replacement Program, Roch	Statutory		1,750	-	-	-	-
Westfall Rd, Relocate Gas Mains, Roch	Statutory		1,920	-	-	-	-
Ridge Rd East, Relocate Gas Mains, Roch	Statutory		900	-	-	-	-

	Investment Reason	%	2012	2013	2014	2015	2016
Ridgeway Ave - Ramona to Minder, Relocate Gas Mains, Carryover, Roch	Statutory		500	-	-	-	-
Maiden Lane - Mt Read to Fetzner, Relocate Gas Mains, Roch	Statutory		310	-	-	-	-
Buffalo Rd, Relocate Gas Mains, Roch	Statutory		1,600	500	-	-	-
South Clinton St, Relocate Gas Mains, Roch	Statutory		325	-	-	-	-
Lincoln Rd South, East Rochester, Relocate Gas Mains Highway	Statutory		130	-	-	-	-
Highway Relocations (projects to be identified)	Statutory		-	5,259	5,417	5,580	5,747
Jane and Kirk Rds, Replace Gas Mains, Roch 9	Statutory	50	300	175	-	-	-
Jane and Kirk Rds, Replace Gas Mains, Roch 9	Growth	50	300	175	-	-	-
Southwest60 System Improvements Phase 2, Install Pipe and Regulator Station, Livingston County	Statutory	50	400	195	-	-	-
Southwest60 System Improvements Phase 2, Install Pipe and Regulator Station, Livingston County	Growth	50	400	195	-	-	-
Distribution Main Replacement, Replace Gas Mains, Roch	Asset Condition	100	300	309	318	328	338
Minor New C&I Services, Install Gas Service, Roch	Asset Condition	100	150	155	159	164	169
Minor New Res Services, Install Gas Service, Roch	Asset Condition	100	770	793	817	841	867
Gas Regulator Replacement Program, Replace Regulator Stations, Roch	Asset Condition	100	743	765	788	812	836
CM1 Replacement Humphrey to Ballantyne Rd, Replace Gas Main, Roch	Asset Condition	100	-	500	2,600	-	-
Transmission Mains (projects to be identified)	Asset Condition	100	-	1,258	7,000	7,000	7,000
Regulator Station Modernization	Asset Condition	50			1,000	1,000	1,000
Regulator Station Modernization	Automation	50			1,000	1,000	1,000
RTU Project, New and Relocate RTU Endpoints, Roch	Automation	100	-	330	-	-	-
Enhanced Leak Prone Main	Asset Condition	100			10,000	15,000	19,600
TOTAL RG&E Gas			**30,322**	**33,971**	**50,971**	**55,252**	**60,790**

RG&E- Common	Reason	%	2012	2013	2014	2015	2016
Fleet	Other	100	4,200	3,618	4,000	4,000	4,000
Facilities and General Services	Other	100	1,300	2,151	6,923	5,808	6,180
Information Technology and Operational Efficency	Other	100	2,894	2,500	2,077	3,192	2,820
TOTAL RG&E Common			**8,394**	**8,269**	**13,000**	**13,000**	**13,000**

TOTAL RG&E			**215,098**	**170,918**	**282,662**	**249,767**	**250,834**

TOTAL NY			**416,718**	**334,389**	**556,527**	**518,346**	**520,365**

Attachment 2

Reconciliation of Electric Plan Investments to Appendix L

Appendix L Reconciliation

	2011-L	2012-L	2013-L	TOTAL-L	2011 Actual	2012 Plan	2013 Plan	TOTAL	DIFFERENCE
NYSEG	147,179,000	127,374,000	141,054,000	**415,607,000**	179,328,000	152,067,965	116,360,035	447,756,000	32,149,000
RG&E	136,497,000	138,538,000	177,353,000	**452,388,000**	152,014,000	181,838,059	134,052,941	467,905,000	15,517,000
NERC Alert Project						9,205,801	5,477,938	14,683,739	14,683,739
TOTAL	**283,676,000**	**265,912,000**	**318,407,000**	**867,995,000**	**331,342,000**	**343,111,825**	**255,890,914**	**930,344,739**	**62,349,739**
NERC Alert Project			**14,683,739**						**(14,683,739)**
									47,666,000

NYSEG- Electric

Title	2011-L	2011 Actual	2012-L	2012 Plan	2013-L	2013 Plan	2011-2012-2013 Appendix L	2011 Actual -2012 P -2013 P
Ithaca Reinforcement Project	-	1,517,634	-	-	-		-	1,517,634
Watercure Rd Sub Transformer Replacement	-	3,003,340	-	-	-		-	3,003,340
Yawger Rd New Substation	-	312,180	-	-	-		-	312,180
Moraine Road Substation Breaker Addition	-	2,422,982	-	-	-		-	2,422,982
Yahoo Service Project	-	(469,887)	-	-	-		-	(469,887)
Capacitor Additions - Energy Efficiency Initiative	-	584,077	-	-	-		-	584,077
Meyer - Add 115kV Capacitor Bank - Hornell	-	474,444	-	510,000	-		-	984,444
Corning Valley Upgrade	23,916,000	19,388,540	-	-	-		23,916,000	19,388,540
Klinekill - Valkin (NMPC) New 115 kV Transmission Line	9,664,000	272,946	-	2,360,000	-	2,957,962	9,664,000	5,590,908
Transit St Substation MGP Remediation***	1,700,000	102,381	-	1,660,000	-	259,000	1,700,000	2,021,381
Walden 69kV Transmission Line Upgrade	3,186,000	344,271	-	2,000,000	-	2,989,000	3,186,000	5,333,271
Line #807 115kV Conversion	3,250,000	1,446,408	2,259,000	3,000,000	-	-	5,509,000	4,446,408
New Mobile Substations	1,750,000	839,090	1,750,000	800,000	-	-	3,500,000	1,639,090
Biogas 34.5kV Collector System	1,120,000	122,479	1,512,000	1,550,000	761,000	1,500,000	3,393,000	3,172,479
Bulk Spare Transformer	3,000,000	1,795,219	-	-	-	-	3,000,000	1,795,219
Silver Creek Substation New Transformer	1,206,000	174,443	-	586,000	-	-	1,206,000	760,443
Northend Substation *	1,471,000	1,473,270		1,722,000		-	1,471,000	3,195,270
Willet Substation New Transformer	654,000	627,324	2,618,000	2,800,000	-	171,000	3,272,000	3,598,324
Flat Street Substation New Transformer	605,000	612,133	3,192,000	4,300,000	-	-	3,797,000	4,912,133
South Perry New 115kV Transformer	875,000	492,276	3,216,000	1,000,000	-	1,000,000	4,091,000	2,492,276
Windham Substation 115kV Capacitor Addition	-	47,916	1,068,000	100,000	-	893,000	1,068,000	1,040,916
Perry Center Area Install New 34.5kV Substation	-	25,307	2,533,000	109,000	-	2,342,000	2,533,000	2,476,307
South Perry New 230kV Transformer	-	1,087,403	4,040,000	5,100,000	12,454,000	5,205,514	16,494,000	11,392,917
Capacitors	-	523,182	3,939,000	1,900,000	2,589,000	4,273,000	6,528,000	6,696,182
Eelpot New Transformer	-	802,609	570,000	2,600,000	3,515,000	1,175,000	4,085,000	4,577,609
Meyer Substation New Transformer	-	651,026	538,000	100,000	3,385,000	3,510,000	3,923,000	4,261,026
Stephentown Substation New Transformer	-	527,985	465,000	600,000	2,465,000	1,360,000	2,930,000	2,487,985
Richfield Springs Substation New Transformer	-	592,593	650,000	1,700,000	1,887,000	201,000	2,537,000	2,493,593
Tom Miller Rd New Substation	-	21,878	110,000	200,000	2,509,000	2,333,000	2,619,000	2,554,878
Coddington Add LTC Capability to 115/34.5kV Transformer	-	910,271	-	2,400,000	1,095,000	-	1,095,000	3,310,271
Big Tree Substation Capacitor Addition (In Northend Substation)	-	-	-	1,048,000	1,057,000	-	1,057,000	1,048,000
Harris Lake Source Upgrade	-	-	-	-	2,336,000	2,336,000	2,336,000	2,336,000
Auburn 345kV Source	-	-	3,600,000	1,000,000	3,000,000	2,582,000	6,600,000	3,582,000
Stolle – Dysinger	-	-	-	-	3,400,000	1,800,000	3,400,000	1,800,000
Substation Transformer		-	400,000	-	3,891,000	-	4,291,000	-
TDIRP (Substation Transformers)- Program Cost **	25,000,000	38,984,000	25,000,000	25,000,000	25,000,000	25,000,000	75,000,000	88,984,000
System Security	3,444,000	2,976,330	3,376,000	2,500,000	3,030,000	3,395,000	9,850,000	8,871,330
Mobile Radio Project (portion of electric 79.1%)	2,201,000	1,172,253	-	4,901,827	-	-	2,201,000	6,074,080
Electric GIS (Has been rolled into ECC Project)	4,756,000	1,826,786	1,113,000	7,682,733	-	3,355,000	5,869,000	12,864,519
Mill C Unit 1+2 draft Tube Replacement and Foundation Protection	1,000,000	614,905		-		-	1,000,000	614,905
TOTALS MAJOR PROJECTS	88,798,000	86,299,993	61,949,000	79,229,560	72,374,000	68,637,476	223,121,000	234,167,029
Other	58,381,000	93,028,007	65,425,000	72,838,405	68,680,000	47,722,559	192,486,000	213,588,971
TOTAL Appendix L	**147,179,000**	**179,328,000**	**127,374,000**	**152,067,965**	**141,054,000**	**116,360,035**	**415,607,000**	**447,756,000**
NERC Alert Project				**9,205,801**		**5,477,938**		
Total NYSEG Electric		**179,328,000**		**161,273,766**		**121,837,973**		

RG&E - Electric

Title	2011-L	2011 Actual	2012-L	2012 Plan	2013-L	2013 Plan	2011-2012-2013 Appendix L	2011 Actual - 2012 P -2013 P
Webster East New 12 kV Source	-	897,806	-	1,994,000	-	-	-	2,891,806
New Station 137	-	3,221,708	-	-	-		-	3,221,708
Station 424 New Line	-	3,615,855	-	-	-	-	-	3,615,855
Station 42 New Capacitors	-	589,829	-	948,000	-	-	-	1,537,829
New 115kV Transmission Line (Sta.13A to Sta.135)	-	1,329,902	-	-	-	-	-	1,329,902
Station 13A Replace Breakers	-	18,070	-	-	-		-	18,070
Stations 180 and 128 New Capacitors	-	582,264	-	1,936,000	-	-	-	2,518,264
Culver Rd Electric Facilities Relocation	-	320,662	-	-	-		-	320,662
Jefferson Ave Electric Facilities Relocation	-	2,311,171	-	100,000	-	-	-	2,411,171
U of R New 115-34kVSubstation (2012 W/T 50% contribution)*	3,760,000	-	-	4,464,223	-	2,139,000	3,760,000	6,603,223
Rochester SCADA NERC Compliance (Roller in ECC- 1X.01066)	1,000,000	-	-	-	-		1,000,000	-
Station 124 New SVC	8,000,000	8,477,402	19,923,000	8,019,000	-	3,876,000	27,923,000	20,372,402
New Downtown 115kV Source	10,000,000	5,613,089	23,875,000	11,392,985	-	6,375,000	33,875,000	23,381,074
New Bulk Power Station	2,000,000	1,831,601	10,000,000	7,000,000	80,000,000	44,670,000	92,000,000	53,501,601
Midtown Electric Facilities Relocation	980,000	15,440	-	500,000	-	500,000	980,000	1,015,440
Stations 127125 & 120 New34.5kV Capacitors	2,725,000	179,756	-	1,689,000	-	-	2,725,000	1,868,756
Station 168 (together with Station 121)	1,050,000	-		-			1,050,000	-
Stations 198 218 194 & 181 New34.5kV Capacitors	2,823,000	739,626	-	1,944,000	-	2,000	2,823,000	2,685,626
Stations 67 to 418 New115kV Transmission Line	1,282,000	12,676	7,128,000	3,287,450	-	9,849,000	8,410,000	13,149,126
Station 56 Additional 12kV Source	2,580,000	115,264	1,995,000	5,638,000	-	2,615,000	4,575,000	8,368,264
Stations 173 178 & 180 New34.5kV Capacitors	1,967,000	502,980	-	1,261,000	-	-	1,967,000	1,763,980
New 115kV/34.5kV Substation (Sta. 262)	-	94,670	920,000	3,320,000	8,336,000	5,836,000	9,256,000	9,250,670
Station 218 to Clyde New34.5kV Transmission Line	-	39,312	500,000	2,355,000	5,500,000	3,475,000	6,000,000	5,869,312
Station 121 New 115kV Capacitor (and Station 168)	-	669,811	-	864,500	1,217,000		1,217,000	1,534,311
Station 71 New 115kV Capacitor	-	-	-	-	1,458,000	1,458,000	1,458,000	1,458,000
TDIRP Program Costs**	15,000,000	20,802,293	15,000,000	15,000,000	15,000,000	15,000,000	45,000,000	50,802,293
Substation Transformers (Station 124 New PST)	16,460,000	5,658,658	13,773,000	12,254,350	1,333,000	-	31,566,000	17,913,008
Electric System Security	1,495,000	2,309,000	1,495,000	3,000,000	1,495,000	1,188,000	4,485,000	6,497,000
Electric GIS (Has been rolled into ECC Project)	2,368,000	1,211,000	556,000	5,121,800	-	2,237,000	2,924,000	8,569,800
Station 2 Runner Upgrade andGenerator Rewind	-	701,665	-	-	-		-	701,665
Station 5 Tunnel Relining***	37,100,000	20,291,332	14,400,000	21,100,000	-	1,000,000	51,500,000	42,391,332
Station 5 Wicket Gate Upgrades	4,000,000	4,572,627	1,750,000	3,300,000	-	-	5,750,000	7,872,627
TOTALS MAJOR PROJECTS	114,590,000	86,725,468	111,315,000	116,489,308	114,339,000	100,220,000	340,244,000	303,434,776
Other	21,907,000	65,288,532	27,223,000	65,348,751	63,014,000	33,832,941	112,144,000	164,470,224
TOTAL RG&E Electric	**136,497,000**	**152,014,000**	**138,538,000**	**181,838,059**	**177,353,000**	**134,052,941**	**452,388,000**	**467,905,000**

Attachment 3

Description of the Most Significant Electric Projects

NYSEG

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Agro-Farma, Inc. New 46 kV Transmission Line and Substation – 100% Reimbursable	12,859 -12,859	239 -239			
Total Costs: $ 16,427					
Description: Build a new 46 kV transmission line from County Line Substation to South Edmeston Substation. **Reason and benefits:** Agro-Farma seeks to increase production capability by 15 MVA and the existing NYSEG system can only support a 5 MVA increase. NYSEG will construct a new 46 kV transmission line paralleling existing Line 803 from County Line Sub to South Edmeston Substation. **Investment Reason:** Growth					
Year started: 2010 **Year in service:** 2014 **Current Status:** 30% Engineering & Design & Permits & Major Equipment Order underway, Detail Design & Construction are in bid process.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Auburn, Replace Wright Ave 115-35kV Transformer 1					3,200
Total Costs: $7,200					
Description: Replace the Wright Ave 115/34.5 kV 50 MVA Transformer #1 with a 115/34.5 kV 75 MVA LTC transformer. **Reason and benefits:** With a loss of Wright Ave 115/34.5 kV transformer #2, Wright Ave 115/34.5 kV transformer #1 becomes thermally overloaded in 2017. In 2017, the exposure is 25 hours/yr potentially affecting 700 customers and 2.8 MW of load. **Investment Reason:** System Capacity					
Year started: 2016 **Year in service:** >2016 **Current Status:** Not Started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Auburn 345 kV source (Appendix L project)	1,000	2,582	16,118	33,800	21,500
Total Costs: $75,000					
Description: • New 345/115 kV, substation in Auburn Division • Connect the new station to the Pannell – Clay 345 kV line • New 115 kV line from the new substation to State Street Substation **Reason and benefits:** The new station and line will strengthen the transmission system throughout the Auburn Division and reduce voltage flicker due to a large customer. It will also reduce NYSEG's dependence on the AES generating plants. **Investment Reason:** Power Quality and System Capacity					
Year started: 2012 **Year in service:** 2016 **Current Status:** Not started, to begin in 2012.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Biogas 34.5kV Collector System (Appendix L project)	1,550	1,500	3,250		
Total Costs: $ 7,800					
Description: Connect the dairy farms in the Cayuga County area that have bio-gas digesters to the NYSEG 34.5 kV transmission system. **Reason and benefits:** This region has been heavily penetrated with manure digesters, as the most cost effective use of the manure is to use it to generate electricity. The existing distribution systems are incapable of collecting this distributed generation's output. **Investment Reason:** Statutory					
Year started: 2011 **Year in service:** 2014 **Current Status:** 30% Engineering & Design underway.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Coopers Corners, Add 3rd 345/115 kV Transformer			2,100	3,000	6,800
Total Costs: $11,900					
Description: Install a third 345/115 kV, LTC transformer rated 120/160/200 MVA, at Coopers Corners Substation and operate it in parallel with the two existing 345/115 kV, 200 MVA, LTC transformers. **Reason and benefits:** During the 2012 summer peak period, loss of both Coopers Corners 345/115 kV transformers would result in widespread load shedding in Liberty. Up to 120 MW and 32,000 customers could be exposed to these potential problems for up to 8,760 hours in the 2012 summer. **Investment Reason:** Power Quality					
Year started: 2014 **Year in service:** 2016 **Current Status:** Not Started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
DOE- Stimulus Program- Capacitor Banks NYSEG(Ashley, Morgan, Ridge Rd., Mountaindale, Amawalk, Big Tree) - 50% Reimb (Appendix L project)	4,480 -2,270				
Total Costs: $ 4,480 (net of DOE funding)					
Description: Install 115 KV Capacitor Banks at the following stations: Ashley Rd., three-50 MVAR, Morgan Rd., two-25 MVAR, Ridge Rd., two-25 MVAR, Mountaindale, two-25 MVAR, Amawalk, two-30 MVAR and Big Tree, two-25 MVAR. **Reason and benefits:** Installation of the 115 KV shunt capacitor banks will lower system losses. The project will be funded in part by a grant from the US DOE via the NY ISO (50%). **Investment Reason:** Power Quality **Current Status:** 30% Engineering & Design complete, Major Equipment Order & Detail Design underway.					
Year started: 2011 **Year in service:** 2012					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
807 Line Conversion Project (Appendix L project)	3,000				
Total Costs: $8,405					
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. • 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. **Reason and benefits:** Increase capacity to meet load growth in the Brewster region to provide adequate voltage levels and thermal conditions. **Investment Reason:** System Capacity					
Year started: 2010 **Year in service:** 2012 **Current Status:** 30% Engineering & Design & Permits complete, Major Equipment Order & Detail Design underway.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
115 kV Line Klinekill – Valkin (Appendix L project)	2,360	2,958	5,183		

Total Costs: $11,014

Description: New 8.5-mile, 115 kV line from the Valkin (National Grid) substation (or another tap point on National Grid Trunk #15) to the Klinekill (NYSEG) substation.

- 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.

Reason and benefits: For line out 115kV Churchtown-Craryville, exposure to imminent voltage collapse and thermal overload is 4500 hrs/yr. This contingency will cause loss of 9,940 customers and 20 MW load. The new line will provide a 115 kV source to the service area.

Investment Reason: System Capacity

Current Status: 30% Engineering & Design complete, Permits & Detail Design underway.

Year started: 2010

Year in service: 2014

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Mechanicville Reinforcement Project, Construct New Luther Forest Substation	15,055				
Total Costs: $ 17,426 (90% included in category 1 and 10% in category 2)					
Description: Construct a new 115-34.5 kV substation with two 34.5 kV distribution circuits and two future 34.5 kV distribution circuit positions. **Reason and benefits:** Resolve loading issues with the existing Mulberry Substation by transferring load to a new 115-34.5 kV source at Luther Forest. Supply future needs of the Luther Forest Technology Campus and ancillary load. **Investment Reason:** System Capacity – 90%- Growth – 10%					
Year started: 2010 **Year in service:** 2013 (should this be 2012?) **Current Status:** 30% Engineering & Design completed, Permits & Major Equipment Order & Detail Design underway.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
NERC Alert Program - NYSEG	9,206	5,478			
Total Costs: $ 14,782					
Description: NYSEG is under a federal mandate to inspect all bulk power system transmission lines to determine if clearance violations exist. Areas found to have substandard clearances shall be corrected. **Reason and benefits:** To meet the federal mandate to correct substandard clearances. **Investment Reason:** Statutory					
Year started: 2011 **Year in service:** 2013 **Current Status:** 30% Engineering & Design & Major Equipment Order & Detail Design are underway.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
North Broadway, Add 2nd 115/34.5 kV Transformer					2,000
Total Costs: $7,200					
Description: Install a second 115/34.5 kV, 30/40/50/56 MVA, Non-LTC transformer at North Broadway Substation and operate it in parallel with the existing 115/34.5 kV, 30/40/50/56 MVA Non-LTC transformer. **Reason and benefits:** During the 2013 summer period, loss of one of the North Broadway 115/34.5 kV transformer would result in an overload of the Erie Street #2 bank. Up to 10 MW and 2,500 customers could be exposed to these potential problems for up to 75 hours in the 2012 summer **Investment Reason:** System Capacity					
Year started: 2016 **Year in service:** >2016 **Current Status:** Not Started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
River Road Substation - Replace transformer with non-LTC 10/12/14MVA			1,500	1,500	2,500
Total Costs: $5,500					
Description: Replace existing 3-2.5/3.125 MVA sub transformer with non-LTC 1-10/12/14 MVA with dual 4.8/12.5 KV windings. **Reason and benefits:** The non-diversified sum of the distribution circuits during Summer 2010 has been as high as 8.4MVA, loading the 10.5 MVA bank by 80%. **Investment Reason:** System Capacity					
Year started: 2014 **Year in service:** 2016 **Current Status:** Not Started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Sackett Lake Substation – Replace transformer with 7.5 MVA unit and convert distribution to 12.5 KV			95	6,205	
Total Costs: $6,300					
Description: Replace the substation transformer with a non-LTC 7.5/10 MVA unit with dual 4.8/12.5 KV windings. Install an additional 438A sub-regulator unit to circuit121 and an additional 668A sub-regulator unit to circuit 120. Convert circuits 020 and 121 from 4.8 KV to 12.5 KV. **Reason and benefits:** The Birchwood Estate served from circuit 121 is adding 70 units over three phases. Circuit 121 will not be able to support the third phase load addition at 4.8 KV. The 121 circuit will need to be converted to 12.5 KV. **Investment Reason:** System Capacity					
Year started: 2014 **Year in service:** 2015 **Current Status:** Not started, to begin in 2014.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
South Perry, Add New 230/115 kV Transformer (Appendix L project)	5,100	5,206	5,596		
Total Costs: $16,494					
Description: New 230/115 kV, 200 MVA, Load Tap Changing (LTC) transformer at South Perry substation. **Reason and benefits:** The South Perry and Genesee Region Station 158 serve 90MW of load and over 17,000 customers. During high load periods, loss of one or the two 115kV lines that supplies that area will cause the other line to overload beyond its LTE rating. **Investment Reason:** System Capacity					
Year started: 2010 **Year in service:** 2014 **Current Status:** 30% Engineering & Design underway, Major Equipment ordered					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Stillwater Substation - Replace transformer bank with 7.5 MVA and convert distribution to 12.5 KV			95	5,405	
Total Costs: $5,500					
Description: Replace existing three-833 KVA transformer with non-LTC 7.5 MVA unit with dual 4.8/12.5 KV windings. Install an additional 250 KVA regulator unit to existing two-250 KVA units. Convert approximately two miles of distribution to 12.5 KV from substation to Colonial Drive **Reason and benefits:** Based on 2010 summer peak, the existing 2.5 MVA sub bank is loaded to 101% of its PLBN rating. In addition, the load of the 215 circuit exceeds the largest size 219 amp line regulators at 4.8 KV. Over past five years, the annual load growth load has averaged 5%. **Investment Reason:** System Capacity					
Year started: 2014 **Year in service:** 2015 **Current Status:** Not started, to begin in 2014.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Stolle Substation-Dysinger (Appendix L project)	0	1,800	3,200	10,000	20,000
Total Costs: $100,800					
Description: • 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. **Reason and benefits:** Increase the voltage stability of the 345 kV transmission system and allow for increased power transfers across New York State. **Investment Reason:** System Capacity and Power Quality					
Year started: 2013 **Year in service:** 2018 **Current Status:** Not started, to begin in 2013.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Walden 69kV Transmission Line Upgrade (Appendix L project)	2,000	2,989			
Total Costs: $5,339					
Description: Rebuild .86 miles of single pole double circuit 69 kV transmission with two separate single circuit overhead lines. Approximately 1,600 feet of the new lines will be underground construction. **Reason and benefits:** Central Hudson is upgrading the 69 kV transmission due to system growth in the Central Hudson, Orange and Rockland, and NYSEG service territories. **Investment Reason:** System Capacity					
Year started: 2010 **Year in service:** 2013 **Current Status:** 30% Engineering & Design & Permits completed, Major Equipment Order & Detail Design & Construction Bid underway.					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Westover Substation New 115 kV Transformer & Binghamton Division Capacitors (Appendix L project)	1,900	4,273			

Total Costs: $6,571

Description:

- New Westover (Goudey) 115/34.5 kV, 30/40/50 MVA, LTC transformer bank.
- Install 102 MVAR, two-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.

Reason and benefits: Sub-marginal voltages appear in the areas served from the Morgan, Langdon, Fuller Hollow, Jones and Conklin substations and the LTE rating is exceeded at the Westover #7 115/13.8 kV and 34.5/13.8 kV transformers upon the simultaneous loss of the Oakdale transformers.

Investment Reason: System Capacity and Power Quality

Year started: 2010

Year in service: 2013

Current Status: 30% Engineering & Design & Major Equipment order underway.

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Wood Street, Add 3rd 345/115 kV Transformer			700	3,506	3,000
Total Costs: $12,206					
Description: Install a third 345/115 kV, 150/200/250/280 MVA, LTC transformer at Wood Street Substation and operate it in parallel with the two existing 345/115 kV, 150/200/250/280 MVA LTC transformers. **Reason and benefits:** During the 2012 summer period, an outage of one Wood Street 345/115 kV transformer with the other one already out would result in low voltage in Brewster. Up to 200 MW and 35,000 customers could be exposed to these potential problems for up to 5,100hours in 2012. **Investment Reason:** System Capacity					
Year started: 2014 **Year in service:** >2016 **Current Status:** Not Started					

RG&E

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Line 926 – Upgrade 115 kV Line	1,000	1,089	3,121		
Total Costs: $5,408					
Description: Reconductor the 2.5 mile section of the 926 line from Station 67 to Station 37 to 480 MVA. **Reasons and Benefits:** For loss of 115kV Circuit 916 (S82-S48), the 115 kV Circuit 926 (S67-S37) will cause thermally overload. The exposure is 40 hours per year, affecting 3,300 customers and 40 MW of load. **Investment Reason:** System Capacity					
Year started: 2011 **Year in service:** 2014 **Current Status:** Engineering/Permitting					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
New Bulk Power Station 255 (Rochester Area Reliability Program) (Appendix L)	7,000	45,000	70,000	73,000	55,300

Total Costs: $252,717

Description:

- 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 345 kV 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.

Reason and benefits: : For loss of Ginna and one 345/115 kV transformer, the remaining transformer capacity will be insufficient due to load growth. Station 255 will provide needed transformer capacity. Two new 115kV sources will help with local voltage and flow problems.

Investment Reason: System Capacity

Year started: 2010

Year in service: 2016

Current Status Engineering/Permitting (Article VII application filed September 2011)

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
New Downtown 115 kV Source (Appendix L)	11,393	6,375	5,016		

Total Costs: $29,982

Description:

- 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 400 MVA.
- Add a phase-shifting transformer on the 920 line at Station 42.
- Relocate 11 kV phase-shifting transformer from Station 23 to new Station 137.

Reason and benefits: New 34.5 kV feeds will reduce load on 34.5 kV circuits from Station 33 to Station 137 and off-load Station 33 transformers. PST at Station 42 will provide controllable third source to Station 42. The exposure to this contingency is 50 hrs/yr, affecting 12,440 customers and 60 MW of load.

Investment Reason: System Capacity

Year started: 2010

Year in service: 2014

Current Status: Engineering

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
New 115/34.5 kV Substation, 262 (Appendix L)	3,920	5,836			
Total Costs: $ 9,256					
Description: • New 115/34.5 kV, 57 MVA substation, one transformer of 57 MVA 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 **Reasons and Benefits:** Loss of circuit 741 (S33-S26) or loss of 34.5/11.5kV transformer at Station 26 results in excessive overload of 11.5 kV circuit 629. Exposure is 175 hours per year, potentially affecting 700 customers and 38 MW of load. **Investment Reason:** System Capacity					
Year started: 2012 **Year in service:** 2013 **Current Status:** Engineering					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Rochester - Add 35kV Circuit to Offload Circuit 761					2,000
Total Costs: $8,900					
Description: Build a new 34.5 kV parallel circuit to offload Circuit 761. **Reasons and Benefits:** Loss of 34.5 kV circuit 761 will cause thermal overload on the 34.5 kV circuit 775 upon transfer of load. The exposure is 130 hours per year, affecting 1,617 customers and 16 MW of load. **Investment Reason:** System Capacity					
Year started: 2016 **Year in service:** 2018 **Current Status:** Not started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Rochester – Add 35 kV Circuit to offload Circuit 701					5,000
Total Costs: $27,700					
Description: Build a new 34.5 kV parallel circuit to offload Circuit 701. **Reasons and Benefits:** Loss of 34.5 kV circuit 701 will cause thermal overload on the 34.5 kV circuits 739, 764, and 765 upon transfer of load. The exposure is 2,860 hours per year, affecting 3,105 customers and 30 MW of load. **Investment Reason:** System Capacity					
Year started: 2016 **Year in service:** 2019 **Current Status:** Not started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Rochester - Add 35kV Circuit to Offload Circuit 740			2,000	3,000	2,300
Total Costs: $7,300					
Description: Build a new 34.5 kV parallel circuit to offload Circuit 740. **Reasons and Benefits:** Loss of 34.5 kV circuit 740 will cause thermal overload on the 34.5 kV circuit 739 upon transfer of load. The exposure is 320 hours per year, affecting 8,967 customers and 35 MW of load. **Investment Reason:** System Capacity					
Year started: 2014 **Year in service:** 2016 **Current Status:** Not started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Rochester - Add 35 kV Circuit to Offload Circuit 765			2,700	3,000	7,000
Total Costs: $12,700					
Description: Build a new 34.5 kV parallel circuit to offload Circuit 765. **Reasons and Benefits:** Under system normal conditions and peak load, the 34.5 kV circuit 765 will experience thermal overload. The exposure is 50 hours per year, affecting 5,030 customers and 22 MW of load. **Investment Reason:** System Capacity					
Year started: 2014 **Year in service:** 2016 **Current Status:** Not started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Rochester - Add 35 kV Circuit to Offload Circuit 775					2,000
Total Costs: $12,400					
Description: Build a new 34.5kV parallel circuit to offload Circuit 775. **Reasons and Benefits:** Loss of 34.5 kV circuit 775 will cause thermal overload on 34.5 kV circuit 761 upon load transfer. The exposure is 130 hours per year, affecting 2,847 customers and 29 MW of load. **Investment Reason:** System Capacity					
Year started: 2016 **Year in service:** 2019 **Current Status:** Not started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Rochester - Add 35 kV Circuit to Offload Circuit 778					2,000
Total Costs: $19,200					
Description: Build a new 34.5 kV parallel circuit to offload Circuit 778. **Reasons and Benefits:** Loss of 34.5 kV circuit 778 will cause thermal overload on 34.5 kV circuits 726, 745, and 772 upon load transfer. The exposure is 170 hours per year, affecting 12,451 customers and 32 MW of load. **Investment Reason:** System Capacity					
Year started: 2016 **Year in service:** 2019 **Current Status:** Not started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Sectionalize and Reconductor 115 kV Circuit 917 (Station 7 to Station 418)			1,870	1,830	
Total Costs: $3,700					
Description: Sectionalize Circuit 917. Use automatic motor operators at Station 93, Station 69 and Station 113. Use 115 kV circuit breakers at Station 70. **Reasons and Benefits:** Sectionalization of circuit 917 will allow automatic isolation of a persistent fault on any line section, and quick restoration of electric service to 34,000 customers and 115 MW of load. Updating will prevent thermal overload on remaining sections. **Investment Reason:** System Capacity					
Year started: 2014 **Year in service:** 2017 **Current Status:** Not Started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 23 Transformer and 11 kV Switchgear	2,750	1,133	3,616		
Total Costs: $9,462					
Description: Add 11 kV GIS and two 115/11 kV transformers to Station 23. Add double bus configuration to the 115 kV GIS. **Reasons and Benefits:** Transformer replacements are due to aging infrastructure. 1T-2T are leaking and reaching end of life. Two of the four bus sections of 11 kV are overdutied, need to be upgraded for proper fault current ratings. Bus 3-4 today at 96% of rated interrupt capacity. **Investment Reason:** System Capacity					
Year started: 2011 **Year in service:** 2014 **Current Status:** Engineering					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 48 - Replace two 115-34.5 kV Transformers					$2,600
Total Costs: $10,000					
Description: Replace the two 115/34.5 kV transformers at Station 48 with 100 MVA LTC units. **Reasons and Benefits:** For loss of one of the two 115/34.5 kV transformers, the remaining 115/34.5 kV transformer will be thermally overloaded. The exposure is 39 hours per year, affecting 465 customers and 20 MW of load. **Investment Reason:** System Capacity					
Year started: 2016 **Year in service:** 2019 **Current Status:** Not started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 56 Additional 12 kV Source (Appendix L)	5,638	2,615	377		
Total Costs: $9,071					
Description: Install a second 115/12 kV transformer with provision for three new circuit positions. **Reasons and Benefits:** This project will improve reliability to the entire area while allowing further room for growth. **Investment Reason:** System Capacity					
Year started: 2011 **Year in service:** 2014 **Current Status:** Engineering/Permitting					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 51 transformer/facilities upgrade and secondary source addition			7,200	5,300	
Total Costs: $12,500					
Description: Replace existing station transformer with new 10 MVA 11 kV to 4 kV LTC type and upgrade existing facilities as required. Add second 10 MVA, LTC type 34.5 kV to 4 kV transformer and extend circuit 773 from a location at or near Station 88. **Reasons and Benefits:** To improve reliability. **Investment Reason:** System Capacity					
Year started: 2014 **Year in service:** 2015 **Current Status:** New Project					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 67 to 418 New 115 kV Transmission Line (Appendix L)	3,287	9,849	713		
Total Costs: $ 13,904					
Description: New six-mile, 115 kV line from Station 67 to Station 418 **Reasons and Benefits:** Loss of Circuit 910 (S67-S418), causes sub marginal voltages and thermal overload on Circuit 917 (S7-S418). The exposure is 300 hours per year, affecting 39,000 customers and 160 MW of load. **Investment Reason:** Power Quality					
Year started: 2010 **Year in service:** 2013 **Current Status:** Engineering/Permitting					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 80 Replace 1T and 3 T Transformers	1,943	484			
Total Costs: $7,295					
Description: Replace 1T & 3T transformers with new 345/115 kV 400 MVA units; replace six 115 kV disconnect switches; replace two 115 kV circuit breakers; replace one section of 115 kV bus. **Reasons and Benefits:** This will alleviate known maintenance issues with the existing 50 year old units. **Investment Reason:** System Capacity					
Year started: 2010 **Year in service:** 2014 (should this be 2013?) **Current Status:** Engineering					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 89, Replace #2 Transformer					2,000
Total Costs: $6,800					
Description: Replace 34/4 kV transformer with a 34/12 kV unit. Convert the two existing 4 kV circuits to 12 kV. **Reasons and Benefits:** The service area of this new 12 kV source can be extended northward where the 12 kV capacity will benefit an adjacent town that is experiencing significant new residential and commercial growth with limited 4 kV supply capacity. **Investment Reason:** System Capacity					
Year started: 2016 **Year in service:** 2018 **Current Status:** Not started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 124 New Phase Shifter Transformer (Appendix L)	12,254				
Total Costs: $32,546					
Description: Add a New Phase Shifter Transformer **Reasons and Benefits:** For loss of either circuit 911 or circuit 932, the remaining circuit will get thermally overloaded. With a phase shifting transformer on each line, the flow on the remaining line can be regulated to stay within cable ratings. Exposure is 25 hrs/yr, affecting 4,800 customers and 23 MW of load. **Investment Reason:** System Capacity					
Year started: 2010 **Year in service:** 2012 **Current Status:** Permitting/Design					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 124 New Static Var Compensator (Appendix L)	8,019	3,876			
Total Costs: $20,024					
Description: Add a +/-200 MVAR Static VAR Compensator (SVC) at the 115 kV bus of Station 124. **Reasons and Benefits:** Dynamic voltage support is required for voltage transient stability for large contingencies which include the tripping of Ginna. The exposure is 25 hours per year, affecting 9,650 customers and 47 MW of load. **Investment Reason:** System Capacity					
Year started: 2009 **Year in service:** 2013 **Current Status:** Engineering/Permitting					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 149 transformer/facilities upgrade and secondary source addition				500	2,500
Total Costs: $8,700					
Description: Replace existing station transformer with new. Add second 10 MVA, LTC type transformer. Upgrade existing distribution circuits from 4 kV to 12 kV. Reconductor primary feeder for ratings increase. **Reasons and Benefits:** Upgrade will unburden existing overloaded station transformer, accommodate anticipated area load growth, enhance other station circuit ties with 12 kV upgrade, and facilitate better secondary source contingency. **Investment Reason:** System Capacity					
Year started: 2015 **Year in service:** 2018 **Current Status:** Not started					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 168 Service Area Reinforcement	2,000	547	11,142		
Total Costs: $13,773					
Description: Sectionalize National Grid 115 kV Trunks #2 and #4 at Station 168 with 115 kV circuit breakers. Install fixed and switched voltage controlled capacitors along 34.5 kV circuits presently served from Station 168. **Reasons and Benefits:** In the event of a contingency under summer peak or winter peak load conditions, the remaining 115/34.5 kV transformer at Station 168 will be loaded above its thermal capacities **Investment Reason:** System Capacity					
Year started: 2012 **Year in service:** 2014 **Current Status:** Begin 2012					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Station 218 to Clyde Station - New 34.5 Transmission Line (Appendix L)	2,355	3,175			
Total Costs: $ 5,940					
Description: New eight-mile, 34.5 kV line from the Clyde Station to Station 218 **Reasons and Benefits:** The new 34.5 kV line will relieve the existing 34.5 kV line (from the Clyde Station to Station 218) of thermal stress through parallel operation. **Investment Reason:** System Capacity					
Year started: 2011 **Year in service:** 2013 **Current Status:** Engineering					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
University of Rochester (reimbursable in part)	8,928 -4,464	2,139	8,069		
Total Costs: $21,276					
Description This is a new 115-34 kV substation being built based on University of Rochester need. **Reasons and Benefits:** This is a new 115-34.5kV Substation to be built to serve additional load and offload Station 33. This project is partially reimbursable by the customer. **Investment Reason:** Growth					
Year started: 2011 **Year in service:** 2014 **Current Status:** In process					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Webster East New 12 kV Source (Appendix L)	1,994				
Total Costs: $5,866					
Description: New 12 kV source in eastern area of Town of Webster. Install a 34/12 kV, 22 MVA transformer at Station 424. Create three new 12 kV circuit positions off the bus. 12 kV bus established after 115 kV expansion of Station 424 then conversions of three existing 4 kV circuits. **Reasons and Benefits:** Provide the 12 kV source for use in converting the remaining 4 kV circuits to 12 kV, thereby alleviating loading and low voltage problems as well as provide the capacity for supplying new load growth. **Investment Reason:** System Capacity					
Year started: 2010 **Year in service:** 2012 **Current Status:** Construction					

Attachment 4

List of Electric Projects Included in Category 1

Network Reinforcement

	2012	2013	2014	2015	2016	Division
NYSEG- Area Reinforcement						
Klinekill - Valkin New 115 kV Transmission Line	2,360	2,958	5,183	-	-	Mechanicville
Perry Center Area Install New 34.5kV Substation	109	2,342	-	-	-	Hornell
Tom Miller Rd New Substation	200	2,333	-	-	-	Plattsburgh
Mechanicville Reinforcement Project, Construct New Luther Forest Substation (90% System Capacity-10% Growth)	13,550	-	-	-	-	Mechanicville
Auburn 345kV Source	1,000	2,582	16,118	33,800	21,500	Auburn
Stolle - Dysinger, Construct 345kV Transmission Line and Switching Station	-	1,800	3,200	10,000	20,000	Auburn
TOTAL -NYSEG- Area Reinforcement	**17,219**	**12,015**	**24,501**	**43,800**	**41,500**	
NYSEG-New Line						
601 Line, replace existing facilities	-	-	500	500	-	Mechanicville
Auburn, Add 35kV Line Segment (Grant Avenue Tap - State St)	-	-	-	-	1,300	Auburn
Auburn, Add 35kV Line Segment (State St - Miller Tap)	-	-	-	-	1,000	Auburn
Biogas 34.5kV Collector System	1,550	1,500	3,250	-	-	Auburn
Other projects <$1M	150	70	1,025	275	225	
TOTAL NYSEG-New Line	**1,700**	**1,570**	**4,775**	**775**	**2,525**	
NYSEG-Improvements in line						
Line #807, Convert to 115kV Operation	3,000	-	-	-	-	Brewster
Walden 69kV Transmission Line Upgrade	2,000	2,989	-	-	-	Liberty
Line 526, Rebuild Coddington-South Hill 34.5 kV Line	-	-	-	900	-	Ithaca
Line 810, Rebuild Carmel-Adams Corners 46 kV Line	-	-	900	-	-	Brewster
Circuit 426 - Upgrade Conductor - Binghamton	1,374	293	-	-	-	Binghamton

	2012	2013	2014	2015	2016	Division
Other projects <$1M	75	450	4,814	450	300	
TOTAL NYSEG-Improvements in line	**6,449**	**3,732**	**5,714**	**1,350**	**300**	
NYSEG-Improvements in substation						
Cobble Hill, Add 2nd 115/34.5 kV Transformer	-	-	1,650	2,000	-	Lancaster
Coddington Add LTC Capability to 115/34.5kV Transformer	2,400	-	-	-	-	Ithaca
Colliers, Replace existing 115/46 kV Non-LTC Transformers with new LTC Transformers	-	-	2,000	2,750	-	Oneonta
Coopers Corners, Add 2nd 115/34.5 kV Transformer	-	-	-	415	1,810	Liberty
Coopers Corners, Add 3rd 345/115 kV Transformer	-	-	2,100	3,000	6,800	Liberty
DOE- Stimulus Program- Capacitor Banks NYSEG(Ashley, Morgan, Ridge Rd., Mountaindale, Amawalk, Big Tree) - 50% Reimb	5,540	-	-	-	-	Several
	(2,770)	-	-	-	-	
Eelpot New Transformer	2,600	1,175	-	-	-	Hornell
Erie Street, Add 3rd 115/34.5 kV Transformer	-	-	-	-	1,027	Lancaster
Flat Street Substation New Transformer	4,300	-	-	-	-	Geneva
Fraser, Add 2nd 345/115 kV Transformer	-	-	700	2,000	2,200	Oneonta
Glenwood - Replace Substation Transformers	1,678	-	-	-	-	Binghamton
Harris Lake Source Upgrade	-	2,336	-	-	-	Plattsburgh
Meyer Substation New Transformer	100	3,510	-	-	-	Hornell
Milford CKT 258 - Install Substation in Location to Improve Reliabiltiy	-	-	-	2,500	-	Oneonta
North Broadway, Add 2nd 115/34.5 kV Transformer	-	-	-	-	2,000	Lancaster
NYSEG, Install PMUs (DOE Project) - 50% Reimbursable	1,682	-	-	-	-	Several
	(841)	-	-	-	-	
Plattsburgh, Lyon Mt, Upgrade Transformer-Regulator	-	-	750	1,000	-	Plattsburgh

	2012	2013	2014	2015	2016	Division
Richfield Springs Substation New Transformer	1,700	201	-	-	-	Oneonta
River Rd Sub - Replace sub transformer wth non-LTC 10/12/14MVA	-	-	1,500	1,500	2,500	Oneonta
South Perry New 115kV Transformer	1,000	1,000	1,232	-	-	Hornell
South Perry New 230kV Transformer	5,100	5,206	5,596	-	-	Hornell
South Perry, Replace 115/34.5 kV Transformer	-	-	1,100	2,321	-	Hornell
Stephentown Substation New Transformer	600	1,360	-	-	-	Mechanicville
Van Buren Reliability Improvement - Geneva	-	-	1,000	1,200	1,200	Geneva
Watercure Rd. - 2nd 345 kV Transformer	400	778	8,746	-	-	Elmira
West Davenport Sub - Replace sub transformer with non-LTC 7.5/10.5MVA unit.	-	-	1,050	1,400	-	Oneonta
Westover Substation New 115kV Transformer and Binghamton Division Capacitors	1,520	3,418	-	-	-	Binghamton
Willet Substation New Transformer	2,800	171	-	-	-	Binghamton
Windham Substation 115 KV Capacitor Bank Addition	101	893	-	-	-	Oneonta
Wood Street, Add 3rd 345/115 kV Transformer	-	-	700	3,506	3,000	Brewster
Amenia 2nd Bank & 13.2 KV Conversion - Brewster	-	-	-	1,000	1,200	Brester
Auburn, Replace State St 115-35kV Transformer 1	-	-	-	-	2,000	Auburn
Auburn, Replace Wright Ave 115-35kV Transformer 1	-	-	-	-	3,200	Auburn
Other projects <$1M	2,108	855	2,258	703	506	
TOTAL NYSEG-Improvements in substation	**30,018**	**20,903**	**30,382**	**25,295**	**27,443**	
TOTAL NYSEG	55,386	38,220	65,372	71,220	71,768	
RG&E- Area Reinforcement						
Rochester Area Reliability Project (New Bulk Power Sta - 345kV Source and 115kV Transmission Lines)	7,000	44,670	70,000	73,000	55,330	Rochester
Station 262- New 115kV/34.5kV Substation	3,320	5,836	-	-	-	Rochester
Station 168 Service Area Reinforcement	2,000	547	11,142	-	-	Canandaigua
New Downtown 115kV Source	11,393	6,375	5,016	-	-	Rochester
TOTAL RG&E- Area Reinforcement	**23,713**	**57,428**	**86,158**	**73,000**	**55,330**	

	2012	2013	2014	2015	2016	Division
RG&E-New Line						
Station 218 to Clyde New 34.5kV Transmission Line	2,355	3,475	-	-	-	Sodus
Stations 67 to 418 New 115kV Transmission Line	3,287	9,849	713	-	-	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 701	-	-	-	-	5,000	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 739	-	-	1,800	2,000	1,400	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 740	-	-	2,000	3,000	2,300	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 761	-	-	-	-	2,000	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 765	-	-	2,700	3,000	7,000	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 775	-	-	-	-	2,000	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 778	-	-	-	-	2,000	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 783	-	-	500	1,700	2,500	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 784	-	-	3,000	-	-	Rochester
Rochester - Add 35kV Circuit - Offload Circuit 772	-	-	460	-	-	Rochester
TOTAL RG&E-New Line	**5,642**	**13,324**	**11,173**	**9,700**	**24,200**	
RG&E-Improvements in line						Rochester
Line 926 - Upgrade 115kV Line - Rochester	1,000	1,089	3,121	-	-	Rochester
Rochester - Sectionalize and Reconductor 115kV Circuit 917 (S7 - S418)	-	-	1,870	1,830	-	Rochester
Line 735,Upgrade 34.5kV Cable, Rochester	-	-	2,000	2,000	1,900	Rochester
Rochester - Upgrade 11kV Circuit 616 (Station 3 - Station 18)	-	-	1,400	-	-	Rochester
Rochester - Upgrade 35kV Circuit 726 (Station 42 - Station 43)	-	-	500	800	2,000	Rochester
Rochester - Upgrade 11kV Circuit 542 (Station 26 - Station 6)	-	-	500	600	-	Rochester
Other projects <$1M	300	-	900	500	400	
TOTAL RG&E-Improvements in line	**1,300**	**1,089**	**10,291**	**5,730**	**4,300**	
RG&E-Improvements in substation						
New Capacitors - DOE Stations 121 & 168	1,729	-	-	-	-	Rochester

	2012	2013	2014	2015	2016	Division
	(865)	-	-	-	-	
Mobile Switchgear Unit 11.5kV	-	-	1,190	-	-	
Mobile Switchgear Unit 34.5kV	-	-	1,135	-	-	
Rochester - Station 204, Add 115-35kV 75 MVA LTC Transformer	-	-	500	700	1,600	
Station 121, Add 2nd 115/34.5 kV Transformer	-	-	-	833	1,000	Rochester
Station 124 New Phase Shifter Transformer	12,254	-	-	-	-	Rochester
Station 124 New SVC	8,019	3,876	-	-	-	Rochester
Station 136, Add 2nd Transformer	-	-	1,000	2,526	-	Rochester
Station 14 transformer and sub-transmission upgrade	-	-	1,600	1,600	3,600	Rochester
Station 149 transformer/facilities upgrade and secondary source addition	-	-	-	500	2,500	Rochester
Station 158, Replace Existing 115/34.5 kV Transformers with a 50 MVA LTCs	-	-	-	1,600	1,000	Rochester
Station 16 transformer and sub-transmission upgrade	-	-	-	-	1,800	Rochester
Station 178, Replace the existing 115/34.5 kV transformer with a new 20/26/33/37 MVA LTC	-	-	1,650	1,100	-	Rochester
Station 210 transformer replacement and 4kV circuit conversion to 12kV	-	-	975	1,600	-	Rochester
Station 23 Transformer & 11kV Switchgear	550	227	723	-	-	
Station 42 - Replace 115-11kV 4T Transformer	1,905	-	-	-	-	
Station 42 - Replace 34.5-11.5kV 3T Transformer - New 12T	1,660	-	-	-	-	
Station 48 - Replace (2) 115-34.5kV Transformers - Rochester	-	-	-	-	2,600	
Station 49 - Replace 34.5-11.5kV Transformer	991	300	691	-	-	
Station 50 transformer and sub-transmission upgrade	-	-	-	-	1,000	Rochester
Station 51 transformer/facilities upgrade and secondary source addition	-	-	7,200	5,300	-	Rochester
Station 56 - Replace (2) 115-34.5kV transformer	2,370	-	-	-	-	Rochester

	2012	2013	2014	2015	2016	Division
Station 56 Additional 12kV Source	5,638	2,615	377	-	-	Rochester
Station 71 New 115kV Capacitor	-	1,458	-	-	-	Rochester
Station 80 - Replace 1T and 3T Transformers	971	242	-	-	-	Rochester
Station 89, Replace #2 Transformer	-	-	-	-	2,000	Rochester
Station 95 - Add 2nd 34.5-11.5kV Transformer - Rochester	-	-	1,289	-	-	Rochester
Stations 180 & 128, Add 115 kV Capacitors	1,936	-	-	-	-	Rochester
Station 67 - Add 115-34.5kV Transformer - Rochester	-	-	-	-	1,450	Rochester
Webster East New 12 kV Source	1,994	-	-	-	-	
Other projects <$1M	6,152	702	740	440	2,494	
TOTAL RG&E-Improvements in substation	**45,305**	**9,419**	**19,070**	**16,199**	**21,044**	
TOTAL RG&E	75,960	81,260	126,692	104,629	104,874	
TOTAL- Category 1 - Electric	**131,346**	**119,480**	**192,064**	**175,849**	**176,642**	

Attachment 5

List of Electric Projects Included in Category 2

Customer and Statutory Requirement

	2012	2013	2014	2015	2016
Growth					
Agro-Farma, Inc. New 46kV Transmission Line & Substation - 100% Reimbursable	12,859	-	-	-	-
	(12,859)	-	-	-	-
Auburn, Reconductor 35kV Line 525 (Centerport - State St)	-	-	-	-	1,600
Bellayre Ski Center Install new 34.5kv distribution feed for upgrade at Ski Center (contribution)	85	394	3,021	-	-
Deposit #1 Sub - Add 2nd 12.5KV circuit and convert distribution to 12.5KV - (100% Reimburseable)	1,140	-	-	-	-
	(1,140)	-	-	-	-
Dingle Ridge 2nd Bank & 13.2 KV Conversion - Brewster	-	-	-	1,000	1,000
Grand Gorge #1 Sub - Replace with transformer with 12/16/20MVA	-	-	300	2,500	2,800
Kent 2nd 13.2 KV Ckt and Bank Upgrade - Brewster	-	-	-	1,000	1,000
Mechanicville Reinforcement Project, Construct New Luther Forest Substation	1,506	-	-	-	-
Other projects <$1M	510	-	2,518	1,600	725
NYSEG Growth	**2,100**	**394**	**5,839**	**6,100**	**7,125**
U of R New 115-34kV Substation 251-50% reimbursable	8,928	2,139	8,069	-	-
U of R New 115-34kV Substation 251-50% reimbursable	(4,464)	-	-	-	-
RG&E Growth	**4,464**	**2,139**	**8,069**	**-**	**-**
TOTAL Growth	**6,565**	**2,533**	**13,908**	**6,100**	**7,125**
Statutory					
Clark Street MGP Remediation - Auburn	-	-	1,000	-	-
Transit St Substation MGP Remediation	1,660	259	14,418	-	-
NYSEG Security Projects	2,500	3,395	1,000	-	-
Other projects <$1M	452	550	371	125	80
NYSEG Statutory	**4,612**	**4,204**	**16,789**	**125**	**80**

	2012	2013	2014	2015	2016
East Ridge Rd.Hwy, Relocate Electric Facilities	3,388	-	-	-	-
Lake Ave (Merrill St to 600' S of Burley St). Relocate Electric Facilities	2,750	-	-	-	-
Long Pond Rd. Hwy Relocate Electric Facilities	875	-	-	-	-
Midtown Relocate Electric Facilities	500	500	-	-	-
Relocate Electric Facilities	-	-	3,500	3,500	3,500
RG&E Security Projects	3,000	1,188	-	-	-
Other projects <$1M	6,090	795	-	-	-
RG&E Statutory	**16,603**	**2,483**	**3,500**	**3,500**	**3,500**
TOTAL Statutory	**21,215**	**6,687**	**20,289**	**3,625**	**3,580**
NERC Alert Program - NYSEG	**9,206**	**5,478**	**-**	**-**	**-**
TOTAL Category 2- Electric	**36,986**	**14,698**	**34,197**	**9,725**	**10,705**

Attachment 6

List of Electric Projects and Programs Included in Category 3

Modernization & Renovation

	2012	2013	2014	2015	2016
620 Line Part 1, rebuild electric facilities, Brainard Tap to W. Lebanon	-	-	300	1,100	-
620 Line Part 2, rebuild electric facilities, Canaan to W. Lebanon Rebuild	-	-	-	-	1,700
871 / 872 Phase 1: Rebuild electric facilities, Route 3 to High Falls	-	-	1,700	-	-
878 Line, Rebuild electric facilities - Phase 1	-	-	2,300	-	-
878 Line, Rebuild electric facilities - Phase 2	-	-	-	-	2,850
879 Line, Rebuild electric facilities, South Junction to Ausable Town Line	-	-	-	-	1,700
880 Line, Rebuild electric facilities	-	-	1,000	2,400	-
884 Line, Rebuild electric facilities, Norton to Jay Rebuild, 10 miles, 46kv (within the APA)	-	-	250	2,750	-
887 Line, rebuild electric facilities	-	-	-	-	1,700
Dryden Bank #1 Transformer Replacement	-	-	750	750	-
Earlville Bank #1 Transformer Replacement	-	-	750	750	-
Harford Mills Bank #1 Transformer Replacement	-	-	500	500	-
Mechanicville, Circuit 620 (BRAINARD TAP - WEST LEBANON Sw. Sta.), Install Static and Ground Wires	-	-	400	1,000	-
New Mobile Substation (#22)	800	-	-	-	-
Tuttle Place Bank #1 Transformer Replacement	-	-	750	750	-
VanBuren Bank #2 Transformer Replacement	-	-	1,050	1,050	-
Wehrle Dr, Replace Cable, Terminations & Switch Gear	1,000	-	-	-	-
Other projects (<$1M)	200	-	2,225	1,575	-
NYSEG Projects	2,000	-	11,975	12,625	7,950
Fiber Optic Cable Replacement Between Stations 42, 124, 204	-	-	1,038	-	-
Station 23 Transformer & 11kV Switchgear	2,200	906	2,894	-	-
Station 80 - Replace 1T and 3T Transformers	971	242	-	-	-
RG&E Line 727 -35 kV Gas filled cable	1,530	-	-	-	-
RG&E Projects	4,701	1,148	3,932	-	-
TOTAL Projects	**6,701**	**1,148**	**15,907**	**12,625**	**7,950**

	2012	2013	2014	2015	2016
Division Projects (Distribution, Transmission, Substation)	23,000	23,000	26,000	26,000	26,000
Substation Modernization	1,250	1,250	7,500	7,500	7,500
TDIRP- NYSEG Breaker Replacement Program	2,050	3,690	3,782	3,877	3,974
TDIRP NYSEG - Other	8,927	7,410	5,218	2,623	326
TDIRP- NYSEG Sectionalizer Replacement	1,500	1,000	1,000	1,000	900
TDIRP- NYSEG, Distribution Poles Replacement	11,600	12,100	14,200	16,700	19,000
TDIRP- NYSEG, Substation Battery Replacement	923	800	800	800	800
NYSEG Programs	49,250	49,250	58,500	58,500	58,500
RG&E Pilot Wire Replacement Program	2,600	1,386	-	-	-
Division Projects (Distribution, Transmission, Substation)	13,000	13,000	18,000	18,000	18,000
Cablecure	1,500	1,045	1,955	1,500	2,000
Substation Modernization	1,750	1,750	7,500	7,500	7,500
TDIRP- RG&E Circuit Breaker Replacement Program	2,000	2,665	2,732	2,800	2,870
TDIRP RG&E - Other	8,564	7,435	7,068	6,700	6,330
TDIRP- RG&E Sectionalizer Replacement Program	1,000	1,000	1,000	1,000	1,000
TDIRP- RG&E, Distribution Poles Replacement	2,000	2,400	2,700	3,000	3,300
TDIRP- RG&E, Substation Battery Replacement	1,436	1,500	1,500	1,500	1,500
RG&E Programs	33,850	32,181	42,455	42,000	42,500
TOTAL Programs	**83,100**	**81,431**	**100,955**	**100,500**	**101,000**
TOTAL	**89,801**	**82,579**	**116,862**	**113,125**	**108,950**

Attachment 7

Description of the Most Significant Gas Projects

NYSEG

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Seneca West Pipeline Interconnect to Elmira (Appendix L Project)	4,860	540	0	**0**	**0**
Total Costs: $ 6,148					
Description: Construction and operation of a five mile, 8" steel, 1100 psig high pressure natural gas transmission pipeline and new meter and regulator station which will connect the Seneca Lake West Pipeline directly to NYSEG's Elmira gas distribution system **Reason and benefits:** Construction of this project will allow NYSEG to turn back or release Dominion Transmission capacity that currently serves a portion of the Elmira distribution system. This will reduce NYSEG's demand charges as well as variable and fuel expenses. In addition to the reduced expenses, an added benefit results from an increase in reliability of the Elmira gas distribution system. This pipeline would also allow for local production from Marcellus Shale to be used as a replacement for primary point capacity. When the project is completed, Elmira will be a Local Production Area (LPA-1) as proposed in the NYSEG Rate Case. **Investment Reason:** System Capacity					
Year started: 2011 **Year in service:** 2013 **Current Status:** In design with construction in 2012. The Article VII application was sent to the PSC for review on November 30, 2011					

RG&E

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Buffalo Road, Replace Gas Mains	1,600	500	0	**0**	**0**

Total Costs: $ 2,100

Description: Work involves replacing approximately 5812' of 14" WRST installed in 1948 from Bermar Park to the west side of Route 390 then continuing from east of Route 390 to the Barge Canal with approximately 5820' of new 16" WRST main. Work also involves replacing approximately 727' of 20" WRST installed in 1961 within the 24" casings crossing Buffalo Road east and west of Route 390 and crossing Route 390 with 730' of new 20" WRST main; and replacing approximately 113' of 20" WRST crossing Buffalo Road near the barge canal originally installed in 1951 with approximately 120' of new 20" WRST main. Existing valves will be replaced and additional valves will be added

Reason and benefits: Replaces leak prone main and comply with permit to occupy public rights-of-way.

Investment Reason: Statutory

Year started: 2010

Year in service: 2013

Current Status: In design

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
New Empire West Gate Station	1,650	3,940	0	**0**	**0**
Total Costs: $ 5,844					
Description: Install new gate station located near Humphrey Rd and Route 386, Town of Chili, New York. Rebuild regulator station ("RS") 424 Middle Road and RS 425 Ballantyne Road. Replace inlet piping to RS 214, 295, 355, 358, 460, 461, and Buffalo Road Station. **Reason and benefits:** Improve pipeline safety, system reliability, and reduce system supply and operating constraints. Improve pipeline safety by reducing operating pressures and replace pipeline sections to less than 20%. Improve overall transmission and feeder system reliability, and improve system pressures at major distribution stations. Improve system supply and operating constraints by allowing greater flexibility year round for system nominations between suppliers. Increase overall system capacity by 20% for long term load growth. Increase capacity by 25% to the Eastern Monroe County and Wayne County distribution systems. **Investment Reason:** System Capacity (50%), Asset Condition (50%)					
Year started: 2011 **Year in service:** 2013 **Current Status:** In planning for project development					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Robinson Road Gate Station Rebuild	815	1510	0	**0**	**0**
Total Costs: $ 2,325					
Description: Rebuild gate station and make second tap off Tennessee Pipeline. The gate station rebuild will include: metering, regulators and monitors, gas heater (existing), gas filter, odorizer and control lines, cathodic protection test station, SCADA equipment, RTU equipment, phone and electric lines, and buildings **Reason and benefits:** The station is in poor condition and contains outdated equipment with frequent need of maintenance, and the filter does not operate correctly **Investment Reason:** Asset condition					
Year started: 2010 **Year in service:** 2013 **Current Status:** In p for project development					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Southwest 60 System Improvements Phase 2	800	390	0	**0**	**0**
Total Costs: $ 1,190					
Description: Install 2.5 miles of 8 and 6 inch gas main **Reason and benefits:** Reinforces gas system operating pressures and removes outdated regulators and gas main from service. Replace leak prone pipe (unprotected steel) and provide reinforcement to gas pressures on the SW60 System which has been and continues to experience industrial load expansion. **Investment Reason:** Statutory, Growth					
Year started: 2010 **Year in service:** 2013 **Current Status:** In planning for project development					

Project	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget
Westfall Road Relocate Gas Mains	1,920	0	0	**0**	**0**
Total Costs: $ 1,920					
Description: Replace gas mains in conflict with municipal street reconstruction projects. **Reason and benefits**: Replaces leak prone main and comply with permit to occupy public rights-of-way. The Monroe County Department of Transportation (MCDOT) plans to reconstruct Westfall Road from East Henrietta to LacDeville Drive. RG&E plans to replace the existing 6830' - 12" WRST with 7054' - 16' WRST **Investment Reason:** Statutory					
Year started: 2010 **Year in service:** 2012 **Current Status: In construction**					

Attachment 8

List of Gas Projects and Programs Included in Category 2

Customer and Statutory Requirement

Project Name	2012	2013	2014	2015	2016
Minor Government Jobs, Relocate Gas Mains, NYSEG	180	185	191	197	203
Minor Distribution Mains, Install Gas Mains, NYSEG	625	644	663	683	703
Minor Services, Install Gas Service, NYSEG	3,700	3,811	3,925	4,043	4,164
NYSEG - Gas Meters	2,805	2,889	2,976	3,065	3,157
NYSEG - Gas Regulators	290	299	308	317	326
NYSEG Transmission Casing Replacement Program, NYSEG	1,026	1,057	1,088	1,121	1,155
Front St, Relocate 124 psi Gas Main, Binghamton	155	-	-	-	-
Replace Croton River Crossing	-	460	-	-	-
MGP Site Remediations - Relocate Regulator Stations and Mains, Goshen	-	-	-	385	-
Critical Valve Installations, Binghamton	-	150	150	-	-
TOTAL NYSEG	**8,781**	**9,495**	**9,301**	**9,811**	**9,708**
Minor Government Jobs, Relocate Gas Mains, Rochester	350	361	371	382	394
Minor Distribution Mains, Install Gas Mains, Rochester	750	773	796	820	844
Minor Services Blanket, Replace Gas Service, Rochester	4,388	4,520	4,655	4,795	4,939
RG&E - Gas Meters	2,535	2,611	2,689	2,770	2,853
RG&E - Gas Regulators	170	175	180	186	191
RG&E Transmission Casing Replacement Program, Rochester	1,750	-	-	-	-
Westfall Rd, Relocate Gas Mains, Rochester	1,920	-	-	-	-
Ridge Rd East, Relocate Gas Mains, Rochester	900	-	-	-	-
Ridgeway Ave - Ramona to Minder, Relocate Gas Mains, Carryover, Rochester	500	-	-	-	-
Maiden Lane - Mt Read to Fetzner, Relocate Gas Mains, Rochester	310	-	-	-	-
Buffalo Rd, Relocate Gas Mains, Rochester	1,600	500	-	-	-
South Clinton St, Relocate Gas Mains, Rochester	325	-	-	-	-
Lincoln Rd South, East Rochester, Relocate Gas Mains Highway	130	-	-	-	-
Highway Relocations (projects to be identified)	-	5,259	5,417	5,580	5,747
Jane and Kirk Rds, Replace Gas Mains, Rochester	600	350	-	-	-
Southwest60 System Improvements Phase 2, Install Pipe and Regulator Station, Livingston County	800	390	-	-	-
TOTAL RG&E	**17,028**	**14,938**	**14,109**	**14,532**	**14,968**
TOTAL	**25,809**	**24,432**	**23,410**	**24,343**	**24,677**