DENNIS J. BENDER, C.P.A.

PROFESSIONAL EXPERIENCE

NEW YORK STATE ELECTRIC & GAS CORPORATION (NYSEG) 1988–Present 2012-present <u>Director Gas Operations</u>

2009 – 2012 <u>Manager – Programs/Projects Electric Capital Delivery</u>

• Project manage the design, licensing, engineering, procurement, construction and commissioning of large electric capital projects for NYSEG and RGE.

2002-2009 Manager – Performance and Budgets

• Coordinated the development, approval and reporting of the NYSEG and RG&E Operations and Technical Services O&M and Capital budgets.

1993-2002 Manager – Special Projects

- Project Manager for Seneca Lake Storage Project Evaluated gas storage options and associated marketing plans including a new lined rock storage technology developed in Europe.
- Chaired the Gas Development Panel responsible for evaluating and recommending investments in new gas franchises and non tariff line extensions.

1991-1993 Manager – Planning and Program Evaluation

- Developed annual and five year marketing plans.
- Evaluated new marketing programs

1988-1991 Senior Rate Analyst

• Prepared and supported the negotiation of NYSEG's electric and gas rate cases.

HANSBROUGH ENVIRONMENTAL SERVICES COMPANY 1987-1988 1987-1988 <u>Chief Operations Officer</u>

• Oversight of plant operations, accounting, customer service operations and environmental staff.

COLUMBIA GULF TRANSMISSION COMPANY 1984-1987 1984-1987 Operations Specialist

• Project managed both on-shore and off-shore gas operations and pipeline projects.

1983 Financial Trainee

• Specialized in the flow and consolidation of manual and mechanized information through 27 subsidiaries to corporate headquarters for financial decision making.

1981-1983 Regulatory and Cost Control Analyst

• Prepared annual Federal Energy Regulatory Commission Form 2 and monthly Form 11.

DELOITTE, HASKINS & SELLS 1980-1981 1980-1981 <u>Staff Accountant</u>

EDUCATION

BS, Business Administration, Alfred University, Alfred, NY, 1979 **AAS, Accounting**, State University of New York at Alfred, Alfred, NY, 1977

PROFESSIONAL AFFILIATIONS

Texas Society of Certified Public Accountants, 1982 Member AGA, Operations Committee

JAVIER BONILLA

PROFESSIONAL EXPERIENCE

IBERDROLA USA 2011–Present

2011 – Present <u>VP Engineering & Delivery</u>

- Responsible for Gas planning, Engineering and Delivery
- Responsible for Electric Engineering and Delivery
- Responsible for Hydro Engineering and Delivery
- Responsible for Standardization
- Responsible for Environmental Compliance

IBERDROLA NETWORK SPAIN

2005-2010 Chief of Substations

- Responsible for local Substation Operation group in Madrid Region
- Responsible for Substation Maintenance in Madrid Region
- Responsible for Substation Delivery Program in Madrid Region

2000-2005 Chief of Secondary Substations and Distribution lines

- Responsible for local Operation group in Madrid Area
- Responsible for Secondary Substation and lines Maintenance in Madrid Area
- Responsible for Secondary Substation and lines Delivery Program in Madrid Area

EDUCATION

- Leadership Programme. ESADE Business School. 2013
- 5 years Mining Engineering degree, Polytechnic University, Madrid, Spain, 2013
- MBA, Nebrija Universtiy, Madrid, Spain, 2006
- 6 years Industrial Engineering degree, Polytechnic University, Madrid, Spain, 1999

MICHAEL D. EASTMAN

PROFESSIONAL EXPERIENCE

NEW YORK STATE ELECTRIC & GAS CORPORATION (NYSEG)/ROCHESTER GAS AND ELECTRIC (RG&E) 2000-Present 2010 – present Vice Pr<u>esident – Gas Operations</u>

2010 – present <u>vice rresident – Gas Operations</u>

• Responsible for day to day Gas Field Operations duties.

2004-2010 Vice President – Gas Assets

• Functional over-site of the New York natural gas business.

2003-2004 Vice President – Corporate Performance

• Identified cost reduction, continuous improvement and new growth ideas.

2000-2003 Vice President – Gas Operations

• Included responsibilities for both NYSEG and RG&E Gas Technical Services during 2003.

UPONOR ALDYL COMPANY 1999-2000 1999-2000 Manager – Business Development

- Responsible for U.S. Business Development and strategic alliances with large U.S. Natural Gas Companies
- Direct sales responsibility for 13 Northeast states selling a complete line of natural gas piping, metals and fittings to natural gas utilities.

NEW YORK STATE ELECTRIC & GAS CORPORATION (NYSEG) 1980-1999 1998-1999 <u>General Manager – Southern Vermont Natural Gas</u>

• Responsible for planning and coordinating project activities associated with the development efforts to build natural gas transmission and distribution facilities for Energy East in Southwestern Vermont.

1991-1998 Manager – Corporate Gas Engineering

• Responsible for corporate engineering functions.

1985-1991 Supervisor – Gas Engineering Elmira Division

• Technical Supervisor for Gas Engineering and Corrosion in the Elmira Division.

1980-1985 Corporate Gas Measurement Technician

• Responsible for Commercial, Industrial and Supplier measurement equipment.

EDUCATION

BMET, Mechanical Engineering Technology, SUNY Binghamton, Binghamton, NY, 1990

AS, Engineering Sciences, Broome Community College, Binghamton, NY, 1980

Public Utilities Executive Course, University of Idaho, 1994

PROFESSIONAL AFFILIATIONS

Board of Directors, Northeast Gas Association Board of Directors, Gas Technology Institute Member AGA, Operations Section Managing Committee

GREGORY A. GEORGE

PROFESSIONAL EXPERIENCE

NEW YORK STATE ELECTRIC & GAS CORPORATION (NYSEG)/ROCHESTER GAS AND ELECTRIC (RG&E) 2003–Present

2011 – present <u>Director – Gas Design & Delivery</u>

• Responsible for system planning, design and project, leak prone replacement programs, and gas capital budget.

January 2011 – August 2011 <u>Director – Electric Capital Delivery</u>

• Responsible for delivering electric capital budget.

2004-2010 Manager – Gas Corporate Engineering

• Responsible for O&M Manual, Construction Standards, Emergency Plan, IMP and DIMP.

2003-2004 Manager – Gas Engineering

• Responsible for planning and design of gas projects and capital budget.

ROCHESTER GAS AND ELECTRIC (RG&E) 1991-2002 1999-2002 Manager – Regional Projects

• Responsible for gas and electric for new growth, bare steel/cast iron main and service replacement programs.

1996-1998 Manager – Energy Services Installations

• Responsible for design of new growth main and service projects.

1991-1995 Engineer

• Responsible for design of transmission and distribution projects.

EDUCATION

MBA, Business Administration, Rochester Institute of Technology, Rochester, NY, 2000

BS, Mechanical Engineering Technology, Rochester Institute of Technology, Rochester, NY, 1996

Project Management Professional Certification, Project Management Institute, Rochester, NY

PROFESSIONAL AFFILIATIONS

Member, Project Management Institute Member, AGA Former Board of Directors, Dig Safely NY Board of Directors, Stepping Stone Learning Center, 2014 - Present

Gas Safety Performance Measures - NYSEG

		2010 Rate Plan		С				
Measure	Targets	Basis Point Adjustment	Gas - Revenue Adjustment*	2011	2012	2013	2014	4 Year Average
Replacement of Leak-Prone Main	24	8	\$288,000	0.00	0.00	0.00	0.00	0.00
Replacement of Leak-Prone Services	1200	8	\$288,000	32	30	27	25	28
Leak Management	100 Leaks (All Types)	12	\$432,000	0	0	0	0	0
Overall Damages	2.0/1000	4	\$144,000	0.000	0.000	0.000	0.000	0.00
Damages due to Mismarks	0.5/1000	10	\$360,000	1.910	1.850	1.900	1.560	1.81
Damages Caused by Company and Company Contractors	0.2/1000	4	\$144,000	0.330	0.400	0.340	0.370	0.36
Emergency Response								
- Within 30 Minutes	75%	8	\$288,000	0.000	0.000	0.000	0.000	0.00
- Within 45 Minutes	90%	4	\$144,000	0.904	0.889	0.847	0.874	0.88
- Within 60 Minutes	95%	2	\$72,000	0.986	0.978	0.969	0.977	0.98
Audit Violations				36.000	60.000	53.000	100.000	62.25
Audit Occurrences				144.000	183.000	141.000	358.000	206.50
Total		60	\$2,160,000					
* Value per Basis Point 2010 - 2013:	\$36,000	Changed		-				

Value per Basis Point 2010 - 2013: \$36,000

Proposed 2016 Rate Case Performed	mance Measures	Proposed 2016 Rate Case Incentive Measures						
Targets	Basis Point Adjustment	Targets	Basis Point Adjustment					
24	8	>24 - 1/2 BP per 1/2 Mile	No Cap					
0	0	0	0					
100 Leaks (All Types)	12	<50 Leaks (All Types)	б					
2.0/1000	4	<u><</u> 1.55/1000	2					
0.5/1000	10	<u><</u> 0.35/1000	5					
0.2/1000	4	<u><</u> 0.07/1000	2					
75% 90% 95%	8 4 2	≥82% ≥96% ≥99%	4 2 1					
>155 Occurrences = 1/4 BP/Occurrence Maximum of 10 Occurrences per Violation	Maximum 50	<52 Occurrences	10					

Quality Management System

I. Quality Management System Overview

The Quality Management System ("QMS") defines how to manage delivery operations. QMS is designed and implemented to ensure that the quality of all products, projects, programs, and services delivered fulfill all customer, legal and regulatory requirements and satisfy expectations during their foreseen period of use. The scope of the QMS includes project management and engineering for: 1) the design, construction and commissioning of electric and gas transmission and distribution assets; and 2) planning and implementing of gas assets.

The Engineering & Capital Delivery ("E&CD") QMS is structured according to the requirements of ISO 9001:2008 Quality Management Systems. The Quality Policy of New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation (together, the "Companies") and the application of the ISO 9001:2008 requirements guarantee Quality compliance. This system and the continuous improvement culture are the keys to improving customer satisfaction with the delivered products and services. Also, employees implementing the QMS play an important part in reaching the Companies' Quality goals.

The following documents support the QMS:



A. Process Management

E&CD has identified the different processes within its scope of work needed to develop and establish its quality model. The processes that make up the ordinary project cycle are mapped and described in the diagram below. The relations between these processes, their manner of operation, and associated monitoring are described in the Iberdola USA ("IUSA") E&CD Standard Operating Procedures. Depending on project scope, a project may involve all or some of the processes shown in the diagram.



B. Management Commitment

General Management demonstrates its commitment to the development and implementation of the QMS by: 1) communicating the importance of complying with client/customer, legal and regulatory requirements; 2) accepting the Quality Policy; 3) ensuring definition of Quality Guidelines and Objectives; 4) reviewing the QMS; and 5) ensuring availability of resources.

C. Client/Customer Focus

E&CD Executive Management is responsible for determining client/customer, legal and regulatory requirements and ensuring they are fulfilled with the objective of increasing client satisfaction. This is performed in the QMS through a review of a prioritized projects list. The purpose of the review is to ensure that: 1) E&CD has the capacity to fulfill the requirements specified in these documents; and 2) the requirements are adequately documented, defined and distributed. In addition, the monitoring and measurement of client/customer satisfaction is achieved through project follow-up meetings, questionnaires and personal interviews.

D. <u>Planning – Quality Objectives</u>

Quality Objectives are defined annually by Executive Management to achieve the commitments established in the Quality Policy and to address any findings identified in the QMS annual review report. Action priorities are identified by the Quality Manager and each business unit's management, and are proposed as Quality Objectives to be approved by Executive Management for each business unit.

E. <u>Planning of the QMS</u>

E&CD will identify each project's requirements in the Project Charter during the initiation stage and in the Project Management Plan at the planning stage. Each project manager will comply

and manage legal and client requirements by preparing his/her own project specific plan which identifies requirements, operational measures and controls. Project Management planning is subject to periodic update, review and approval.

II. E&CD Organization, Roles and Responsibilities

E&CD organization, roles and responsibilities are described in the document "Organization and functions of IBERDROLA USA Engineering & Capital Delivery." The main responsibilities and functions of the different organizational decision-making levels that are in charge of different aspects of the management, operational, development and monitoring of all Quality-related actions are described below. All levels must be committed to continuously improving the implementation and development of the QMS. These responsibilities will be completed along with those specified in the IUSA E&CD Standard Operating Procedures.

A. Executive Management

E&CD Executive Management is ultimately responsible for implementing and complying with the Quality Policy. Executive Management must establish an approach for understanding Quality and its importance within the organization's strategic goals and its integration within the Companies.

B. Vice Presidents

The E&CD Vice Presidents are responsible of the following actions: 1) approving the Quality Manual and its revisions; 2) approving the QMS procedures; 3) approving the objectives of the Quality program; 4) approving the necessary budget for compliance with the policy, guidelines and objectives; 5) ensuring that Quality goals (guidelines and objectives) are transferred to Business Management; and 6) approving the QMS annual review report.

C. Quality Managers

To ensure the implementation and effectiveness of the QMS, a Quality Manager is appointed as a representative of management. A Quality Manager has the authority and independence to: 1) supervise fulfillment of the requirements established in relation to the QMS; 2) report on the performance of the management system as well as on the possible shortfalls, which ensures the establishment of remedial and/or preventive actions required for fulfillment; 3) foster awareness regarding QMS documentation and client requirements at all levels of the Companies.

The Quality Manager has global responsibility for monitoring the effective application of the QMS, which includes the following responsibilities: 1) communicating the Quality Policy to all levels of the organization; 2) ensuring the proper implementation and performance of the QMS; 3) ensuring that legal and regulatory requirements are identified, updated and distributed within the organization; 4) coordinating and monitoring the functions of each business unit's responsible Quality representatives; 5) promoting the continuous improvement in all the aspects related to Quality; 6) reviewing the Quality Manual and its procedures, as well as executing any revisions thereto; 7) preparing the documentation necessary to carry out the annual review report by Executive Management; 8) reviewing and documenting the monitoring of Quality objectives;

9) reviewing a corporate Quality audit plan; 10) assisting and coordinating with the Lead Auditor in any internal audits; 11) advising Executive Management on all problems related to Quality; and 12) providing support to the organization on the QMS.

The Quality Managers report to the E&CD Quality Executive Management Board on matters related to Quality by presenting and assessing the effectiveness of the implementation of the system, and on areas which require improvement, evolution, remedial and/or preventive measures.

D. Responsible Quality Representatives

All business units are responsible for control quality aspects directly related to their production activities (reviews, inspections, etc). Quality Managers shall appoint a person responsible for Quality for each business unit. Each business unit's Responsible Quality Representative is in charge of: 1) ensuring the implementation of the Quality Manual and support its development; 2) ensuring the effective Quality management of projects under his/her responsibility; and 3) developing and receiving approval of the necessary budget in order to comply with Quality objectives and programs.

E. Quality Committee

The Quality Committee will be made up of the Quality Manager, each business area's responsible Quality representatives, and appropriate management representatives of each business unit. The Quality Committee will meet at least once a year. Quality Committee responsibilities include: 1) proposing and following up on Quality objectives; 2) following up on any identified non-conformances; and 3) participating in the identification and definition of continuous improvement actions. The Quality Committee will support the definition of the annual Quality objectives and follow up on their deployment within the organization. Compliance with Quality objectives is reviewed at least every six months by the E&CD Quality Committee.

F. Process Owners and Project Managers

Process owners and project managers are responsible for: 1) ensuring the effective monitoring of the process documents that are part of the QMS; 2) taking appropriate measures to ensure compliance with legal and regulatory requirements; 3) ensuring proper training and communication with their staff, as well as identifying future needs and facilitating their staff assistance; 4) ensuring the appropriate Quality management of projects under his/her responsibility; 5) collaborating in the review of internal Quality audits within their own area; 6) encouraging Quality inspections as well as monitoring their control; and 7) implementing corrective actions deriving from Quality audits and inspections.

G. Employees

Every E&CD employee is responsible for: 1) knowing and complying with the Quality requirements and defined operating procedures; 2) participating in Quality training courses and committing themselves and implementing what they have learned; and 3) informing their management when there are quality anomalies in the course of their normal activity. All employees are responsible for following appropriate quality requirements within their business areas.

H. Management Review

EC&D Executive Management reviews the QMS at least once per year through a report prepared by the Quality Manager. The annual review will be carried out at the beginning of each year with a focus on quality activities occurring in the year just completed. The annual review will be supported by a report based on: 1) the results of any internal audits; 2) external client feedback, including feedback from any external audits (e.g., audits by state public service commissions); 3) the degree to which annual quality objectives are fulfilled; 4) performance of processes and conformity with the product; 5) the state of any remedial and preventive actions; 6) monitoring action items from prior management reviews; 7) recommendations for improvement and the degree to which improvement is achieved; 8) changes which may affect the QMS (such as adapting the Quality Policy, changes to the organization, and changed circumstances); 9) the results of Quality compliance assessments with respect to client and legal requirements and other requirements to which the Companies may have adhered; and 10) any other information of interest.

As a result of the analysis of the report, Executive Management decides on improvement actions to be introduced and the next year's Quality objectives which would include measures to bring the products closer to achieve such objectives.

I. <u>Competency</u>, Awareness and Training

E&CD Management defines its training needs to be covered by the training plan issued and managed by IUSA Human Resources which assesses individual responsibilities and company strategy. This training plan will establish annual training programs geared towards management improvement, development of professional careers, and technical and functional training of personnel. This plan also takes into account the introduction of new employees into the culture and management system (Quality and business management) of the Companies.

The training activities to be carried out are based on: 1) client demands; 2) the Companies' objectives; and 3) the QMS reviews.

III. Measurement, Analysis and Improvement

E&CD registers inspection and control activities carried out in project processes as defined in the procedures, technical manuals or the specific project management plans. Records provide

evidence of the inspection and control activities carried out, their results and the person or persons responsible for carrying them out. Deviations detected in these inspections are dealt with in accordance with the provisions of procedures.

Internal audits are carried out with the purpose of verifying, through assessment of objective evidences, that the QMS is implemented and documented in an effective manner in accordance with the requirements specified. Audits of the QMS are carried out by qualified independent auditors.

A. <u>Non-conformity, Corrective Action and Preventive Action</u>

Non-conformities may be detected in a number of ways, including through: 1) internal assessments at any stage in the process; 2) client input; 3) contractors' inspection or supervision activities; 4) any activity of monitoring and control processes; 5) internal and external audits of the QMS, including those audits performed by state public service commissions; 6) quality inspections; and 7) investigation of accidents.

The management system establishes records which describe the non-conformity, the proposed solution and, if applicable, remedial or preventive actions, the final accepted solution and actions implemented with their effectiveness. This control also identifies the persons responsible for examining the non-conforming product and deciding its disposition.

B. <u>Continual Improvement</u>

Continuous improvement at E&CD is deployed into four action areas. First, indicators provide information regarding fulfillment of objectives. These are analyzed to look for those factors which may inform a better result and define, if applicable, improvement actions. At the same time, efficiency can be monitored with these indicators. Second, standard and ad hoc software tools will be implemented to improve process efficiency. This will allow for the tracking of indicators, which in turn will serve as an information mechanism for continuous improvement. The third area is product evolution. This involves defining new products with technological advances to respond to client expectations. To facilitate product evolution, E&CD improves product efficiency and reliability by defining goals and projects to be developed in different areas within the organization. Fourth, as a result of internal and external audits, and the proposals resulting from the lessons learned process, amendments to the management systems are made.

Gas QA/QC Approach

The E&CD Group has recently re-organized the QA/QC approach to be aligned with the QMS, certified under ISO 9001:2008 and implemented in August 2014. A new E&CD QA/QC department has been created through the consolidation of individuals from the gas and electric businesses. The goal of this re-organization is to improve overall Quality in Operations by implementing a consolidated Quality group which will develop, perform and monitor QA/QC activities across different business areas. This approach allows us to have more focus on Gas QA/QC activities in Operations by coordinating technical and QA/QC tasks.

As result of this re-organization, we now have a devoted team of 10 people charged with taking care of various quality issues with a proactive approach, while also looking for continuous improvement. This new consolidated team will be able to work on different projects, both electric and gas, depending on immediate needs and priorities to ensure that the needed QA/QC resources are assigned for each task. This team does not just perform audits; rather, the team is composed of the Companies' quality experts who design audit plans, identify needs, and work with other areas to assure resources are available to get the necessary QA/QC work completed. As part of this re-organization, the two individuals who had been previously assigned as full-time gas QA/QC inspectors are now part of this larger consolidated QA/QC team. The overall team is tasked with, among other responsibilities, the roll-out of the training program described below to address the violations and occurrences in the gas area.



The following items are the drivers to this re-organization:

- Gas QA/QC has been included as part of the Safety, Health, Compliance and Quality Group;
- After some initial assessment, the Companies' internal audit findings related to Gas QA/QC work and record-keeping were similar to what the New York State Public Service Commission ("PSC") Gas Safety Audit Staff had identified;
- It was determined that focusing more on P rocess Improvement using a proactive approach would be appropriate, instead of waiting for audit results (a lagging indicator);
- The Companies analyzed past PSC violation and occurrence history;
- The Companies noticed that training of gas employees related to the use of the "new" leak form had a direct impact on reducing violations/occurrences;
- The Companies reviewed how field personnel were trained and how updates to various procedures were rolled out; and
- The Companies identified the need to develop more "ready to use" refresher training modules that could be reviewed to help focus employees on r educing violations/occurrences in those areas and topics that have been receiving violations.



The below pie diagram, charts and graph show the results of the Companies' analyses.







Based on the results of the Companies' analyses, the Companies have or will perform the following actions:

- The Companies have kicked off the Gas Process Excellence Team with the overall goal to improve processes in order to reduce violations/occurrences;
- Identified topics for training;
- Developed a timeline for training that has been created and approved;
- Identified Gas Supervisors to head up module creation (using appropriate subject matter experts ("SMEs"));
- Created a template to make it easy to create modules;
- Identified a training delivery process to make it easy to attend;
- Conducted pilot training with Gas Supervisors to identify areas for improvement;
- Identify SMEs to assist in module creation (in progress);
- Finish the development of specific training (creation, editing, approval);
- Complete the schedule for training all appropriate employees (identify who needs to be trained and establish an attendance tracking system);
- Roll-out full training;
- Conduct audits by the new consolidated QA/QC group to determine effectiveness of training; and
- Collect feedback from training attendees for suggested improvements.

Training Module Creation

The below bullet points describe the creation of the training module.

- Introduction (common for all modules developed by MROs and SHEQ)
- Overview of the Gas Excellence Performance Program
 - Why we are doing the training
 - Overview of the types of violations/occurrences and their history at the Companies
 - How the modules were developed
 - Organize the modules according to Operations and Maintenance procedures
 - Review each relevant code section
 - Review the various O&M procedures in place
 - Focus on the areas highlighted in the violation/occurrence analysis
 - Review proper documentation practices (common for all modules)
- Describe the forms
 - How to fill out, line by line, field by field
- Check for understanding and the link to code/O&M.
- Check to see if attendees understand what was presented

ask Name	Duration	Start	Finish
Module Preparation	45 days?	Wed 4/15/15	Tue 6/16/1
Accidents and Leaks	30 days?	Wed 4/15/15	Tue 5/26/1
Draft	15 days	VVed 4/15/15	Tue 5/5/1
Review	10 days	Wed 5/6/15	Tue 5/19/1
Update as necessary and Approve	5 days?	Wed 5/20/15	Tue 5/26/1
🖃 Maintenance	30 days	Wed 4/15/15	Tue 5/26/1
Draft	15 days	Wed 4/15/15	Tue 5/5/1
Review	10 days	V/ed 5/6/15	Tue 5/19/1
Update as necessary and Approve	5 days	Wed 5/20/15	Tue 5/26/1
Corrosion Control	30 days	Wed 4/15/15	Tue 5/26/1
Draft	15 days	VVed 4/15/15	Tue 5/5/1
Review	10 days	Wed 5/6/15	Tue 5/19/1
Update as necessary and Approve	5 days	Wed 5/20/15	Tue 5/26/1
🖃 Warning Tags	30 days	Wed 5/6/15	Tue 6/16/1
Draft	15 days	Wed 5/6/15	Tue 5/26/1
Review	10 days	Wed 5/27/15	Tue 6/9/1
Update as necessary and Approve	5 days	Wed 6/10/15	Tue 6/16/1
Training	52 dave	Mon 5/18/15	Tue 7/28/1
Training Training Schedluing	5 dave	Mon 5/18/15	Eri 5/22/1
Training accidents and leaks	5 days	Wed 6/3/15	Tue 6/9/1
Training decidence and reality	10 days	Wed 74 45	Tue 7/14/1
Training corresion control	5 days	Wed 6/17/15	Tue 6/23/1
Training concerning Tage	5 days	Wed 7/02/15	Tue 7/08/4

<u>Timeline</u>

Audit Accidents and Leaks	12 days?	Wed 8/5/15	Thu 8/20/15
Audit Processes	1 day?	VVed 8/5/15	Wed 8/5/15
Audit Report	1 day?	Thu 8/20/15	Thu 8/20/15
Audit Corrosion Control	12 days?	Wed 9/9/15	Thu 9/24/15
Audit Processes	1 day?	VVed 9/9/15	Wed 9/9/15
Audit Report	1 day?	Thu 9/24/15	Thu 9/24/15
🖃 Audit Maintenance	12 days?	Wed 8/19/15	Thu 9/3/15
Audit Processes	1 day?	Wed 8/19/15	Wed 8/19/15
Audit Report	1 day?	Thu 9/3/15	Thu 9/3/15
Audit Warning Tags	12 days?	Wed 9/23/15	Thu 10/8/15
Audit Processes	1 day?	Wed 9/23/15	Wed 9/23/15
Audit Report	1 day?	Thu 10/8/15	Thu 10/8/15

	Proposal			Forecast		
Category	2015	2016	2017	2018	2019	2020
Transmission Mains	-	2,000	9,300	21,792	21,121	21,121
Distribution Mains	14,464	26,022	19,189	15,593	14,688	13,447
Leak Prone Main Program	11,486	12,191	13,534	14,740	15,049	15,365
Services	11,448	14,665	10,053	12,856	14,828	15,106
Service Meters & Service						
Regulators	4,239	3,319	3,424	3,526	3,632	3,741
M&R/Gate & Distribution						
Regulator Stations	1,951	100	2,683	6,600	5,375	4,500
Highway Relocations	1,977	2,842	2,902	2,963	3,025	3,089
General Plant/Miscellaneous	500	511	1,871	2,532	2,043	555
NYSEG Sub-total	46,065	61,650	62,956	80,603	79,762	76,924

NYSEG Gas Capital Budget Proposal and Forecast (\$K) NYSEGGASEDO-4

Note: Does not include the gas portion of common investment.

NYSEG Incremental O&M Actuals, Proposal and Forecast

Incremental Maintenance - Gas (\$000)

				Per B	ooks										
						His	toric	Normalizi	ng	Normaliz	ed	Fore	casted	Rate	Year 1
		20	12	20	13	Test	Year	Adjustmen	its	Historic Test	Year	Ch	ange	TME 3	/31/2017
	A. Incremental Maintenance														
	Category (Project)														
1	Damage Prevention (Enhanced DPV)	\$	344	\$	173	\$	299	\$-		\$	299	\$	649	\$	948
2	Public Awareness (Fire Department Outreach)												200		200
3	Corrosion Control (Residential Meter Atmospheric Corrosion Inspections)												47		47
4	Corrosion Control (Flame Spray M&R Station Piping)												105		105
5	Corrosion Control (Vacuum Excavation/Core-boring contract for anode installation)												156		156
6	Distribution Integrity Management (Data automation & electronic records)												200		200
7	Emergent Projects												-		-
8	Imputed Sales/Use tax ¹												66		66
9	Subtotal Incremental Maintenance	\$	344	\$	173	\$	299	\$ -		\$	299	\$	1,423	\$	1,722

B. Base Rates RY1 - RY5 will be included in Outside Services O&M lines

10	Public Awareness*	\$ 40	\$ 57	\$ 56	\$ (56)
11	Exposed Piping on Bridges*	75	141	275	(275)
12	Distribution Integrity Management*	97	139	167	(167)
13	Integrity Management Program*	0	12	0	0
14	Corrosion Control *	37	0	 13	 (13)
15	Subtotal New Base Rates	\$ 249	\$ 349	\$ 511	\$ (511)

* Note: these line items are moved from Incremental O&M to Base Rates beginning in RY1

¹ Imputed sales tax at 4%

Exhibit (NYSEGGASEDO-5) Page 2 of 2

NYSEG Incremental O&M Actuals, Proposal and Forecast

Incremental Maintenance - Gas (\$000)

Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Year 5 Change TME 3/31/2018 Change TME 3/31/2019 Change TME 3/31/2020 Change TME 3/31/2021 A. Incremental Maintenance Category (Project) 1 Damage Prevention (Enhanced DPV) \$ 20 \$ 968 \$ 20 \$ 988 \$ 20 \$ 1,008 \$ 22 \$ 1,030 2 Public Awareness (Fire Department Outreach) 204 4 208 5 213 4 217 4 3 Corrosion Control (Residential Meter Atmospheric Corrosion Inspections) 48 1 49 1 50 1 51 1 4 Corrosion Control (Flame Spray M&R Station Piping) 2 107 2 109 2 111 2 113 5 Corrosion Control (Vacuum Excavation/Core-boring contract for anode installation) 3 159 3 162 3 165 3 168 200 200 6 Distribution Integrity Management (Data automation & electronic records) 200 200 ----7 Emergent Projects 100 100 100 200 150 350 150 500 8 Imputed Sales/Use tax¹ 71 5 77 84 91 5 7 7 135 135 1,993 9 Subtotal Incremental Maintenance \$ \$ 1,857 \$ \$ 188 \$ 2,181 189 \$ 2,370 \$ \$

Exhibit (NYSEGGASEDO-6) Page 1 of 2

NYSEG Vegetation Management Actuals, Proposal and Forecast

Vegetation Management - Distribution - Gas (\$000)

		Per Books					
	2012	2013	Historic Test Year	Normalizing Adjustments	Normalized Hist <u>oric Test Y</u> ear	Forecasted Change	Rate Year 1 T <u>ME 3/31/20</u> 17
Vegetation Management - Distribution 1 2	\$ 199 -	\$ 241	\$ 212 -	\$ 38	\$ 250	\$ 170 -	\$ 420 -
3 4	- \$ 199	<u>-</u> \$ 241	\$ 212	\$ 38	\$ 250	<u>-</u> \$ 170	\$ 420

Normalizing Adjustments: Credits and unrecorded invoice = \$38,4 Escalation rate is 4.02% in RY 1 Calculation of Rate Year 1:

Credits and unrecorded invoice = \$38,423 Previous rate case amount of \$250,000/year did not allow to cut entire ROW annually

Based upon bids in hand and previous invoices, the amount needed for 2015 annual cutting is:

Escalation rate is 2.1% in RY 2-5

•

Mowing = \$353,900Contract Forester = \$40,000Aerial Transmission Patrol = \$9,500Sum = \$403,400Escalate 4.02% to RY1 = \$419,617

Exhibit __ (NYSEGGASEDO-6) Page 2 of 2

NYSEG Vegetation Management Actuals, Proposal and Forecast

Vegetation Management - Distribution - Gas (\$000)

	Forecasted Change	Rate Year 2 T <u>ME 3/31/20</u> 18	Forecasted <u>Change</u>	Rate Year 3 T <u>ME 3/31/20</u> 19	Forecasted Change	Rate Year 4 T <u>ME 3/31/20</u> 20	Forecasted <u>Change</u>	Rate Year 5 T <u>ME 3/31/20</u> 21
Vegetation Management - Distr	ribution							
1	\$ 8	\$ 429	\$ 10	\$ 439	\$ 8	\$ 447	\$ 9	\$ 456
2	-	-	-	-	-	-	-	-
3	-	-	-		-		-	-
4	\$ 8	\$ 429	\$ 10	\$ 439	\$ 8	\$ 447	\$ 9	\$ 456

Normalizing Adjustments: Credits and unrecorded invoice = \$38,423 Escalation rate is 4.02% in RY 1 Escalation rate is 2.1% in RY 2-5

Exhibit (NYSEGGASEDO-7) Page 1 of 2

NYSEG Integrity Management Program Actuals, Proposal and Forecast

	NYSEG Gas Pipeline Integrity Costs			Per	r Books				malized					
	'(000)					His	toric	Normalizing	g Hi	istoric	Fore	ecasted	Rate	Year 1
		20	12		2013	Test	t Year	Adjustment	Tes	st Year	Cł	ange	TME 3	<u>3/31/20</u> 17
1	Data Management ¹	\$	13	\$	115	\$	6		\$	6	\$	46	\$	52
2	Distribution Integrity Management (DIMP)		15		24		116			116		164		280
3	Integrity Management Program (IMP)		143		32		99			99		71		170
4	Leak Reporting		-		10		10			10		-		10
5	Automated Main Replacement Program Implementation		-		-		-			-		-		-
6	Pipeline Rehab		-		-		-			-				
	Total Gas Pipeline Integrity Costs	\$	171	\$	181	\$	231	\$ -	\$	231	\$	281	\$	512

Footnotes

¹ Amounts in 2012, 2013, and Historic Test Year includes costs to implement Data Mangement Software Program (New Century Software).

Note: The regulatory liability balance at 12/31/14 is \$415k which includes \$53k NCR.

Exhibit __ (NYSEGGASEDO-7) Page 2 of 2

NYSEG Integrity Management Program Actuals, Proposal and Forecast

NYSEG Gas Pipeline Integrity Costs (000)

'(000)	Forecast	ed	Rate	Year 2	Fore	casted	Rate	Year 3	Fore	casted	Rate	Year 4	Fore	casted	Rate	Year 5
	Change	<u> </u>	Г <u>МЕ 3</u>	<u>/31/2</u> 018	Ch	ange	TME :	<u>3/31/20</u> 19	Ch	ange	T <u>ME 3</u>	<u>3/31/20</u> 20	Ch	ange	TME 3	/31/2021
Data Management ¹	\$ -		\$	52	\$	-	\$	52	\$	(20)	\$	32	\$	-	\$	32
Distribution Integrity Management (DIMP)	(2	25)		255		(155)		100		15		115		(45)		70
Integrity Management Program (IMP)	,	70		240		(100)		140		210		350		115		465
Leak Reporting	-			10		-		10		-		10		-		10
Automated Main Replacement Program Implementation		25		25		225		250		(250)		-		-		-
Pipeline Rehab				-		150		150		125		275		50		325
Total Gas Pipeline Integrity Costs	\$	70	\$	582	\$	120	\$	702	\$	80	\$	782 न	\$	120	\$	902
	(000) Data Management ¹ Distribution Integrity Management (DIMP) Integrity Management Program (IMP) Leak Reporting Automated Main Replacement Program Implementation Pipeline Rehab Total Gas Pipeline Integrity Costs	'(000) Forecast Change Change Data Management ¹ \$ Distribution Integrity Management (DIMP) (1) Integrity Management Program (IMP) (2) Leak Reporting - Automated Main Replacement Program Implementation (2) Pipeline Rehab - Total Gas Pipeline Integrity Costs \$	'(000)Forecasted ChangeData Management ¹ \$Distribution Integrity Management (DIMP)(25)Integrity Management Program (IMP)70Leak Reporting-Automated Main Replacement Program Implementation25Pipeline Rehab-Total Gas Pipeline Integrity Costs\$	ForecastedRateChangeTME 3Data Management1\$ -Distribution Integrity Management (DIMP)(25)Integrity Management Program (IMP)70Leak Reporting-Automated Main Replacement Program Implementation25Pipeline Rehab-Total Gas Pipeline Integrity Costs\$ 70	ForecastedRate Year 2ChangeTME 3/31/2018Data Management1\$ -Distribution Integrity Management (DIMP)(25)Integrity Management Program (IMP)70Leak Reporting-Automated Main Replacement Program Implementation25Pipeline Rehab-Total Gas Pipeline Integrity Costs\$ 70	ForecastedRate Year 2ForeChangeTME 3/31/2018ChData Management1\$ -\$ 52\$Distribution Integrity Management (DIMP)(25)255Integrity Management Program (IMP)70240Leak Reporting-10Automated Main Replacement Program Implementation25255Pipeline RehabTotal Gas Pipeline Integrity Costs\$ 70\$ 582\$	ForecastedRate Year 2ForecastedChangeTME 3/31/2018ChangeData Management ¹ \$ -\$ 52\$ -Distribution Integrity Management (DIMP)(25)255(155)Integrity Management Program (IMP)70240(100)Leak Reporting-10-Automated Main Replacement Program Implementation25255225Pipeline Rehab-150-Total Gas Pipeline Integrity Costs\$ 70\$ 582\$ 120	ForecastedRateYear 2ForecastedRateChangeTME 3/31/2018ChangeTME 3/31/2018ChangeTME 3/31/2018TME 3	Forecasted Rate Year 2 Forecasted Rate Year 3 Change TME 3/31/2018 Change TME 3/31/2019 Data Management ¹ \$ -< \$ 52 \$ - \$ 52 Distribution Integrity Management (DIMP) (25) 255 (155) 100 Integrity Management Program (IMP) 70 240 (100) 140 Leak Reporting - 10 - 10 Automated Main Replacement Program Implementation 25 255 225 250 Pipeline Rehab - 150 150 Total Gas Pipeline Integrity Costs \$ 70 \$ 582 \$ 120 \$ 702	ForecastedRate Year 2ForecastedRate Year 3ForecastedChangeTME 3/31/2018ChangeTME 3/31/2019ChangeChang	Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Change Forecasted Forecasted	ForecastedRate Year 2ForecastedRate Year 3ForecastedRate Year 3Forecasted <th>Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Rate Year 4</th> <th>'(000) Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Forecasted</th> <th>Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 4 Fo</th> <th>'(000) Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Ya 1 Forecasted Forecast</th>	Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Rate Year 4	'(000) Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Forecasted	Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Forecasted Rate Year 3 Forecasted Rate Year 4 Fo	'(000) Forecasted Rate Year 2 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 4 Forecasted Rate Year 3 Forecasted Rate Year 3 Forecasted Rate Year 4 Forecasted Rate Ya 1 Forecasted Forecast

Footnotes

¹ Amounts in 2012, 2013, and Historic Test Year includes costs to implement Data Mangement Software Program (New Century Software).

Note: The regulatory liability balance at 12/31/14 is \$415k which includes \$:

Exhibit __ (NYSEGGASEDO-8) Page 1 of 2

NYSEG Gas Research and Development ("R&D")Actuals, Proposals and Forecast

	NYSEG R&D Components	Per Books													
	(000)					Н	istoric	Nor	malizing	Н	listoric	Fo	recasted	Rate	e Year 1
			2012		2013	Te	st Year	Adjus	stment (A)	Test	Year (B)	C	hange	TME	3/31/2017
1	Millenium	\$	592	\$	641	\$	686	\$	(36)	\$	650	\$	-	\$	650
2	Internal Projects		53		460		770	\$	(295)		475		175		650
3	NYSERDA		368		207		421	\$	(49)		372		67		439
4	Total R&D Grand Total	\$	1,013	\$	1,308	\$	1,877	\$	(380)	\$	1,497	\$	242	\$	1,739
5	Rate Case Targets	\$	1,497	\$	1,497	\$	1,497								
6	Reconciliation (liability) balance -incl	I NCR				\$	(1,207)								
7	Reconciliation (liability) balance -incl on balance prior to existing rate cas	l NCR se				\$	(330)								
8	(A) Normalizin	g adjustmer	ts remove the	e increas	sed										
9	(B) Normalized	l historic tes	t year represe	ents targ	ets.										

Exhibit __ (NYSEGGASEDO-8) Page 2 of 2

NYSEG Gas Research and Development ("R&D")Actuals, Proposals and Forecast

	NYSEG R&D Components (000)	Fo	recasted	Rate	e Year 2 3/21/2019	F	orecaste	d	Rate	e Year 3	Fore	casted	Rat TME	e Year 4	For	recasted	Rat TME	e Year 5 3/31/2021
1	Millenium	\$		\$	650		-	_	\$	650	\$	-	\$	650	\$	-	\$	650
2	Internal Projects		-		650		-			650		-		650		-		650
3	NYSERDA		9		449		8	3		458		8		468		8		477
4	Total R&D Grand Total	\$	9	\$	1,749	5	8	3	\$	1,758	\$	8	\$	1,768	\$	8	\$	1,777

NYS Division of Homeland Security & Emergency Services Superstorm Sandy Hazard Mitigation Grant Program 4085 State Agency Advance Application

FOR DHSES USE ONLY		
Application Date	Application #	
Project Cost \$	Federal Sł	nare Requested \$
A. APPLICANT INFORMATION (ENTIRE	E PROJECT)	
Applicant (Organization) <u>New York State E</u>	Department of Publi	c Service
Project Title <u>LOI 948 - Install Valves</u> Pressure Main to Medium Pressure in I	on Gas System in Flo Flood Prone Areas	ood Prone Areas AND LOI 949 – Upgrade Low
Project Location <u>Broome, Delaware, and</u>	Tioga Counties in N	lew York
Project Description (brief) <u>Upgrades in Ne</u> New York to improve system resiliency during	ew York State Electri future flooding ever	ic & Gas Corporation's natural gas facilities in centra nts
County Albany	Co	ongressional District _20
FIPS Code	C	ommunity NFIP ID # <u>360001</u>
Authorized Applicant Agent ¹		Point of Contact ²
Michael Worden	Name	Michael Worden
Chief, Electric Distribution Section	Title	Chief, Electric Distribution Section
(518) 486-2498	Telephone #	(518) 486-2498
(518) 473-2420	Fax #	(518) 473-2420
3 Empire State Plaza	Address 1	3 Empire State Plaza
	Address 2	
Albany, NY 12223	City/State/Zip	Albany, NY 12223
michael.worden@dps.ny.us	Email	michael.worden@dps.ny.us

¹ Individual authorized to sign certifications in Section P

² Individual State/FEMA will contact for additional information

	Exhibit (NYSE	GGASEDO-9)
Prepared by (signature)	Date	Page 2 of 21

B. LOCATION

Provide a brief description of the project location. Include the name of the municipality and county, intersecting streets, and easily identified landmarks such as water bodies and structures. Include the street address of the property, if applicable, along with the highway inventory classification.

Specify the number and type of properties affected by the project. For example, a drainage project that affects eighty homes, ten businesses and two schools.

The project site should be marked on a legible location map. More than one map may be required. A United State Geological Survey (USGS) 1:24,000 topographic quadrangle map or a detailed local road map is ideal for use as a location map. Identify the site location including the latitude and longitude. Include a north arrow, title, and legend from the original map on an $8-1/2'' \times 11''$ sheet. Additionally, the identification of waterways and roads surrounding the project area should be noted. If applicable, the identification of adjacent community boundaries should be identified on these maps.

Iberdrola USA's proposed project encompasses 13 locations of natural gas distribution facilities in central New York's Broome, Delaware, and Tioga counties. The facilities are owned and operated by its subsidiary New York State Electric & Gas Corporation ("NYSEG"). The project footprint is detailed in the attached appendix, which contains maps that identify the routes and locations where infrastructure will be upgraded, the water level during the last major flood in 2011, and a topographical layout of each affected service area.

The project will positively affect 5,351 NYSEG customers, including residential, commercial, and institutional users, located in flood prone areas in the towns of Apalachin, Binghamton, Deposit, Endicott, Hancock, Johnson City, Kirkwood, Owego, Vestal, and Walton. As detailed in the following sections, the project will improve resiliency during future flooding events along the Susquehanna River and Delaware River in central New York by reducing service downtime.³

Location	Town	Project Description	County	Мар
1	Binghamton	Eliminate New St & Edna Ave Regulator Stations and upgrade neighborhood	Broome	1
2	Binghamton	Eliminate Prospect St Regulator Station and upgrade neighborhood	Broome	1
3	Johnson City	Eliminate Corliss Ave Regulation Station and upgrade neighborhood	Broome	1
4	Apalachin	Relocate Apalachin POD outside of floodplain	Tioga	1
5	Binghamton	Move Baltimore Regulator Station above high water line	Broome	1
6	Endicott	Move W. Wendell Regulator Station above high water line & retire Main St station	Broome	1
7	Kirkwood	Relocate regulator station outside of floodplain	Broome	1
8	Vestal	Vestal Center loop	Broome	1

³ Deposit is located on the West Branch of the Delaware River and Hancock is located on the East Branch of the Delaware River. Both towns experienced similar widespread flooding in recent storms as the towns located along the Susquehanna River.

		L		Page 4 of 21
9	Binghamton	Valve Installations For Existing Systems Sectionalizing Flood Prone Areas - No Other Work Planned	Broome	1
10	Deposit	Town border station relocate, village pressure upgrade, retire station	Broome	2
11	Hancock	Valve installation	Delaware	3
12	Walton	Relocate regulator station outside of floodplain	Delaware	4
13	Owego	Replace leak prone main and pressure upgrade for village	e Tioga	5

Exhibit

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C. DESCRIPTION OF EXISTING CONDITIONS

Describe the existing conditions that produce the events your project is intended to mitigate. Provide a detailed description of the existing conditions and the frequency with which damages occur. Describe the location, source of the hazard, and the history and extent of the damage. Include newspaper articles, insurance records, and other documentation as necessary.

If the project is preventative, that is if it is intended to prevent a disastrous event (e.g. landslide) from occurring, then use the above listing to project the effects the event would probably produce if it actually occurred. Describe how frequent the landslide is occurring or the rate of bank erosion.

Include sketches and photographs to help describe the problem, but do not describe the proposed solution in this section. Use additional sheets as necessary.

Compared to historical averages, we have seen increasing frequency and intensity of extreme weather events in the U.S. over the past decade, which has had a devastating impact on energy infrastructure. In New York, recent flooding events have inflicted widespread damage to the state's natural gas distribution infrastructure. Widespread flooding in New York's Susquehanna River Valley caused prolonged service outages for customers across the region in 2006 and 2011, costing billions of dollars in repairs and lost economic output.

The costly effects of storms in New York have produced a strong political response at the federal and state level. Following Hurricane Sandy, President Obama and Governor Cuomo both appointed Commissions to develop effective rebuilding strategies to mitigate the impact of future storms. In the summer of 2013, the Commissions published reports with recommendations, which convey two common messages: 1) the government and private sector must expect an increasing frequency and intensity of extreme weather events moving forward, and 2) existing energy infrastructure needs to be reinforced with a focus on resiliency.

At the federal level, the Obama Administration directed the U.S. Department of Energy (D.O.E.) to examine current and potential future impacts of climate trends on the U.S. energy sector. According to D.O.E, weather-related costs in the sector are expected to rise as climate change increases the frequency and intensity of hurricanes and other extreme weather events. ⁴ D.O.E. concludes that increasing resilience of energy infrastructure to events such as flooding, including hardening of existing facilities and structures, is needed to improve system reliability.

⁴ Pg. 1, U.S. Energy Sector Vulnerabilities to Climate Change and Extreme Weather. Available at <u>http://energy.gov/downloads/us-energy-sector-vulnerabilities-climate-change-and-extreme-weather</u>.

In addition, the Obama Administration created the Hurricane Sandy Rebuilding Task Force to develop a comprehensive regional approach to strengthening infrastructure throughout the Northeast. In August 2013, the Task Force published its final report, which concludes resilient energy systems could have helped limit service outages during recent storms.⁵ The Task Force emphasizes that recovery energy investments must ensure future resiliency, and since most energy infrastructure is privately owned and operated, these investments will only come about through close cooperation between the federal and state governments and the private sector.

At the state level, the Cuomo Administration appointed two commissions to develop recommendations. In November 2012, the NYS2100 Commission was convened to examine and evaluate key vulnerabilities in New York's critical infrastructure systems, and to recommend actions that should be taken to strengthen and improve the resilience of those systems. According to the Commission's final report, New York's critical energy infrastructure must be strengthened, with a focus on examining critical component locations to identify and bolster those most prone to damage by weather-related stresses.⁶

Lastly, in light of the impact of recent storms on the essential services provided to New Yorkers, Governor Cuomo created the Moreland Commission to conduct a comprehensive investigation of the practices of New York State's utilities. In its final report, published in June 2013, the Commission states that it is necessary for utilities to harden their systems by investing in infrastructure that is designed to be more resilient:⁷

While this will be a costly endeavor amounting to billions of investment dollars statewide, it is nonetheless prudent in light of the concomitant human and economic losses experienced during the recent storm events. Just as a guardrail at the top of a mountain can prevent the need for ambulances below, investments made to reduce storm damage will also reduce utilities' restoration costs and times in future storms. (36)

In central New York, recent storms have caused two 200-year floods that inflicted widespread damage of natural gas distribution infrastructure located along the Susquehanna River and Delaware River.⁸⁹ As homes and businesses were flooded, the gas lines providing service to the premises also filled with water. This not only disabled service, but caused prolonged outages due to extensive pumping and cleanup requirements to return the facilities to operational condition. Due to the disproportionate impact of recent floods in Broome, Delaware, and Tioga counties, NYSEG has prioritized these areas for storm hardening initiatives to upgrade current infrastructure to be more resilient during future floods.

D. PROPOSED PROJECT (ENTIRE PROJECT)

Provide a complete and detailed description that will provide the reviewer with an understanding of the proposed project by describing your objectives, methodology, feasibility, outcomes, milestones, resources, deliverables, as well as the proposed project's benefits. The narrative should establish the purpose of the project (e.g. what are you intending to do?) and the "who, what, where, when, and how"

⁵ Pg. 64, *Hurricane Sandy Rebuilding Strategy: Stronger Communities, A Resilient Region*. Available at <u>http://portal.hud.gov/hudportal/HUD?src=/sandyrebuilding</u>.

⁶ Pg. 15, NYS 2100 Commission: Recommendations to Improve the Strength and Resilience of the Empire State's Infrastructure. Available at <u>http://www.rockefellerfoundation.org/blog/nys-2100-commission-report-building</u>.

⁷ Pg. 36, *Moreland Commission on Utility Storm Preparation and Response: Final Report*. Available at <u>http://utilitystormmanagement.moreland.ny.gov/</u>.

⁸ "Northeast is Soaked Again, Forcing Evacuations", September 8, 2011, New York Times. Available at

http://www.nytimes.com/2011/09/09/nyregion/remnants-of-tropical-storm-soak-an-already-battered-northeast.html

⁹ See attached appendix for photos of 2011 flood along the Susquehanna River.

of the proposal, including the means to implement and construct it, and description of any associated construction activities, your experience, etc. (e.g., How will the project be implemented and by whom?)

NYSEG's project aims to create more resilient gas infrastructure in 10 towns along the Susquehanna River and Delaware River in central New York. The project entails upgrading 168,761 feet of gas lines from low to medium pressure and installing 179 isolation valves. The useful life of the project is approximately 60 years for the main lines and 20 years for the isolation valves.

Town		Total Gas Customers	Total Customers in Flood Zone	Total Critical Customers in Flood Zone
C. Binghamton		18,662	769	72
T. Binghamton		858	0	
T. Conklin		1,111	491	
V. Endicott		4,846	26	
V. Johnson City		6,510	531	
T. Kirkwood		703	59	
T. Owego		2,680	191	2
V. Owego		1,785	1,206	9
T. Union		11,581	927	14
T. Vestal		7,419	595	7
V. Walton		1,501	556	8
	Total	57,656	5,351	112

There are 57,656 total gas customers in the 10 affected towns, with 5,351 customers and 112 critical facilities located in flood zones:¹⁰

When flooding is expected to occur, county emergency services personnel order home evacuations and request NYSEG to turn off gas service at premises. Crews then must go to each premise to shut off services manually. However, during recent floods water levels rose so rapidly that there was not enough time to turn off services at many locations before waters became too high to safely work. As a result, the lines connecting these homes flooded back to regulator stations, the local distribution hub, knocking out service to wide areas and creating a risk for ruptured gas lines to ignite.

NYSEG's project aims to prevent this extensive flooding penetration in two ways: 1) upgrading pressure mains from low to medium pressure and 2) installing strategically placed valves throughout the system to isolate vulnerable sections. Low pressure gas systems easily fill with water if the level of water becomes higher than the height of an opening in the piping because water exerts a greater amount of pressure than is contained in the pipe. Replacing low pressure piping systems prevents this filling and thus improves reliability and the service restoration recovery speed after flooding events. Second, installing isolation valves in strategic locations can be used to isolate sections of pipeline and regulator station feed points in the event of catastrophic leaks or emergencies. Taken together, this approach will significantly reduce future downtime during future flooding events; as soon as the water level recedes, gas service should be able to be restored.

During the most recent flood of 2011, 8,556 customers in the identified towns lost service for over 21 days. Subsequent recover efforts cost NYSEG \$9,095,005. To achieve these two

objectives and mitigate future flood damage, the 13 locations will have the following work completed:

Location	Town	Project Description
1	Binghamton	Eliminate New St & Edna Ave Regulator Stations and upgrade neighborhood
2	Binghamton	Eliminate Prospect St Regulator Station and upgrade neighborhood
3	Johnson City	Eliminate Corliss Ave Regulation Station and upgrade neighborhood
4	Owego	Relocate Appalachian POD outside of floodplain
5	Binghamton	Move Baltimore Regulator Station above high water line
6	Endicott	Move W. Wendell Regulator Station above high water line & retire Main St station
7	Kirkwood	Relocate regulator station outside of floodplain
8	Vestal	Vestal Center loop
9	Binghamton	Valve Installations For Existing Systems Sectionalizing Flood Prone Areas – No Other Work Planned
10	Deposit	Town border station relocate, village pressure upgrade, retire station
11	Hancock	Valve installation
12	Walton	Relocate regulator station outside of floodplain
13	Owego	Replace leak prone main and pressure upgrade for village

Location	Town	Length of Main (ft)	Main to Replace (ft)	# Services to Replace	# Valves
			• • • •	·	
1	Binghamton	34,142	10,562	262/404	25
2	Binghamton	25,906	6,799	254/337	10
3	Johnson City	7,530	106	94/108	4
4	Owego	3,500	-	-	-
5	Binghamton	2,500	-	-	-
6	Endicott	4,500	-	-	-
7	Kirkwood	6,200	6,200	-	-
8	Vestal	20,800	20,800	-	-
9	Binghamton	-	-	-	83
10	Deposit	22,060	22,060	242/277	11
11	Hancock	-	-	-	3
12	Walton	5,200	5,200	-	13
13	Owego	36,423	17,414	313/477	30
	-	168,761	89,141	1,165/1,603	179

As a first step to NYSEG's long-term hardening plan for the region, the project constitutes a functional portion of the company's full solution. NYSEG's commitment to provide 25 percent local share is assurance that the project will be completed pending approval. Because the project entails modifying existing infrastructure there will not be a significant new impact on the Area of Potential Effect, as presented in the attached appendix. NYSEG will implement a number of best practices to minimize environmental impact of replacing gas lines, and since the proposed facilities will have the same physicality as existing infrastructure, there will be minimal new impact.

The estimated cost of the project is \$35,863,250, and a detailed budget is provided in Section H. In terms of execution, NYSEG has upgraded gas facilities in its service territory for decades. The company has a well-established, proven process for safely and responsibly completing construction projects and well qualified staff with a wealth of experience successfully performing this scope of work in other parts of New York.

The project's planning and deployment process will be managed by a mix of internal NYSEG resources and qualified outside contractors, and involves five conceptual phases:

- **Initiation Phase.** The project is initiated in this first phase. Specifically, NYSEG will finalize its internal processes and procedures necessary to implement and test project components. The Project Charter is a key deliverable developed during this phase.
- **Planning Phase.** The project management plan is developed during this phase, which includes defining roles/responsibilities, how the project team will communicate internally and with outside contractors, and how risks, issues, and deliverables will be managed. At this time, protocols and procedures for team interaction are developed, teams are organized, and vendors are selected. Agreements will be finalized on the metric used for collection methods to measure the projects benefits, terms of the contracts and project scope/budget.
- **Execution Phase**. During this phase, each team member will begin executing their plans for the project. Specifically, this phase contains the build out of infrastructure followed by testing. Project management will be performed by internal Project Managers (PM), who will supervise two Field Construction Coordinators (FCC) overseeing site preparation, installation, and commissioning tasks:

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- <u>PM responsibilities</u>: PMs will provide the oversight of all contractors performing construction and commissioning activities, as well as the coordination between the company and the contractor as required. PMs will also provide assistance resolving field related questions and providing services as required during the construction, test and commissioning segments of the project. PMs will maintain detailed schedules, monitor and report on project status, risk, and issues for their assigned portion of the project, and will hold periodic meetings with senior management to report progress, issues, and risks threatening project progress.
- <u>FCC responsibilities</u>: Each FCC will oversee project activities awarded to contractors. Each FCC will represent NYSEG by working with the contractor supervisor for the duration of the project. The Field Construction Coordinator will monitor the contractor to help ensure conformity of project work to Iberdrola USA safety and performance standards.
- **Implementation Phase.** This phase commences with the final preparation for the migration of upgraded infrastructure and systems to the operations control center via a cutover. Once the systems are ready, NYSEG is ready to commence operation, and quality assurance has certified the transition to operation, the systems are incorporated into the production environment and production operations commence.
- **Closure Phase**. In this last phase, the project team will ensure that all deliverables are completed, lessons learned are documented, project materials are archived, financial transactions are complete, and the project and contracts are ready for closure.

As stated above, once complete the project will produce a number of benefits for the 10 towns by increasing resiliency and reducing outage times during future flooding events. In addition to the economic value in helping reduce future downtime, the project's impact on system resiliency will support the local property, life safety, and emergency services. There are 112 critical facilities in the project's flood prone

areas. Recent floods have proven that it is vital that public safety, hospitals, nursing homes, telecommunications, water districts, and schools (shelters) remain fully operational to provide emergency services during and after storms. Overall, this project will help make critical facilities more resilient in future storms by helping prevent prolonged outages.

E. PROPOSED PROJECT ALTERNATIVES

All applications must include an evaluation of the proposed project and two feasible alternatives in addition to the "No Action" alternative. Describe at least two alternate approaches that were considered to solve the problem noted in the Existing Conditions Section and include:

- a) The estimated cost of each alternative;
- b) A brief explanation as to why each alternative was not chosen over the proposed project.

In addition to "No Action", NYSEG considered two alternatives to the proposed project. The estimated cost and reasoning as to why each alternative was not chosen over the proposed project are detailed below:

Alternative	Estimated Cost	Explanation
No Action	\$0	If NYSEG does not upgrade its gas facilities, homes, businesses, and critical facilities located in flood prone areas will remain vulnerable to prolonged outages during future flooding events. Comparable storms to recent ones will cause extensive damage to gas facilities and will require large scale, expensive recovery efforts.
Replace all gas mains with new facilities in flood prone areas instead of retrofitting existing mains to upgrade from low to medium pressure.	\$100,000,000+	Installing all new gas lines would be prohibitively expensive compared to upgrading existing facilities, as NYSEG has made significant investment in its current infrastructure which still has remaining useful life.
Install reinforcement mains for redundancy throughout flood prone areas.	\$100,000,000+	Installing reinforcement mains would enable system redundancy, but would be prohibitively expensive and would create a significant environmental impact through the trenching work required to install new lines.

F. PROJECT PHOTOS

Provide photographs of the project site in all four geographic directions. Include two sets of photos, one taken away from the middle of site looking outward, and one taken from the site's edges looking inward. Also include photos of any structure or unique feature likely to be impacted by the project. Number all photos consecutively and provide a photo key map which notes the location and view. The Applicant may also provide aerial photography of the project area, if available.

See maps in the attached appendix for the layout and aerial shots of each affected service area.

G. PROJECT DRAWINGS

Drawing detailing the proposal must be included in the application. They should be large enough to show the location of existing and proposed structures, and surrounding areas that may be impacted by the project, such as staging areas and temporary access points. Existing and proposed conditions may also be shown on separate drawings. Detailed engineering plans are not necessary, but can be submitted if available. The drawing may be sketched by hand. Include photographs of the proposed project site with your drawings as described later in this section.

See maps in the attached appendix for project drawings showing existing and proposed conditions. The new facilities will have approximately the same dimensions as current infrastructure.

H. MAPS AND OTHER INFORMATION

Please include the following maps or information with the application. Wetland maps and soils information can be obtained from your County Soils and Water Conservation District. *Please mark project location on all maps.*

- USDA-NRCS Soils Classification Map with definitions
- Topography Map
- National Wetlands Inventory Map with legend (if applicable)
- State Regulated Freshwater Wetlands Map with legend (if applicable)
- Tax maps (Acquisition/Relocation/Elevation projects only)

See maps in the attached appendix.

I. ESTIMATED BUDGET INFORMATION

Your budget should include all anticipated costs associated with your project. Keep in mind, as an example, that it could be 2 years from application submittal to when the actual project is half completed. With that said your cost estimates should be reflective of any potential price increases. Your budget should include at a minimum the project's costs in the following categories: Engineering and Design, Environmental Consultations, Permitting, Project Management. Inspection Fees, Construction, Labor, Materials and Supplies, Equipment, Site Restoration. The FEMA Construction Budget Form-FEMA 20-15 is included as a separate attachment.

See attached FEMA Construction Budget Form 20-15 for a budget summary.

The total estimated cost of the proposed project is \$35,863,250. This amount includes all capital expenses for engineering and design, environmental consultations, permitting, project management, construction labor, materials and supplies, and equipment.

Location	Town	Project Description	Estimated Cost
1	Binghamton	Eliminate New St & Edna Ave Regulator Stations	\$4,415,500
2	Binghamton	and upgrade neighborhood Eliminate Prospect St Regulator Station and	\$3,239,600

			Page 11 of 21
		upgrade neighborhood	
3	Johnson City	Eliminate Corliss Ave Regulation Station and upgrade neighborhood	\$721,700
4	Owego	Relocate Appalachian POD outside of floodplain	\$1,200,000
5	Binghamton	Move Baltimore Regulator Station above high water line	\$950,000
6	Endicott	Move W. Wendell Regulator Station above high water line & retire Main St station	\$1,325,000
7	Kirkwood	Relocate regulator station outside of floodplain	\$1,565,000
8	Vestal	Vestal Center loop	\$4,160,000
9	Binghamton	Valve Installations For Existing Systems Sectionalizing Flood Prone Areas – No Other Work Planned	\$1,452,500
10	Deposit	Town border station relocate, village pressure upgrade, retire station	\$9,147,850
11	Hancock	Valve installation	\$52,500
12	Walton	Relocate regulator station outside of floodplain	\$1,467,500
13	Owego	Replace leak prone main and pressure upgrade for village	\$6,166,100

\$35,863,250

Exhibit (NYSEGGASEDO-9)

The following tables detail costs for each project location:

Location 1: Binghamton – Eliminate New St & Edna Ave Regulator Stations and upgrade neighborhood

Description of Work	Main to Repl. (ft)	Services to Repl.	# of Valves	Average Cost	Subtotal
	/	•			
Replace S & SWP main - Installation	10,562			\$150	\$1,584,300
Replace S & SWP main - Engineering	10,562			\$50	\$528,100
Replace services - Installation		262		\$3,000	\$786,000
Replace services - Engineering		262		\$1,000	\$262,000
Re-piping for svcs / add regs - O&M		404		\$1,000	\$404,000
Installing regulators - O&M		404		\$500	\$202,000
Pressure upgrade - O&M				\$10,000	\$161,600
Valves - Installation			25	\$15,000	\$375,000
Valves - Engineering			25	\$2,500	\$62,500
Retire New St regulator station				\$50,000	\$50,000
					\$4,415,500

Location 2: Binghamton – Eliminate Prospect St Regulator Station and upgrade neighborhood

Description of Work	Main to Repl. (ft)	Services to Repl.	# of Valves	Average Cost	Subtotal
Replace S & SWP main - Installation	6,799			\$150	\$1,019,850
Replace S & SWP main - Engineering Replace services - Installation	6,799	254		\$50 \$3,000	\$339,950 \$760,500

		Exhibit	(NYSEG	GASEDO-9)
			I	Page 12 of 21
Replace services - Engineering	254		\$1,000	\$254,000
Re-piping for svcs / add regs - O&M	337		\$1,000	\$337,000
Installing regulators - O&M	337		\$500	\$168,500
Pressure upgrade - O&M			\$10,000	\$134,800
Valves - Installation		10	\$15,000	\$150,000
Valves - Engineering		10	\$2,500	\$25,000
Retire Prospect St regulator station			\$50,000	\$50,000
				\$3,239,600

Location 3: Johnson City – Corliss Avenue

Description of Work	Main to Repl. (ft)	Services to Repl.	# of Valves	Average Cost	Subtotal
Replace S & SWP main - Installation	106			\$150	\$15,900
Replace S & SWP main - Engineering	106			\$50	\$5,300
Replace services - Installation		94		\$3,000	\$282,000
Replace services - Engineering		94		\$1,000	\$94,000
Re-piping for svcs / add regs - O&M		108		\$1,000	\$107,500
Installing regulators - O&M		108		\$500	\$54,000
Pressure upgrade - O&M				\$10,000	\$43,000
Valves - Installation			4	\$15,000	\$60,000
Valves - Engineering			4	\$2,500	\$10,000
Retire Corliss Ave LP regulator station				\$50,000	\$50,000
					\$721,700

Location 4: Owego - Relocate Appalachian POD outside of floodplain

Description of Work	Length of Main (ft)	Average Cost	Units	Subtotal
Install new gas main - installation Install new gas main - engineering	3,500 3,500	\$200 \$50	Ft Ft	\$700,000 \$175,000
Install new regulator station - installation Install new regulator station -		\$200,000		\$200,000
engineering		\$75,000		\$75,000
Retire regulator station		\$50,000		\$50,000
				\$1,200,000

Location 5: Binghamton – Move Baltimore Regulator Station above high water line

Length of Main (ft)	Average Cost	Units	Subtotal
2,500	\$200	ft	\$500,000
2,500	\$50 \$200,000	ft	\$125,000 \$200,000
	Length of Main (ft) 2,500 2,500	Length of Main (ft) Average Cost 2,500 \$200 2,500 \$50 \$200,000 \$200,000	Length of Main (ft) Average Cost Units 2,500 \$200 ft 2,500 \$50 ft 2,500 \$50 ft

		\$950,000
Retire regulator station	\$50,000	\$50,000
installation Install new regulator station - engineering	\$75,000	\$75,000
		Page 13 of 21

Exhibit (NYSEGGASEDO-9)

Location 6: Endicott – Move W. Wendell Regulator Station above high water line & retire Main St station

Description of Work	Length of Main (ft)	Average Cost	Units	Subtotal
Install new gas main - installation	4,500	\$200	ft	\$900,000
Install new gas main - engineering	4,500	\$50	ft	\$225,000
Install new regulator station -				
installation		\$100,000		\$100,000
Install new regulator station -		•		•
engineering		\$50,000		\$50,000
Retire regulator station		\$50,000		\$50,000
				\$1,325,000

Location 7: Francis St Kirkwood – Relocate regulator station outside of floodplain

Description of Work	Main to Repl (ft)	Services	Average Cost	Subtotal
Decemption of from			Attoluge cool	Castolai
Replace S & SWP main - Installation	6,200		\$150	\$930,000
Replace S & SWP main - Engineering	6,200		\$50	\$310,000
Replace services - Installation		0	\$3,000	\$0
Replace services - Engineering		0	\$1,000	\$0
Re-piping for svcs / add regs - O&M		0	\$1,000	\$0
Installing regulators - O&M		0	\$500	\$0
Pressure upgrade - O&M			\$10,000	\$0
Valves - Installation			\$15,000	\$0
Valves - Engineering			\$2,500	\$0
Install Purchase Station Installation			\$1,700,000	\$0
Install Purchase Station Engineering			\$300,000	\$0
River Bore			\$1,000,000	\$0
Retire regulator station			\$50,000	\$50,000
Install Regulator Station			\$200,000	\$200,000
Engineering Regulator Station			\$75,000	\$75,000
				\$1,565,000

Location 8: Vestal Center loop

Description of Work	Main to Repl. (ft)	Average Cost	Subtotal
Replace S & SWP main - Installation Replace S & SWP main - Engineering	20,800 20,800	\$150 \$50	\$3,120,000 \$1,040,000 \$4,160,000

Location 9: Valve Installations For Existing Systems For Sectionalizing Flood Prone Areas Where No Other Work Is Planned

Description of Work	# of Valves	Average Cost	Subtotal
Valves - Installation	83	\$15,000	\$1,245,000
Valves - Engineering	83	\$2,500	\$207,500
			\$1,452,500

Location 10: Deposit – Town border station relocate, village pressure upgrade, retire station

Description of Work	Main to Repl. (ft)	Services to Repl.	# Valves	Average Cost	Subtotal
Replace S & SWP main - Installation	22,060			\$150	\$3,309,000
Replace S & SWP main - Engineering	22,060			\$50	\$1,103,000
Replace services - Installation		242		\$3,000	\$726,000
Replace services - Engineering		242		\$1,000	\$242,000
Re-piping for svcs / add regs - O&M		277		\$1,000	\$276,500
Installing regulators - O&M		277		\$500	\$138,250
Pressure upgrade - O&M				\$10,000	\$110,600
Valves - Installation			11	\$15,000	\$165,000
Valves - Engineering			11	\$2,500	\$27,500
Install Purchase Station Installation				\$1,700,000	\$1,700,000
Install Purchase Station Engineering				\$300,000	\$300,000
River Bore				\$1,000,000	\$1,000,000
Retire regulator station				\$50,000	\$50,000
					\$9,147,850

Location 11: Hancock – Valve Installation

Description of Work	# of Valves	Average Cost	Subtotal
Valves - Installation	3	\$15,000	\$45,000
Valves - Engineering	3	\$2,500	\$7,500
			\$52,500

		# of			
	Main to	Services	# of	Average	
Description of Work	Repl. (ft)	to Repl.	Valves	Cost	Subtotal
Replace S & SWP main - Installation	5,200			\$15 0	\$780,000
Replace S & SWP main - Engineering	5,200			\$50	\$260,000
Replace services - Installation		0		\$3,000	\$0
Replace services - Engineering		0		\$1,000	\$0
Re-piping for svcs / add regs - O&M		0		\$1,000	\$0
Installing regulators - O&M		0		\$500	\$0
Pressure upgrade - O&M				\$10,000	\$0
Valves - Installation			13	\$15,000	\$195,000
Valves - Engineering			13	\$2,500	\$32,500
Install Purchase Station Installation				\$1,700,000	\$0
Install Purchase Station Engineering				\$300,000	\$0
River Bore				\$1,000,000	\$0
Retire regulator station				\$50,000	\$50,000
Install Regulator Station				\$100,000	\$100,000
Engineering Regulator Station				\$50,000	\$50,000
					\$1,467,500

Location 12: Walton – Relocate regulator station outside of floodplain

Location 13: Owego - Replace leak prone main and pressure upgrade for village

		#			
Description of Work	Main to Repl. (ft)	Services to Repl.	# of Valves	Average Cost	Subtotal
Replace S & SWP main - Installation	17,414			\$150	\$2,612,100
Replace S & SWP main - Engineering	17,414			\$50	\$870,700
Replace services - Installation		313		\$3,000	\$939,000
Replace services - Engineering		313		\$1,000	\$313,000
Re-piping for svcs / add regs - O&M		477		\$1,000	\$477,000
Installing regulators - O&M		477		\$500	\$238,500
Pressure upgrade - O&M				\$10,000	\$190,800
Valves - Installation			30	\$15,000	\$450,000
Valves - Engineering			30	\$2,500	\$75,000
					\$6,166,100

J. WORK SCHEDULE

Provide a work schedule for the proposed project that reflects a realistic timeframe in which to complete it. Also include a Gantt chart, or similar, to show any overlapping events in schedule. Take into account items such as engineering and design, permitting delays, weather conditions, limited construction season, seasonal restrictions, bidding process, etc., when developing the work schedule.

The work schedule for each project scope is detailed in the attached Gantt charts, with estimated durations included below:

(NYSEGGASEDO-9) Exhibit Page 16 of 21

Location	Town	Project	Estimated Duration
1	Binghamton	Eliminate New St & Edna Ave Regulator Stations and upgrade neighborhood	55 weeks
2	Binghamton	Eliminate Prospect St Regulator Station and upgrade neighborhood	54 weeks
3	Johnson City	Eliminate Corliss Ave Regulation Station and upgrade neighborhood	28 weeks
4	Owego	Relocate Appalachian POD outside of floodplain	29 weeks
5	Binghamton	Move Baltimore Regulator Station above high water line	22 weeks
6	Endicott	Move W. Wendell Regulator Station above high water line & retire Main St station	21 weeks
7	Kirkwood	Relocate regulator station outside of floodplain	23 weeks
8	Vestal	Vestal Center loop	39 weeks
9	Binghamton	Valve Installations For Existing Systems Sectionalizing Flood Prone Areas - No Other Work Planned	43 weeks
10	Deposit	Town border station relocate, village pressure upgrade, retire station	48 weeks
11	Hancock	Valve installation	11 weeks
12	Walton	Relocate regulator station outside of floodplain	22 weeks
13	Owego	Replace leak prone main and pressure upgrade for village	59 weeks

K. FLOODPLAIN INFORMATION

- Waterway/Water body: Susquehanna River and Delaware River 1.
- 2. Flood Plain Determination:
 - Regulatory Floodway¹¹ □ Not in Special Flood Hazard Area
 - ☑ 100-year Floodplain¹² • Coastal Hazard Area (V zone)

The project locations were chosen because they are all in a Special Flood Hazard Area along the Susquehanna River or Delaware River. The purpose of the project is to mitigate future flood damage in these areas.

Flood Hazard Zone: designation (i.e. A10, C, AE, V):

¹¹ Technical analysis demonstrating no-rise in the discharge of the base flood elevation and Floodplain Development permit required. ¹² Local Floodplain Development permits are required prior to commencement of construction.

Exhibit (NYSEGGASEDO-9) Page 17 of 21

100-Year base flood elevation at the site is ______ Ft. NGVD (MSL)

(This information can be provided as best available data from sources such as: NYSDEC, local engineering records, etc.)

Coastal Barrier
 Otherwise Protected Area (OPA)

(If applicable, include a copy of the Flood Insurance Rate Map (FIRM) with the project site and Community-Panel Number identified and a copy of the Applicant's Local Law for Flood Damage Prevention)

Floodplain Consultation

Did you consult Local and State	Floodplain Administrators? 🗷 Yes I	🗆 No Da	October 28, 2013 tes:
Local Floodplain Administrator:	Larry Lepak (Broome & Tioga)	Phone:	607-775-2545
Local Floodplain Administrator:	Tom Blanchard (Delaware)	Phone:	518-357-2379
State Floodplain Administrator:	William Nechamen	Phone:	518-402-9029

L. WETLANDS

Using additional sheets of paper labeled with this section letter & title, answer the following questions:

- a) Are freshwater or tidal wetlands located within or adjacent to the project site?
- b) What is the approximate size of the wetland?
- c) Does the site contain hydric soils?
- d) Will project directly affect wetlands? If yes, describe and quantify wetland impacts (if known).
- e) Will project indirectly affect wetlands, such as draining of wetland due to enhanced drainage?
- f) Has Applicant considered project alternatives that would not affect wetlands? Explain.
- g) Include a wetlands map with project location clearly marked on the map. (Include wetlands map legend and definitions as well).

M. COASTAL ZONES

Using additional sheets of paper labeled with this section letter & title, answer the following questions:

a) Is the project located in a designated coastal zone?

 b) Does the community have an adopted Local Waterfront Revitalization Plan (LWRP)? If so, is project consistent with plan? (If yes, provide a copy of plan's relevant policy/project goal, etc. highlighted.)

N. OTHER FUNDING AGENCIES

- 1. In No I Yes Has this project been submitted to other State or Federal agencies for funding?
- 2. No Yes Has this project or project been studied by government, academic or scientific organizations?
- 3. In No Section 2. Se

If you answered "yes" to any of the questions above, please provide the agency name, address, point of contact, phone number, and amount requested.

O. PUBLIC NOTICE/OFFICIAL NEWSPAPER INFO (ENTIRE PROJECT)

FEMA is required to publish a Public Notice for any project that has the potential to affect a wetland or floodplain. Provide the following about your community's official newspaper(s):

Name	Press & Sun Bulletin Newspaper					
Address	33 Lewis Road, Binghamton, NY 13905					
Telephone #	<u>607-798-1234</u> E-mail <u>N/A</u>					

P. REQUIRED CERTIFICATIONS

GENERAL CONDITIONS

The undersigned submits this application under the Federal Emergency Management Agency's Hazard Mitigation Grant Program (HMGP) and certifies it will fulfill all program requirements.

The undersigned acknowledges that actions initiated and/or completed without fulfilling the specific documentation and procedural requirements of the National Environmental Policy Act (NEPA) may not be considered for FEMA funding. Only in rare situations, where actions were initiated in an emergency situation to prevent or reduce an immediate threat to life, health, property or severe economic losses can exceptions be considered, if otherwise eligible. However, no project application can be considered for FEMA funding that was initiated prior to the receipt of this application from the NYS Division of Homeland Security & Emergency Services (DHSES).

The undersigned acknowledges that to retain eligibility for funding, the applicant may not initiate work on this project prior to FEMA approval. Furthermore, that as a condition of any project approval; the applicant acknowledges that they are responsible for obtaining all required permits prior to project initiation. Copies of all permits are to be forwarded to DHSES. Any modifications to the approved scope of work must be submitted to FEMA (through DHSES) for approval. All site inspections and maintenance should be documented and maintained by the applicant, since this would be essential in determining the eligibility of federal funding for future damages arising at the sites.

The undersigned acknowledges that other types of federal assistance that have been received for this project has been identified within this application. In addition all requests or anticipated requests for funding made to other federal agencies or sources are also identified within this application.

MAINTENANCE AGREEMENT

The *City/Town/Village/County* of ______, State of ______, hereby agrees that if it receives any Federal aid as a result of the attached project application, it will accept responsibility, at its own expense if necessary, for the routine maintenance of any real property, structures, or facilities acquired or constructed as a result of such Federal aid. Routine maintenance shall include, but not be limited to, such responsibilities as keeping vacant land clear of debris, garbage, and vermin; keeping stream channels, culverts, and storm drains clear of obstructions and debris; and keeping detention ponds free of debris, trees, and woody growth.

The purpose of this agreement is to make clear the Subgrantee's maintenance responsibilities following project award and to show the Subgrantee's acceptance of these responsibilities. It does not replace, supercede, or add to any other maintenance responsibilities imposed by any Federal law or regulation and which are in force on the date of project award.

Tri-annual inspections of each property must be documented and submitted to the State by the applicant.

FUNDING CERTFICATION

I hereby certify that the 25% local share of this project:

- ☑ Is available
- □ Will be available within 3 months of submitting this project application
- □ Will require the following action by the Applicant and is anticipated to be available within _____ months of

project approval:

Signature of	
Authorized Applicant Agent:	Date:

STATE-LOCAL DISASTER ASSISTANCE AGREEMENT

404 HAZARD MITIGATION GRANT PROGRAM

This agreement between the State of New York and New York State Electric and Gas Corporation

(Applicant's Full Name)

shall be effective on the date signed by the applicant. It shall apply to all assistance funds provided by or through the State to the applicant as a result of the declaration of major disasters by the President of the United States FEMA 4085 NY. The Applicant's designated representative certifies that He/She has legal authority to apply for assistance on behalf of the applicant, and that the Applicant will:

- 1. Provide all necessary financial and managerial resources to meet the terms and conditions of receiving federal and/or state disaster assistance.
- 2. Use disaster assistance funds solely for the purpose for which these funds are provided and as approved by the Governor's Authorized Representative (GAR).
- 3. Agree to assume costs of the non-federal (at least 25% of the projects total cost).
- 4. Designate an Applicant's local Agency to act on the jurisdiction's behalf and will establish and maintain a proper accounting system to record expenditures of disaster assistance funds in accordance with generally accepted accounting standards or as directed by the GAR.
- 5. Return to the State, within 15 days of a result for payment by the GAR, any advance funds received which are not supported by audit or other federal or state review of the applicant's compliance with program requirements.
- 6. Give federal and state agencies, designated by the GAR, access to and the right to examine all records and documents related to the use of disaster assistance funds.

- 7. Comply with all applicable codes and standards as pertain to this project and agree to provide all appropriate project maintenance.
- 8. Comply with all applicable provisions of federal and state law and regulations with regard to the procurement of goods and services.
- 9. Begin project work within 90 days of the approval of the grant and follows a pre-approved timetable for project completion.
- 10. Comply with all federal and state statutes and regulations relating to non-discrimination.
- 11. Comply with provisions of the Hatch Act limiting political activities of public employees.
- 12. Comply with the National Flood Insurance Program (NFIP) purchase requirements.
- 13. Not enter into cost-plus-percentage-of-cost contracts for the completion of HMGP project work.
- 14. Not enter into contracts for which payment is contingent upon receipt of federal or state funding.
- 15. Not enter into contracts with any party debarred or suspended from participating in federal assistance programs.

Signed for the Applicant:

Typed Name	Signature
Title	Date
Signed for the State:	
Typed Name	Signature
Title	Date

FEDERAL EMERGENCY MANAGEMENT AGENCY CERTIFICATION REGARDING DRUG-FREE WORKPLACE REQUIREMENTS (GRANTEES OTHER THAN INDIVIDUALS)

This certification is required by the regulations implementing the Drug-Free Workplace Act of 1988, 44 CFR Part 17, Subpart F. The regulations, published in the 1989 Federal Register, require certification by grantees prior to award, that they will maintain a drug-free workplace. The certification set out below is a material representation of fact upon which reliance will be placed, when the agency determines to award the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or government-wide suspension or debarment (See 44 CFR Part 13, Subpart C 13.300 and Subpart D13.400)

The grantee certifies that it will provide a drug-free workplace by

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition
- (b) Establishing a drug-free awareness program to inform employees about:
 - (1) The dangers of drug abuse in the workplace
 - (2) The grantee's policy of maintaining a drug-free workplace
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a)
- (d) Notifying the employee in the statement (required by Paragraph 9a) that, as a condition of employment under the grant the employee will:
 - (1) Abide by the terms of The statement and

Exhibit (NYSEGGASEDO-9) Page 21 of 21

- (2) Notify the employer of an criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction
- (e) Notifying the agency within ten days after receiving notice under subparagraph (d)(2), from an employee otherwise receiving actual notice of such conviction
- (f) Taking one of the following actions, within 30 days of receiving notice under subparagraph (d)(2), with respect to any employee who is convicted
 - (1) Taking appropriate personnel action against such an employee, up to and including termination;
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance of rehabilitation program approved for such purposes by a federal, state or local health, law enforcement, or other appropriate agency
- (g) Making a good faith effort to continue to maintain a drug free workplace through implementation of paragraphs (a), (b), (c), (d) and (g).

Places of Performance: The grantee shall insert in the space provided below the site(s) for the performance of work done in connection with the specific grant (street address, city, county, state, zip code) Natural gas facilities located in the towns of Apalachin, Binghamton, Deposit, Endicott, Hancock, Johnson City,

Kirkwood, Owego, Vestal, and Walton in New York.

New York State Electric and Gas Corporation

Organization Name (As appropriate) Application Number

Printed Name

Exhibit (NYSEGGASEDO-10) Page 1 of 1

Consolidated Statement of Public Awareness and Outreach Efforts: NYSEG 2015 Rate Case Proposal (\$000's)															
Source	Description	2014 Test Year Spend	Normalizing Adjustments	Normalized Historic Test Year	2015 Budget	Forecasted Change	Rate Year 1 TME 3/31/2017	Forecasted Change	Rate Year 2 TME 3/31/2018	Forecasted Change	Rate Year 3 TME 3/31/2019	Forecasted Change	Rate Year 4 TME 3/31/2020	Forecasted Change	Rate Year 5 TME 3/31/2021
NYSEG															
Public Affairs	Natural Gas Scratch and Sniff	32			33	1	34	1	35	1	36	1	37	1	37
Public Affairs	First Responders Letter	3			3	0	3	0	3	0	3	0	3	0	3
Public Affairs	Excavator Manual 811 Kit	22			22	1	23	0	23	0	24	1	24	1	25
Public Affairs	Call Before You Dig - Radio Campaign	70			70	3	73	2	74	2	76	2	77	2	79
Public Affairs	Call Before You Dig - Print Ad Campaign	17			17	1	18	0	18	0	18	0	19	0	19
Public Affairs	RP1162 Pipeline Letter	3			3	0	3	0	3	0	3	0	3	0	3
Public Affairs	Natural Gas Safety - Radio Campaign	62			62	2	64	1	66	1	67	1	69	1	70
Public Affairs	Natural Gas Safety - Print Ad Campaign	33			40	2	42	1	42	1	43	1	44	1	45
Public Affairs	Call Before you Dig Specialty Items	10			0	10	10	0	10	0	10	0	11	0	11
Subtotal		252	0	0	250	20	270	6	276	6	282	6	287	6	293
Inc. O&M (Public Awareness)	Campaign				13		14		15		16		16		17
Inc. O&M (Public Awareness)	811 Radio Campaign				23		48		49		50		52		52
Inc. O&M (Public Awareness)	Paradigm Liasion				8		8		8		8		8		9
Inc. O&M (Public Awareness)	DigSafely NY Misc. Outreach				2		9		9		9		10		10
	Customers: Recognizing & Responding to														
Horseheads Order	Gas Odors														
	Advertising:														
	Radio					70	70	1	71	2	73	2	75	2	76
	Newsprint					20	20	0	20	0	21	0	21	0	22
	Transit					85	85	2	87	2	89	2	90	2	92
	Enhanced NGA Advertising Campaign					13	13	0	13	0	14	0	14	0	14
	Mailings/Printing:					5	5	0	5	0	E	0	F	0	5
	Increased frequency of mailings					5	5	0	5	0	5	0	5	0	3
	Educational Services					100	100	2	102	2	104	0	106	2	109
	Contractors: Program coordination/					100	100	2	102	2	104	2	100	2	105
	maintenance/mailing lists/focus groups					45	45	1	46	1	47	1	48	1	49
	Municipalities: Third Party Damage														
	Mailings/Printing:														
	Scratch & Sniff					5	5	0	5	0	5	0	5	0	5
	Excavator Kit/DVDs/Postage					6	6	0	6	0	6	0	6	0	7
Subtotal		0	0	0	46	355	434	7	443	8	453	8	464	8	474
NYSEG Total		252	0	0	296	375	704	13	719	13	735	14	751	14	767

Note: All cost figures are escalated 4.02% from either Historic Test Year or the 2015 budget to RY1 and then 2.1% thereafter.

Note: As of January 2015, the two Public Affairs annual budget items below have been moved to Customer Service. Confirmation with Customer Service that they will include these two items in their Rate Case filing is needed:

Choose a natural Gas Supplier - Print Ad	39,600
Choose a natural Gas Supplier - Postcard	
mailing	65,632

INDEX OF WORKPAPERS SUPPORTING DIRECT TESTIMONY OF GAS ENGINEERING, DELIVERY AND OPERATIONS PANEL (NYSEG)										
Exhibit Reference	Description of Exhibit	No. of WPs	Title of Workpaper (or WP) File	Content of Workpaper	WP Format	Trade Secret				
NYSEGGASEDO-2	NYSEG Gas Safety Performance Measures	1	Exhibit (NYSEGGASEDO- 2) Gas Safety Performance Measures	Tabs 2011, 2012, 2013 and 2014: Year End Goal, Results and Status (2011-14) for: Gas Leak Management, Gas Leak Prone Pipe Replacement, Gas Prevention of Excavation Damages, and Gas Leak Responsiveness	.xls	No				
NYSEGGASEDO-4	NYSEG's Gas Capital Budget Proposal and Forecast	1	Gas 5 Year Investment Plan 2015-2020 Revision for Rate Case Final	Gas 5 Year Investment Plan 2015-2020	xls	No				
NYSEGGASEDO-5	Incremental O&M budget history, proposal and forecast	1	NG-RRP-2-WP-03 Incremental Maintenance-Gas	Summary and Calculations supporting exhibit	xls	No				
NYSEGGASEDO-6	Vegetation Management Budget History, Proposal and Forecast	1	NG-RRP-2-WP-04	Summary and Calculations supporting exhibit	xls	No				
NYSEGGASEDO-7	Integrity Management Program budget history, proposal and forecast	1	NG-RRP-2-WP-07 Gas RD 4- 30-2015	Summary and Calculations supporting exhibit	xls	No				
NYSEGGASEDO-8	R&D Summary Forecast and Historic and Test Year Details	1	NG-RRP-2-WP-07 Gas RD 4- 30-15	 Tab – Exhibit: Tab – Project Descriptions Tab – Worksheet Tab – Proposed Projects w. Estimates 	xls	No				
N/A	New Base Rates	1	NC-RRP-2-WP-15 OM - Outside Services	Forecast costs and calculations	xls	No				