

BEFORE THE
NEW YORK STATE
PUBLIC SERVICE COMMISSION

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Proceeding on Motion of the Commission as to the
Rates, Charges, Rules and Regulations of
New York State Electric & Gas Corporation
for Gas Service

Case 15-G- _____

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**DIRECT TESTIMONY OF
GAS ENGINEERING, DELIVERY AND OPERATIONS PANEL
(NEW YORK STATE ELECTRIC & GAS CORPORATION)**

**Dennis J. Bender
Javier Bonilla
Michael D. Eastman
Gregory A. George**

May 20, 2015

**DIRECT TESTIMONY OF NYSEG GAS ENGINEERING,
DELIVERY AND OPERATIONS PANEL**

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I. INTRODUCTION

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Q. Can you please state the names of the members of this New York State Electric & Gas Corporation Gas Engineering, Delivery and Operations Panel (“Panel”)?

A. We are Dennis J. Bender, Javier Bonilla, Michael D. Eastman, and Gregory A. George.

Q. Mr. Bender, please state your title and business address.

A. I am the Director of Gas Operations. My business address is 18 Link Drive, Binghamton, New York 13902.

Q. Please summarize your educational background and work experience.

A. My Curriculum Vitae (“CV”) is set forth in Exhibit ____ (NYSEGGASEDO-1).

Q. Have you previously testified in other proceedings before the New York State Public Service Commission (“PSC” or “Commission”) or any other state or federal regulatory agency or court?

A. No.

Q. Mr. Bonilla, please state your title and business address.

A. I am the Vice President of Engineering and Delivery. My business address is 89 East Avenue, Rochester, New York 14649.

Q. Please summarize your educational background and work experience.

A. My CV is set forth in Exhibit ____ (NYSEGGASEDO-1).

Q. Have you previously testified in other proceedings before the PSC or any other state or federal regulatory agency or court?

A. No.

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1 Q. Mr. Eastman, please state your title and business address.

2 A. I am the Vice President of Gas Operations. My business address is
3 1300 Scottsville Road, Rochester, New York 14624.

4 Q. Please summarize your educational background and work experience.

5 A. My CV is set forth in Exhibit __ (NYSEGGASEDO-1).

6 Q. Have you previously testified in other proceedings before the PSC or any other
7 state or federal regulatory agency or court?

8 A. Yes, I have previously testified in other gas proceedings before the PSC, the
9 Maine Public Utilities Commission, the New Hampshire Public Utilities
10 Commission and the Vermont Public Service Board. I most recently testified
11 before the Commission in Cases 09-G-0716 and 09-G-0718.

12 Q. Mr. George, please state your title and business address.

13 A. I am the Director of Gas Planning, Engineering and Delivery. My business
14 address is 1300 Scottsville Road, Rochester, New York 14624.

15 Q. Please summarize your educational background and work experience.

16 A. My CV is set forth in Exhibit __ (NYSEGGASEDO-1).

17 Q. Have you previously testified in other proceedings before the PSC or any other
18 state or federal regulatory agency or court?

19 A. No.

20 **II. SUMMARY AND IDENTIFICATION OF EXHIBITS**

21 Q. Is this Panel sponsoring any exhibits?

22 A. Yes. This Panel sponsors the following exhibits:

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- 1) Exhibit __ (NYSEGGASEDO-1) provides the CVs of the witnesses testifying on this Panel;
- 2) Exhibit __ (NYSEGGASEDO-2) sets forth New York State Electric & Gas Corporation's ("NYSEG" or "Company") Gas Safety Performance Measures for 2011-2014 and the Company's Gas Safety Performance Measures proposal;
- 3) Exhibit __ (NYSEGGASEDO-3) describes NYSEG's Quality Management System and Quality Assurance/Quality Control ("QA/QC") approach for its gas business;
- 4) Exhibit __ (NYSEGGASEDO-4) is NYSEG's Gas Capital Budget Proposal and Forecast;
- 5) Exhibit __ (NYSEGGASEDO-5) sets forth the Incremental O&M Actuals, Proposal and Forecast;
- 6) Exhibit __ (NYSEGGASEDO-6) sets forth the Vegetation Management Actuals, Proposal and Forecast;
- 7) Exhibit __ (NYSEGGASEDO-7) sets forth the Integrity Management Program Actuals, Proposal and Forecast;
- 8) Exhibit __ (NYSEGGASEDO-8) sets forth the NYSEG Gas Research and Development ("R&D") Actuals, Proposal and Forecast;
- 9) Exhibit __ (NYSEGGASEDO-9) is the Grant Application for Storm Hardening funding;
- 10) Exhibit __ (NYSEGGASEDO-10) is a Consolidated Statement of Public

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1 Awareness and Outreach Efforts; and
2 11) Exhibit __ (NYSEGGASEDO-11) provides an index of the Panel’s
3 workpapers. A copy of the workpapers will be provided to the New York
4 State Department of Public Service Staff (“Staff”).

5 Q. What is the purpose of this Panel’s testimony?

6 A. The Panel discusses:

- 7 1) NYSEG’s natural gas system;
- 8 2) Gas service quality and safety performance measures;
- 9 3) The Company’s proposed Capital Expenditure plans;
- 10 4) Actions taken following the gas incidents that occurred in Horseheads, New
11 York;
- 12 5) Incremental Operations and Maintenance (“O&M”) programs needed to meet
13 current work tasks and new regulatory requirements, and their associated cost;
- 14 6) Vegetation Management Programs and their associated cost;
- 15 7) The Integrity Management Programs needed to meet current work and new
16 regulatory requirements, and their associated costs;
- 17 8) Additional requested Base Rate Cost Recovery Programs and their associated
18 costs;
- 19 9) R&D Programs and their associated costs;
- 20 10) Emergency Preparedness; and
- 21 11) Public Awareness and Communication Programs.

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III. NATURAL GAS SYSTEM STATUS

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Q. Can you please provide a description of the NYSEG natural gas system?

A. As identified in the 2014 U.S. Department of Transportation Annual Operator Report and year end 2014 Company records, NYSEG operates and maintains approximately 4,772 miles of transmission and distribution gas main and 3,437 miles of gas service lateral piping. NYSEG has 58 purchase stations, 29 heaters, 65 odorizers, 450 district regulator stations, 64 farm taps, and approximately 236,000 services.

Q. What tasks must NYSEG perform to run its natural gas system?

A. NYSEG must operate, maintain, and upgrade all the systems constructed throughout its 100 plus years of operating history, respond to approximately 8,000 gas odor emergencies at all times, respond to approximately 60,000 requests to locate facilities for construction projects occurring in 33 counties annually, leak survey a minimum of 1/3 of its facilities, connect approximately 1,500 new customer gas services annually, and relocate facilities in conflict with all street, road, and highway rebuilding projects. Employees test 30 gas pipeline supply sales meters annually, calibrate approximately 235 industrial meters, exchange approximately 1,500 distribution meters for accuracy testing annually, and train approximately 300 contractors. Company employees are responsible for qualification skills assessments, construction and safety practices, engineering approximately 3,000 service and work orders, maintaining all of the maps and records associated with all these facilities, and

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1 performing corrosion monitoring and corrective work on 5,700 cathodically
2 protected piping sections. For the next five years, NYSEG must also exchange
3 approximately 4,700 gas meters annually for mandated meter retirement
4 programs.

5 Q. Are there other tasks that the Company must perform?

6 A. Yes. The Company must perform thousands of mandated operating and
7 maintenance inspections on its infrastructure, including protecting underground
8 facilities in compliance with 16 NYCRR 753, repairing all leaks, calculating gas
9 network studies to correctly size facilities for replacements and load additions,
10 working proactively with local production companies which desire to connect and
11 are connected directly to the distribution facilities, maintaining system pressures,
12 monitoring district regulator stations and coordinating deliveries from the
13 NYSEG gas control center with the interstate pipeline control centers, balancing
14 gas deliveries, interacting with multiple natural gas marketers, optimizing supply
15 for all firm customers, maintaining and producing all of the billing documents for
16 all of these transactions, collecting payments from customers, and providing
17 NYSEG commodity and delivery service as required.

18 Q. What is the focus of NYSEG's natural gas business?

19 A. NYSEG's natural gas business focuses on public safety, system reliability, and
20 the environment. NYSEG is committed to operational excellence, continuous
21 improvement, serving new customers, and coordinating activities with local fire
22 departments, emergency management officials, municipalities, highway

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1 departments, regulatory agencies, and jurisdictional and governing bodies to
2 provide safe, reliable, cost-efficient natural gas service to many upstate rural
3 businesses and communities. The Company, which has one of the lowest lost and
4 unaccounted for gas (“LAUF”) factors in the state, continues to repair all leak
5 classifications annually, leak surveys approximately 2/3 of its mains and services
6 annually, maintains one of the lowest third-party damage rates in the state, and
7 strives to be among the top emergency responders and proactive system safety
8 performance leaders in the state.

9 **IV. GAS SERVICE QUALITY AND SAFETY PERFORMANCE MEASURES**

10 Q. Does NYSEG currently have mandated gas service quality performance measures
11 and safety related targets?

12 A. Yes, NYSEG is subject to targets and associated Negative Revenue Adjustments
13 (“NRAs”) related to infrastructure enhancements, leak management, damage
14 prevention and emergency response times. They are attached as Exhibit __
15 (NYSEGGASEDO-2) – NYSEG Gas Safety Performance Measures.

16 Q. Do the current mandated gas service quality and safety performance measures
17 help NYSEG to achieve and maintain the Company’s infrastructure and current
18 high performance?

19 A. Yes, these mandated and Commission-ordered measures have helped NYSEG to
20 systematically identify, prioritize and coordinate upgrades and replacements of
21 aging mains and services, reduce main and service leaks, improve emergency
22 response times, reduce third-party system damages, extend the useful life of main,

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1 and improve the effectiveness of employee training programs, thereby improving
2 system safety, reliability and economics.

3 Q. Please review the history of and discuss the Company's performance regarding
4 the gas service quality and safety performance measures.

5 A. Since NYSEG's last rate case, the Company has continued to maintain its high
6 level of leak response time, has reduced the number of outstanding leaks (NYSEG
7 is required to repair Type 3 leaks), has implemented many proactive damage
8 prevention programs and has consistently exceeded the miles of leak prone main
9 and number of leak prone services required to be replaced annually.

10 Exhibit __ (NYSEGGASEDO-2) – Gas Safety Performance Measures provides
11 the four-year historical performance for all gas service quality and safety
12 performance measures. The Company takes these gas service quality and safety
13 performance measures very seriously and strives to be the top performer in the
14 state proactively. Examples of proactive efforts are demonstrated by leak
15 surveying 2/3 of the system annually, repairing all leak classifications annually
16 and using statistical and predictive analysis to improve the damage prevention
17 program.

18 Q. Based upon NYSEG's historic performance under the gas service quality and
19 safety performance standards in effect through December 31, 2014, has NYSEG
20 ever incurred an NRA?

21 A. NYSEG has not incurred an NRA for failing to meet its gas service quality and
22 safety performance measure goals, but has come close each year to incurring an

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1 NRA relative to third-party damages due in large part to the actions of third-party
2 excavators which are beyond the Company's control. The Company has spent
3 significant funds on a damage prevention vehicle ("DPV") program to assist with
4 monitoring third-party excavators.

5 Q. What gas service quality and safety performance measures is NYSEG proposing?

6 A. Certain of the current gas service quality and safety performance measures are a
7 challenge to achieve at the present levels, especially the damage prevention
8 measures, because NYSEG has little direct control over the general public and is
9 limited to proactive programs to educate and influence excavators to prevent
10 third-party damages. The leak repair measures require NYSEG to repair all
11 classes of leaks while leak surveying 2/3 of the system on an annual basis.
12 Additionally, the emergency response targets require continuous focus and
13 around-the-clock staffing to achieve the current requirements. NYSEG is
14 requesting to continue the current gas service quality and safety performance
15 measures adopted by the Commission's September 21, 2010 Order Establishing
16 Rate Plan in Case 09-G-0716 et al. ("2010 Rate Order") with certain adjustments
17 as identified in Exhibit __ (NYSEGGASEDO-2) – Gas Safety Performance
18 Measures.

19 Q. Please describe the Panel's proposed adjustments to the Company's gas service
20 quality and safety performance measures.

21 A. The Company proposes to increase the leak prone main replacement target from
22 24 miles in 2016 to 26 miles in 2017 and 28 miles each year thereafter, as

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1 discussed in the testimony that follows. The Panel acknowledges that the
2 Commission issued its Order Instituting Proceeding for a Recovery Mechanism to
3 Accelerate the Replacement of Leak Prone Pipe on April 17, 2015 in
4 Case 15-G-0151. The Company is actively participating in that proceeding.

5 Q. Is the Company proposing any changes to the incentive mechanism related to the
6 Leak Prone Main Replacement Program?

7 A. Yes. The Company is proposing as an incentive that a Positive Revenue
8 Adjustment (“PRA”) of 1/2 basis point be earned for each incremental 1/2 mile of
9 main replaced above the annual target. Also, should the annual amount of the
10 Company’s Gas Capital spend on leak prone main replacements exceed the
11 amounts included in rates, as identified in the Gas Capital Budget (Exhibit __
12 (NYSEGGASEDO-4) while the Company exceeds the annual mileage target, the
13 Company is proposing to defer the incremental carrying costs associated with the
14 incremental main replacement. The deferral calculation would be based on the
15 average annual cost per 1/2 mile of main for all leak prone mileage, times the
16 number of 1/2 miles of main replaced above the annual target.

17 Q. Is the Company proposing any additional changes?

18 A. Yes. The Company reserves the right to approach the Commission to modify this
19 incentive mechanism pending the outcome of Case 15-G-0151, referenced above,
20 regarding accelerated replacement of leak prone pipe. NYSEG also proposes to:

21 1) Report leak prone service replacements that are associated with the leak
22 prone main replacement mileage and other main replacement projects instead of

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1 having a separate target for the individual leak prone service replacements. To
2 the extent that the reported leak prone service replacements under this proposal
3 were to fall under an average of 500 per year, the Company would propose to
4 institute a new measure after consultation with Staff. The current measure, which
5 requires replacement of 1,200 leak prone services per year, results in cost and
6 operational inefficiencies as the Company needs to address a significant number
7 of leak prone service replacements that are not associated with main replacement
8 projects. Many of these services are eventually tied over as part of a future main
9 replacement project which is inefficient and negatively impacts customer
10 satisfaction as a result of multiple projects at a customer site.

11 2) Improve performance in the area of Gas Record Audits by a minimum of
12 25% when compared to the historic four-year average (2011-2014) identified by
13 the PSC Gas Audit Staff, as referenced in Exhibit __ (NYSEGGASEDO-2) – Gas
14 Safety Performance Measures. For the purpose of this performance measure, the
15 Company will combine all occurrences whether classified by the PSC as a “High
16 Risk” or “Other Risk” in its determination of performance.

17 Q. What targets are the Company proposing for audit records and what basis point
18 adjustments are being proposed?

19 A. The Company is proposing a target of a 25% improvement from the four-year
20 historic average (2011-2014). NRAs will be calculated on all occurrences above
21 the 25% improvement threshold target and each of these occurrences above the
22 25% threshold target will be assessed a negative 1/4 basis point adjustment up to a

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1 total of 50 basis points. The potential NRA in any individual category would be
2 limited to 10 occurrences. The Company is also proposing that should the actual
3 annual occurrences reported be 75% or more below the four-year historic average
4 that it be awarded 10 positive basis points.

5 Q. During the past four years, would the Company have incurred an NRA or
6 received a PRA regarding PSC Record Audits for its performance using this
7 proposal?

8 A. NYSEG would have experienced an NRA in 2012 and 2014. In the previous
9 four-year period, the Company would not have earned a PRA.

10 Q. Does the Company generally recommend a PRA for high performance?

11 A. Yes. The Company receives in rates the financial resources necessary to achieve
12 the existing Gas Safety Performance Measures targets. To the extent the
13 Company is able to exceed the current Gas Safety Performance Measures targets,
14 it should have an opportunity to recover a PRA as an incentive. The proposed
15 incentive adjustments are included in Exhibit __ (NYSEGGASEDO-2) – Gas
16 Safety Performance Measures. The PRA incentives are 50% of the NRA for each
17 category. Each incentive has been established to be better than the four-year
18 average for that category as identified in Exhibit __ (NYSEGGASEDO-2) – Gas
19 Safety Performance Measures. The PRA will be earned if the Company meets the
20 PRA threshold metric associated with the individual measure.

21 Q. Is the Panel familiar with Recommendation 12.3 from the Company's
22 Management Audit in Case 10-M-0551?

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1 A. Yes, Recommendation 12.3 provides that the Company should increase QA/QC
2 staffing to support an effective and functioning QA/QC program for all gas
3 projects and programs.

4 Q. Is the Panel addressing this recommendation?

5 A. Yes. Exhibit __ (NYSEGGASEDO-3) describes the Company's Quality
6 Management System and the recently implemented QA/QC approach for its gas
7 business.

8 **V. CAPITAL EXPENDITURES PLAN**

9 Q. Can you please summarize the levels of capital investment you are supporting in
10 this testimony?

11 A. As indicated in Exhibit __ (NYSEGGASEDO-4) – NYSEG Gas Capital Proposal
12 and Forecast, the proposed investment is approximately \$62 million in 2016,
13 excluding common capital. This includes increases for the changes in
14 capitalization policy proposed later in this testimony.

15 Q. Are the current capital forecasts reflected in Exhibit __ (NYSEGGASEDO-4)
16 identical to those set forth in the recently filed Five-Year Capital Plan (attached to
17 the direct testimony of the Capital Expenditures - Electric and Hydro Panel as
18 Exhibit __ (CEE-2))?

19 A. No. The Company continually reevaluates and reprioritizes capital projects and
20 system needs due to the changing operations and regulatory environment in which
21 it operates. As a result, the exact mix of capital projects and the timing of each
22 project will often change. It is important that the Company's capital plan remains

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1 flexible to meet the needs of customers, regulators and other stakeholders.

2 The capital investment plans proposed in this filing necessarily can
3 provide only a snapshot of the Company's then-current investment plans.

4 Reevaluation and reprioritization of capital investments occurs frequently in order
5 to best meet operational and system needs. This reevaluation and prioritization
6 process is critical in light of the dynamics associated with capital projects.

7 Q. What are the asset categories used for program planning and capital spending?

8 A. The asset categories used for program planning and capital spending are:
9 Transmission Mains; Distribution Mains; Services; Leak Prone Main; Leak Prone
10 Services; Service Meters and Service Regulators; Metering & Regulating
11 ("M&R")/Gate and Distribution Regulator Stations; Highway Relocations; and
12 General Plant/Miscellaneous.

13 Q. Can you please describe NYSEG's projects classified as Transmission Mains?

14 A. These projects include replacing or extending NYSEG's gas mains that operate at
15 or above 125 psig. Projects are developed to support the Integrity Management
16 Programs, including the Transmission Integrity Management Plan ("TIMP") and
17 the Distribution Integrity Management Plan ("DIMP"), which address asset
18 condition and risk, the need for system capacity to support load growth, the
19 balance of gas supply, and other transmission main needs for system reliability
20 and risk.

21 Q. What NYSEG projects are classified as Distribution Mains?

22 A. These projects include replacing or extending NYSEG's gas mains that operate

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1 below 125 psig. Projects are developed to support the DIMP, which addresses
2 asset condition and risk, the need for system capacity to support load growth, and
3 other distribution system needs for reliability and risk.

4 Q. Can you please describe NYSEG's projects classified as Gas Services?

5 A. These projects include leaks on existing services, replacement of services
6 associated with main replacement projects, installation of services to new
7 customers, upgrades of services to supply increased loads to existing customers as
8 required, and relocation of services as required by code or regulation.

9 Q. Please describe the Leak Prone Main and Services Replacement Programs.

10 A. Mains and services will be replaced using DIMP as a basis for priority, which will
11 reduce leaks and risk on the distribution system. The program is proposed to
12 increase the amount of capital spending to accelerate the main replacements from
13 24 miles annually in 2016 to 26 miles in 2017, and then to 28 miles in 2018 and
14 each year after. When the number of miles is increased, a corresponding increase
15 to O&M will be necessary. The increase in O&M is to accommodate leak
16 surveys, tie-ins, and other related O&M tasks associated with pressure increases
17 from low to medium-pressure, and other related O&M (for example, moving
18 inside meters to outside locations). The miles of leak prone main included in the
19 program will continue to include replacement of leak prone main due to municipal
20 projects. The planned mileage increases allow resource dedication and
21 appropriate management to complete design work in the year prior to

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1 construction. The annual number of leak prone service replacements will depend
2 on the leak prone main replacement mileage and leak survey results.

3 Q. What projects are included in the budget for those NYSEG projects that are
4 classified as Service Meters and Service Regulators?

5 A. The budget line items for Service Meters and Service Regulators include: new
6 meters and regulators to serve new customers; upgraded meters for existing
7 customers; and the replacement of meters identified through the alternative in test
8 program.

9 Q. Can you please describe the M&R/Gate Station and Distribution Regulator
10 Station projects?

11 A. The M&R/Gate Station and Distribution Regulator Station projects include the
12 replacement or addition of new gas facilities due to asset condition and
13 obsolescence or the need to increase system capacity. As part of station
14 replacements, the facilities are modernized and automated when applicable with
15 new technology. Examples include: addition of a second regulator run to
16 increase reliability of existing single run stations; obsolete regulator replacements;
17 odorizer and other station equipment replacements; Remote Terminal Units
18 (“RTUs”); installation of other remote automated measurement equipment within
19 the transmission and distribution system; and automation of operation and/or
20 inspection equipment for the station. Gate and regulator station facilities are
21 critical components to the safety and reliability of the delivery system. A
22 systematic replacement and upgrade program (similar to the Leak Prone Main

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1 Replacement Program) based on risk and prioritization should be included in the
2 annual rate plan to address the asset condition, reliability and risk of these
3 facilities. The Gate and Regulator Station Modernization & Automation Program
4 has an additional benefit, similar to the Leak Prone Main Replacement Program,
5 in reducing leaks on equipment and associated piping.

6 Q. What are the Highway Relocation projects?

7 A. Highway Relocation projects include gas facility relocations and replacements
8 that are required due to conflicts with public street and highway reconstruction
9 projects. Facilities located in easements on private property are generally
10 reimbursable by the municipality to NYSEG. Relocation of the facilities prior to
11 the start of the public project reduces the potential for damage to NYSEG's
12 facilities and limits unscheduled interruption of service to customers in the
13 affected surrounding area.

14 Q. What projects are included in General Plant/Miscellaneous?

15 A. General Plant/Miscellaneous includes: 1) supervisory control and data acquisition
16 ("SCADA") replacements and upgrades; and 2) the development of an Outage
17 Management System. Capital tools for Gas Field Operations are also included in
18 General Plant/Miscellaneous.

19 Q. Why is NYSEG proposing the development of an Outage Management System?

20 A. NYSEG received a letter, dated November 18, 2014, from the Commission
21 referencing an order in Case 13-G-0484 that required NYSEG to review its
22 Emergency Response plan to consider inclusion of 46 separate best practices.

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1 Once this review was completed, NYSEG was required to include these best
2 practices in its program or justify their exclusion. NYSEG is proposing to
3 develop an Outage Management System that will provide more responsive
4 estimates of impacted customers due to unforeseen circumstances that could cause
5 sections of the gas system to be out of service.

6 Q. Can you please describe the process that NYSEG uses to develop the forecast of
7 its annual gas capital investment requirements?

8 A. NYSEG’s gas capital forecast is developed by Gas Engineering – System
9 Planning and submitted to Investment Planning (“IP”) as part of the annual budget
10 development and approval process. Gas Engineering includes and considers input
11 from other departments, such as Gas Field Operations, Gas Supply, Marketing,
12 and others as applicable, in the development of project scopes. Programs and
13 projects are developed to support: regulations; rate case performance measures;
14 gas system performance; customer additions and load growth; asset condition;
15 modernization and automation; and NYSEG’s business plans. Projects are
16 categorized and prioritized using IP’s investment categories and prioritization
17 process.

18 Q. What is NYSEG’s capital forecast for Transmission Mains projects based upon?

19 A. NYSEG forecasts expenditures for transmission mains based on the projected cost
20 for the proposed replacement of transmission main assets in poor condition and as
21 determined by TIMP and DIMP, growth and infrastructure projects, and reliability
22 and risk needs. TIMP and DIMP address asset condition of the existing

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1 transmission mains and applicable threats. Growth and infrastructure projects are
2 developed to meet new and existing customer load growth. The need for growth
3 and infrastructure projects is based on economic conditions throughout the
4 territory. Economic conditions are influenced by the cost differential between
5 natural gas and competing fuels, energy policies, and economic development and
6 health of the geographical region. Reliability and risk projects address both asset
7 condition and system reliability.

8 Q. What is the NYSEG Gas Transmission Casings Replacement Program?

9 A. This project replaces approximately five transmission gas main casings a year
10 over a 10-year period. The project improves system safety and reliability by
11 proactively replacing gas main casings.

12 Q. What is the Phelps (South) Transmission Replacement Project?

13 A. This project will rebuild the Phelps Tap Gate Station (Lester Road) and replace
14 approximately 25,000 linear feet of 10” steel main operating at 162 psig
15 maximum allowable operating pressure (“MAOP”) with 12” steel main operating
16 at 203 psig MAOP. The project will increase reliability and capacity to the
17 Geneva System during peak demand by eliminating the operational need to
18 separate the systems due to the different MAOP in the winter time. The project
19 addresses asset condition by replacing transmission pipe installed in the 1940s.
20 The new pipeline will be designed to operate at less than 20% specified minimum
21 yield strength.

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1 Q. What is the DeRuyter Transmission Replacement Project?

2 A. The DeRuyter Transmission Replacement Project will replace approximately
3 25 miles of 8” 298 psig MAOP coated steel gas transmission gas mains with
4 10” coated steel piping. The DeRuyter transmission main was installed in 1953
5 and lacks sufficient capacity to supply the Winney Hill first stage regulator station
6 in Oneonta. The increase in capacity will eliminate the need to utilize the
7 compressor located in Norwich.

8 Q. What is NYSEG’s capital forecast for Distribution Mains projects based upon?

9 A. NYSEG forecasts these expenditures based on the projected cost for the proposed
10 Leak Prone Main Replacement Program, growth and infrastructure projects, and
11 reliability and risk needs. The Leak Prone Main Replacement Program uses
12 DIMP as a part of the basis for prioritization based on risk which addresses asset
13 condition of existing mains. Growth and infrastructure projects are developed to
14 meet new and existing customer load growth. The need for these projects is based
15 on economic conditions throughout the territory. Economic conditions are
16 influenced by the cost differential between natural gas and competing fuels,
17 energy policies, and economic development and health of the geographical region.
18 Reliability and risk projects address both asset condition and system reliability.

19 Q. What is the Lansing/Freeville Gas Reinforcement Project and its benefits?

20 A. This project will install seven miles of 10” diameter 124 psig distribution gas
21 main along West Dryden Road, a new 60 psig regulator station at the intersection
22 of Warren and West Dryden Roads and rebuilds the Dominion Transmission

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1 (“DTI”) owned Freeville gate station. The existing system is below 50% of
2 MAOP on the design day. Systems operating at 50% of MAOP have very limited
3 capacity to serve load growth. Design pressures drop quickly with added load. If
4 operating pressures drop below 50% MAOP, the inlet pressure at service
5 regulators may be insufficient for proper operation. The demand for gas service
6 in this area is growing and the system lacks sufficient capacity to support
7 significant load growth. The project improves existing system pressures during
8 the heating season and for the design condition while providing capacity for
9 expected load growth. There are several large private projects for residential and
10 mixed use development that have requested natural gas service. To serve these
11 loads, this reinforcement of the distribution system is necessary with construction
12 projected to start in 2016. The rebuild of DTI’s Freeville gate station includes
13 payment by NYSEG to DTI for the improvements necessary to serve new gas
14 load growth and for replacement of NYSEG owned and operated equipment to
15 serve the new gas load including: a second stage regulator, over pressure
16 protection, odorization and SCADA controls.

17 Q. What is the Port Dickinson Gas Pipeline Loop Extension Towns of Port
18 Dickinson and Fenton Project?

19 A. The project installs 12,000 feet of new 8” 124 psig wrapped steel gas main. This
20 proposed 124 psig pipeline will provide a two-way feed to supplement the current
21 supply point at Hinman’s Corners Station and provide a loop feed to the 20 psig
22 distribution system in the Town of Chenango and the Village of Chenango. This

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1 new pipeline will raise the inlet pressure at Hinman’s Corners regulator station by
2 approximately 10 psig and raise the low-pressure point in the 20 psig system by
3 approximately 5 psig on the design day.

4 Q. What is the Gas Pipeline Susquehanna River Bore Extension Project?

5 A. The project installs 7,000 feet of new 10” 124 psig wrapped steel gas main. The
6 proposed pipeline will connect from the existing 10” wrapped and protected
7 124 psig line on Corliss Avenue on the north side of the river in the Village of
8 Johnson City, to the existing 6” wrapped and protected steel 124 psig pipeline
9 located on the south side of the river in the Town of Vestal. This connection will
10 raise the system pressure on the existing pipeline from 85 to 97 psig on design
11 day. The river bore will enhance system safety and reliability by creating a
12 124 psig feed from the Westover Point of Delivery (“POD”), where the existing
13 124 psig main is fed solely from the Twist Run Road POD.

14 Q. What is the Boswell Hill Bare Steel Main Replacement Project Town of Union?

15 A. The project installs 12,000 feet of new 10” 124 psig wrapped steel gas main. The
16 existing gas main is unprotected steel and undersized for system capacity. The
17 pipeline feeds district regulator stations in West Corners, Endicott and Vestal.
18 Replacement will enhance system reliability and accommodate growing demand
19 for gas in the areas served. This project will replace sections over a three year
20 period with the tie in and abandonment of the unprotected steel gas main in the
21 third year.

22 Q. What is the Homer System Upgrade Project?

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1 A. The project is a multi-year project to upgrade low-pressure systems to medium-
2 pressure. Twenty-eight thousand feet of existing low-pressure main in 22 streets
3 will be retired, replaced and upgraded as necessary. The upgrade will eliminate
4 four low-pressure regulator stations. Three of the four stations are underground
5 pit regulator stations where facility deterioration is a concern. The increase to
6 medium-pressure will enhance system reliability and increase system load
7 capacity.

8 Q. What is the Remotely-Operated Valves Program?

9 A. This program will install remotely-operated valves to protect operation of the gas
10 transmission and distribution systems due to external TIMP or DIMP threats and
11 risk (i.e., third-party damages, flooding and other natural forces).

12 Q. What is NYSEG's capital forecast for Services based upon?

13 A. The capital forecast for Services is based on historical spending for all service
14 work including replacements and new services.

15 Q. What actions has the Company taken following the two gas incidents that
16 occurred in Horseheads, New York in 2005 and 2011?

17 A. Following the two gas incidents that occurred in Horseheads, New York, the
18 Company replaced approximately two miles of main and 100 services where
19 third-party construction damage was discovered (Winding Way and the Mayfair
20 plot), in addition to the normal annual leak prone main and service programs. In
21 addition, NYSEG and Rochester Gas and Electric Corporation ("RG&E" and
22 together with NYSEG, the "Companies") hired a consultant, Lucius Pitkin, Inc.,

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1 to develop a fitness for service study in the Town and Village of Horseheads. As
2 a result of that study, the Company has replaced an additional 800 1” steel and
3 1¼” steel medium-pressure services in the Town and Village of Horseheads. At
4 the same time, the Companies began statistically sampling 1” and 1¼” steel
5 medium-pressure services in the Binghamton, Elmira, Lockport and Rochester
6 service areas to determine if similar third-party damage has occurred in these
7 systems. The Company has spent approximately \$8 million on this initiative
8 through the end of 2014.

9 On February 20, 2014 the Commission issued its Order Requiring Risk
10 Assessments and Remediation of New York Gas Facilities in Case 11-G-0565
11 (“Horseheads Order”) directing gas local distribution companies, including
12 NYSEG and RG&E, to conduct a risk assessment of their distribution systems to
13 be completed within six months. Subsequently, the period of time for completion
14 of the risk assessment was extended to February 20, 2015. NYSEG and RG&E
15 conducted the risk assessment as ordered utilizing the expertise of an external
16 metallurgist consultant, Lucius Pitkin, Inc., and filed the report on
17 February 20, 2015.

18 The assessment recommended the replacement of approximately 2000
19 1” steel and 1¼” steel medium-pressure services in Chemung County. The
20 Company filed its Chemung County Service Replacement Program in March
21 2015 to replace the 2000 1” steel and 1¼” steel medium-pressure services by the
22 end of 2016. The Capital costs associated with this Program are included in the

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1 capital projections as the Chemung County Service Replacement Project.

2 Q. What is NYSEG’s capital forecast of Highway Relocation projects based upon?

3 A. NYSEG forecasts these expenditures based on preliminary project descriptions
4 and schedules provided to NYSEG by the New York State Department of
5 Transportation (“NYSDOT”), county and local municipal highway and
6 engineering departments, and other known or anticipated projects. The schedules
7 of these gas main relocation projects are subject to change based on the public
8 street and highway projects’ schedules. The public street and highway projects’
9 schedules are impacted by the availability of federal, state, and local project
10 funding levels.

11 Q. What is NYSEG’s capital forecast for M&R/Gate Station and Distribution
12 Regulator Station projects based upon?

13 A. The capital forecast includes an increasing amount of capital for replacement of
14 these facilities based on asset condition, risk, and reliability of system operations.
15 Included is a Gas Regulator Modernization & Automation Program. The planned
16 capital spend in 2016 increases in 2017 and after to allow resources to be
17 dedicated to design the projects and begin procurement. Gate and regulator
18 station projects and equipment upgrades within the program will be scored and
19 prioritized based on risk assessment due to asset condition, system reliability and
20 operations. Equipment at gate stations may include heaters owned by others,
21 odorizers, new backup generators and other equipment owned by NYSEG. This
22 program is necessary to dedicate capital to replace stations that are obsolete or are

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1 in poor physical condition. When regulator and gate stations are modernized by
2 replacement or upgrades, automation and remote controls are evaluated and
3 included as applicable. This category includes remote communication and
4 operation technology, such as RTUs and remote electronic pressure recording
5 devices. This category also includes a future project to rebuild the Bradley Farms
6 gate station in the Elmira division.

7 Q. What is included in automation?

8 A. Automation includes four general items: remotely operated valves; gate and
9 regulator station automation of operations; RTUs and endpoint monitoring
10 devices; and SCADA controls. These items are included in several capital project
11 line items as described in our testimony. Remotely-operated valves will be
12 selectively installed on both transmission and distribution systems to provide
13 quick emergency response for system hardening without the need for dispatch of
14 field personnel. Gate and regulator station automation includes some R&D
15 projects for new and existing technology for remote operations of the stations,
16 trouble shooting, reducing field personnel callouts and improving response times.
17 RTUs and endpoint monitoring devices provide live system operation information
18 to better respond to system conditions and improve the quality and calibration of
19 the hydraulic models of the system. The hydraulic models are used to determine
20 long-term projects and replacements, and to determine alternate conditions for
21 special operating conditions that may be necessary due to construction projects
22 and other non-typical conditions. SCADA is the remote operating system used by

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1 the Energy Control Center to monitor and operate the transmission and
2 distribution systems.

3 Q. What is the Mechanicville Compressed Natural Gas Station and Facilities Project
4 and its benefits?

5 A. The project is necessary to bring new gas supply to the Town of Mechanicville.
6 The existing distribution system has the capacity to serve, but the supply pressure
7 from National Grid is insufficient to meet load growth that has occurred and is
8 projected. In addition, there are upstream capacity limitations for incremental
9 capacity on the supply transmission system from DTI making compressed natural
10 gas (“CNG”) a possible viable alternative to peak shave load demand for the
11 Mechanicville distribution area. NYSEG will build, own and operate a CNG
12 station at Central Avenue in 2015 that will accommodate three CNG trailers. The
13 CNG trailers will be owned by the CNG supplier. When gas demand growth
14 exceeds the capacity of the Central Avenue location for three CNG trailers, the
15 equipment will be moved to a new site which has been determined to have room
16 to accommodate more trailers and the associated equipment. The capital
17 expenditure for this second phase is included in the capital five-year projection in
18 year 2018.

19 Q. What is the Gas RTU/Telemetry Upgrade Project?

20 A. This project will replace regulator station RTU equipment. The existing
21 equipment is obsolete and beyond its service life. Equipment failure would
22 require field personnel to monitor operations of a regulator station until

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1 restoration of the RTU. The project will improve pipeline safety, distribution
2 system reliability, monitoring and controlling.

3 Q. How do you intend to manage the increases to the capital investment you are
4 requesting in this testimony?

5 A. We have created a centralized Project Management Office (“PMO”) in order to
6 manage our processes and increase productivity.

7 The PMO provides leadership to the project management teams within
8 Engineering & Capital Delivery, enabling them to work in an efficient and
9 effective project environment (i.e., implementation of a Project Management
10 Procedures Manual, standardization of methodologies and risk management).
11 The PMO is responsible for tracking, reporting, analyzing and improving our
12 project portfolio performance. This will enhance our ability to produce project
13 deliverables and fulfill project objectives and scope within the agreed schedules,
14 budgets, and quality standards.

15 **VI. SYSTEM HARDENING**

16 Q. What steps has NYSEG taken to harden its gas system against natural disasters?

17 A. As part of project planning criteria, low-pressure systems are considered for
18 conversion to medium-pressure when replacements are made. In “100-year”
19 flood prone areas, pressure conversions will be given high priority and made at
20 the time of main replacement where feasible. This measure will reduce the
21 likelihood of water intrusion into gas mains during flooding. The addition of new
22 looping in existing distribution systems will be considered as part of project

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1 planning criteria to improve reliability in areas that may be impacted by flooding.
2 Loops may include installation of valves to operate the new sections of the system
3 while providing protection from flood water intrusion. Existing valve locations
4 on the gas systems will be reviewed and additional valves installed where
5 necessary to facilitate shut-off of mains and services located in 100-year flood
6 prone areas to minimize outages. In addition, remotely-operated valves will be
7 planned and located for areas on both the transmission and distribution systems in
8 flood prone areas where flood levels may rise quickly or be difficult to access
9 during a flood event. This will allow a remote shutdown of flood risk facilities
10 before and during an event. Remotely-operated valves will also be included at
11 regulator stations located in or near flood areas. In addition, if an existing
12 regulator station is located in a flood area, it will be prioritized for relocation as
13 feasible. Vent stacks on regulator stations will also be extended to above known
14 flood level elevations.

15 Q. How are low-pressure to medium-pressure conversions included in the Five-Year
16 Capital Plan?

17 A. The cost of conversions is included in the capital cost of distribution main
18 replacements such as the Leak Prone Main Replacement Program. O&M costs
19 for work associated with the conversions such as leak survey, service meter
20 relocations, and service tie-overs are included in the O&M requested in this rate
21 case.

22 Q. Are remotely-operated valves included in the Five-Year Capital Plan?

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1 A. Yes, the costs of remotely-operated valves on the transmission and distribution
2 system are included in the Five-Year Capital Plan.

3 Q. How are remotely-operated regulator station control valves and vent stacks
4 included in the Five-Year Capital Plan?

5 A. Remotely-operated regulator station control valves are included in the regulator
6 station upgrade and replacement projects line item. The extension of vent stacks
7 is a separate program requesting O&M in this rate case.

8 Q. Has the Company considered and applied for any state grants for storm hardening
9 measures?

10 A. The Company applied for state grant money on October 29, 2013 for the above
11 described storm hardening efforts. The grant application is included as
12 Exhibit __ (NYSEGGASEDO-9) and is still pending.

13 **VII. INCREMENTAL MAINTENANCE**

14 **A. Review of the Current Programs, Expenses and Benefits**

15 Q. What is the overall strategy of the Incremental Maintenance program and what is
16 the strategic benefit to customers?

17 A. The program established as part of the 2010 Rate Order includes seven categories
18 of Incremental Maintenance programs. Within each program category, individual
19 Incremental Maintenance projects are initiated, managed and concluded.

20 Incremental Maintenance projects are typically successful R&D projects, new
21 data automation projects, audit responses or regulatory initiatives that are being
22 ramped up to production scale for the first time. Although general costs, benefits

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1 and schedules are understood, there is still a moderate degree of uncertainty until
2 work is actually under contract and/or the program is better understood. These
3 projects require an annual true up to demonstrate that the project is progressing as
4 expected. Deferral is downward only. After individual Incremental Maintenance
5 projects are successfully brought up to production scale and the benefit of the
6 projects has been demonstrated, the Company recommends that they be removed
7 from the annual reconciliation process (i.e., the Incremental Maintenance
8 program) and moved to base rates. This step-wise process allows for the
9 introduction of new technologies and processes into the business with multiple
10 opportunities for review and modification.

11 Q. Is the Company recommending any other changes to the overall strategy
12 described above?

13 A. No. Although individual projects will be cycled through the various categories of
14 Incremental Maintenance and into base rates, no changes to the categories
15 themselves are recommended.

16 Q. What is the current rate plan target for the NYSEG Incremental Maintenance
17 program?

18 A. The current target is \$577,000 annually for Incremental Maintenance.

19 Q. What was the actual level of expenditure for Incremental Maintenance?

20 A. Please refer to Exhibit __ (NYSEGGASEDO-5) that sets forth the Incremental
21 Maintenance Actuals, Proposal and Forecast.

22 Q. Can you please provide examples of how the Incremental Maintenance program

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1 has been used by the Company for the benefit of the customers?

2 A. Yes. NYSEG annually files a scope and cost summary of its Incremental
3 Maintenance program projects in its Schedule E compliance filings. The 2012-
4 2014 financial summary is detailed in Exhibit __ (NYSEGGASEDO-5), which
5 sets forth the Incremental Maintenance Actuals, Proposal and Forecast. Program
6 project examples include:

7 1) Public Awareness – RP-1162 Outreach: Conducted enhanced media
8 outreach efforts and awareness surveys regarding pipelines and DigSafely through
9 Northeast Gas Association (“NGA”) co-funded programs as well as incremental
10 local radio messages from NYSEG management. This was in compliance with
11 federal public awareness mandates (RP-1162). The NGA-supported outreach
12 efforts may be viewed at http://www.northeastgas.org/be_safe.html.

13 2) Damage Prevention: Operated a DPV program that influenced third-party
14 damages within rate case targets. The DPVs inspected third-party excavations
15 near Company facilities, noted and corrected deficiencies and provided training
16 and educational materials. DPV inspectors identified 55 deficiencies of
17 16 NYCRR 753 in 2012, 138 in 2013 and 163 in 2014.

18 3) Exposed Piping on Bridges: Established and carried out contractor
19 projects to conduct enhanced atmospheric corrosion inspections and repairs of gas
20 piping on bridges. This project completed 51 inspections in 2011, 69 in 2012,
21 34 in 2013 and 56 in 2014.

22 4) Additional System Leak Survey: Conducted an incremental leak survey of

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1 1/3 of the distribution system each year that resulted in the early detection and
2 repair of 362 below-ground leaks from 2011-2014. The incremental and non-
3 mandated survey is performed utilizing a Remote Methane Leak Detector device
4 that industry estimates indicate is 30-40% more efficient than the standard Flame
5 Ionization technology. The Company believes that finding and fixing any leak
6 that potentially avoids an incident justifies the program cost.

7 5) Corrosion Control: Created a fully-automated electronic records corrosion
8 database that uploaded historic paper corrosion cards, eliminates future paper
9 records and data entry errors, allows uploading of data from the field directly into
10 the database and allows electronic, remote work assignment and audit functions.

11 Q. Was there flexibility in spending levels built into the 2010-2013 spending plan?

12 A. Yes. Although individual project costs, benefits and schedules are understood,
13 there is still a moderate degree of uncertainty until work is actually under contract
14 and/or the program is better understood. Because the cost and level of activity are
15 not precisely predictable, the Company maintains the flexibility to shift the annual
16 spend between individual projects within the \$577,000 annual target to best meet
17 regulatory and customer needs. This flexibility is valuable and is recommended
18 to be continued.

19 Q. What is the NYSEG recommended treatment of successfully tested projects?

20 A. The Company recommends that successfully demonstrated projects be included in
21 future base rates and not be included in the Incremental Maintenance Program
22 subject to annual true up. The projects to be included in base rates are the

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1 previously described: Public Awareness RP1162 Outreach (\$79,000 in Rate Year
2 1); Exposed Piping on Bridges (\$173,000 in Rate Year 1); and Additional System
3 Leak Survey (DIMP) (\$339,000 in Rate Year 1). The projects included in this
4 category as well as their historic cost information are identified in
5 Exhibit __ (NYSEGGASEDO-5) – Incremental O&M.

6 Q. Is NYSEG proposing any changes in the scope of these three projects that are
7 being moved to base rates?

8 A. Yes. NYSEG proposes to increase the spending level for the Additional System
9 Leak Survey by an incremental 1/3 to cover 100% of the NYSEG gas system each
10 year. Analysis of NYSEG/RG&E leak survey data from 2008-2014 indicates that
11 doubling the 1/3 incremental survey to 2/3 will result in the identification and
12 repair of more than 600 additional leaks from 2016-2023 and shift detection and
13 reporting of leaks away from the public and towards the Company. Based upon
14 existing contract pricing, the estimated annual expense increase for the new
15 incremental 1/3 leak survey is \$169,500.

16 **B. Proposed Treatment of the Existing Program**

17 Q. Does NYSEG propose to continue the current Incremental Maintenance program
18 and funding?

19 A. Yes, based on the results of the existing Incremental Maintenance program,
20 NYSEG proposes to continue the current Incremental Maintenance program. As
21 stated earlier, incremental O&M projects are typically successful R&D projects,
22 new data automation projects, and audit responses or regulatory initiatives that are

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1 being ramped up to production scale for the first time. Although general costs,
2 benefits and schedules are understood, there is still a moderate degree of
3 uncertainty until work is actually under contract and/or the program is better
4 understood. The annual true up feature of the program to demonstrate that the
5 individual projects within the program are progressing as expected allows for the
6 introduction of new technologies and processes into the business with multiple
7 opportunities for review and modification.

8 Exhibit __ (NYSEGGASEDO-5) identifies incremental O&M to cover
9 currently known and unknown projects in years 2016 and beyond that would be
10 subject to true up. It also includes O&M for a significantly expanded DPV
11 Project to allow DPV coverage at most NYSEG divisions.

12 Q. Does NYSEG propose any changes in the accounting treatment of the Incremental
13 Maintenance program?

14 A. Yes. As noted earlier, one of the strengths of the Incremental Maintenance
15 program is that it adds a flexible and step-wise method of ramping up new
16 programs to production scale. However it was observed in the present rate case
17 that the development and initiation of these new programs occasionally required
18 multiple iterations to eliminate unknowns and produce a scope of work that was
19 in the best interest of the customer. This occasionally delayed the start of work
20 until a later year. The present rate plan does not have the flexibility to defer
21 unspent Incremental Maintenance funds into a subsequent year. NYSEG
22 proposes that up to 20% of the annual Incremental Maintenance monies be

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1 allowed to be carried over into a subsequent rate year. NYSEG believes this
2 flexibility will maximize the benefit of the program to the customer.

3 **C. Proposal for New Projects with New Incremental Funding**
4 **Within the Programs**

5 Q. What changes in the Incremental Maintenance program does NYSEG propose to
6 include in this rate proceeding that were not included in the Test Year (i.e., the
7 12 months ending December 31, 2014) or require an adjustment in base rates?

8 A. Exhibit __ (NYSEGGASEDO-5) – Incremental Maintenance identifies new
9 incremental O&M to cover currently known and unknown projects in years 2016
10 and beyond that would be subject to true up. These new Incremental O&M
11 projects continue to consist of successful R&D projects, audit response initiatives,
12 new data automation projects or regulatory initiatives that are being ramped up to
13 production scale for the first time that meet the intended purpose of the
14 Incremental Maintenance Program. The new incremental proposals are:
15 1) Public Awareness – Fire Department Emergency Response: As
16 mentioned above, NYSEG received a letter from the Commission dated
17 November 18, 2014 that provided notice of certain inadequacies in the revised
18 Iberdrola USA, Inc. Gas Emergency Plan in place for NYSEG, which was
19 submitted in accordance with a Commission order in Case 13-G-0484. This
20 notice provided NYSEG an opportunity to respond and make the necessary
21 revisions. In addition to addressing the deficiencies noted in the letter, NYSEG is
22 proposing to expand communications with local fire departments to include fire

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1 department training associated with gas specific emergency situations. The O&M
2 costs to be included in this program will consist of: a) incremental overtime for
3 Supervisors and Gas Fitters to provide training to local fire departments in the
4 evening when volunteers are available; and b) payments of \$250 to each local fire
5 department as an incentive for their costs to participate in the training. In
6 addition, the Company would also like to pay any fire department that travels to
7 the Reynolds Road Training Facility in Binghamton \$500 to reimburse them for a
8 portion of the travel cost to attend. Many of the fire departments do not have
9 budgets that allow for travel. NYSEG would like the opportunity to reimburse
10 them for travel costs as a way to encourage participation. This will enhance
11 public safety and overall communications within the communities served. The
12 estimated annual expense for this program is \$200,000.

13 2) Corrosion Control – Residential Meter Atmospheric Corrosion Project:
14 The recent management audit recommended that NYSEG begin an annual meter
15 inspection program for atmospheric corrosion. As a result of that
16 recommendation, NYSEG conducted a successful pilot program in 2014 to
17 inspect its outside meters and risers as part of its mandated leak survey. NYSEG
18 proposes to continue this effort during the mandated leak survey. Leak surveyors
19 will include a visual inspection of meters and risers for atmospheric corrosion and
20 severe coating loss as part of their work and report instances of corrosion or
21 coating loss that require remediation. The \$47,000 estimated annual cost for this
22 program is based upon the quoted price for 2015 work.

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1 3) Corrosion Control – Vacuum Excavation for Anode Installation: Earlier
2 NYSEG R&D work demonstrated the technical and economic feasibility of anode
3 installation for corrosion control via vacuum excavation and pavement coring.
4 The soft excavation technique minimizes the probability of pipeline damage,
5 minimizes disruption of public roadways and minimizes pavement damage and
6 restoration costs. Although the large majority of work will be anode installation
7 for cathodic protection, other miscellaneous vacuum excavation tasks that support
8 damage prevention and integrity management goals may also be conducted. This
9 project will provide added customer benefit by targeting anode installations on
10 cathodic protection sections that are nearing non-compliance. NYSEG presently
11 conducts cathodic protection voltage remediation only on sections that are already
12 electrically deficient and out of compliance ($<-.85$ mV). This is typically in the
13 range of 200-400 electrical sections per year.

14 In addition to this mandated compliance remediation of down sections,
15 NYSEG now proposes to conduct incremental voltage remediation of sections
16 that are still compliant, but which are predicted to become non-compliant within a
17 year. By adopting this proactive stance, NYSEG will minimize the number of
18 sections that fall into deficiency, minimize the probability of deficiencies, and
19 increase work flexibility and system integrity. The estimated annual expense for
20 this program is \$156,000.

21 4) Corrosion Control – Flame Spray of Above-Ground Piping: This program
22 will complement the Regulator Station Building program described below. The

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1 technical and economic feasibility of Aluminum Flame Spray for above-ground
2 piping was studied as an RG&E/NYSEG R&D project. The results of that project
3 demonstrated the benefits of the technology and recommended an annual program
4 of station piping conversion to the aluminum coating. The coating need only be
5 applied once per life of pipe and replaces all other coatings and annual
6 maintenance. The estimated annual expense for this program is \$105,000.

7 5) Damage Prevention – DPV Project: The NYSEG DPV Project has proven
8 to be a useful tool in addressing third-party damages. The statistical analysis of
9 third-party damage rates at NYSEG from 2008-2014 in DPV and non-DPV areas
10 indicates that the DPV patrol effort was worthwhile. Predictive modeling of this
11 data further indicates that third-party damage rates may be reduced further by
12 increasing the number of DPVs at NYSEG from five to fifteen. Therefore,
13 NYSEG is proposing to expand the scope of the DPV Project to allow for this
14 added coverage. The annual cost of the expanded project is forecasted at
15 \$948,000, based upon existing contract rates.

16 6) Electronic Records Data Conversion: Recent management and other
17 audits have recommended that NYSEG eliminate paper-based records
18 management and move to electronic processes to minimize errors and improve
19 productivity and system integrity. As a result of these recommendations, NYSEG
20 proposes to complete the conversion of its corrosion processes as well as to
21 convert other gas paper-based processes. The estimated cost of this program,
22 based upon experience with the corrosion records upgrades, is \$200,000/year for

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1 five years.

2 7) Emergent Projects: The Commission is actively monitoring utility
3 operations in several areas including Public Awareness, Damage Prevention,
4 Atmospheric Corrosion, Risk Assessment and Records Management. As part of a
5 multi-year rate plan, NYSEG proposes the inclusion of this line item, which
6 would allow NYSEG to immediately respond to and implement any future
7 changes ordered by the Commission during future Rate Years. The proposed cost
8 for this program would be \$100,000 in Rate Year 2, \$200,000 in Rate Year 3,
9 \$350,000 in Rate Year 4, and \$500,000 in Rate Year 5.

10 **VIII. VEGETATION MANAGEMENT**

11 **A. Review of the Current Program, Expenses and Benefits**

12 Q. What amount does the Company currently include for the NYSEG Vegetation
13 Management Program?

14 A. The current level is \$250,000 annually.

15 Q. What was the actual level of expenditure for Vegetation Management?

16 A. Please refer to Exhibit __ (NYSEGGASEDO-6) that sets forth the Vegetation
17 Management Actuals, Proposal and Forecast. The forecast expenditure is
18 \$420,000 in Rate Year 1.

19 Q. Please provide examples of the benefits of the Vegetation Management Program?

20 A. The Vegetation Management program conducted enhanced mowing, side-
21 trimming and reclamation on over 245 miles of transmission and distribution
22 right-of-way ("ROW") per year. This enhanced visibility and access allowed for

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1 improved damage prevention. It also permitted easier aerial patrols, leak survey,
2 close-interval survey and Integrity Management. This program also began the
3 development by a contract ROW forester of an automated NYSEG system-wide
4 Vegetation Management Program and electronic database.

5 **B. Proposed Treatment of the Existing Program**

6 Q. Does NYSEG propose to continue the current Vegetation Management Program?

7 A. Yes. NYSEG proposes to continue the current Vegetation Management Program
8 (with the expansions discussed below), move its annual expense shown in Exhibit
9 __ (NYSEGGASEDO-6) – Incremental Vegetation Management to base rates,
10 and forgo the need to perform an annual reconciliation.

11 **C. Proposal for New Initiatives for New Incremental /**
12 **Vegetation Management Funding**

13 Q. What changes in the Vegetation Management Programs does NYSEG propose to
14 include in this rate proceeding that were not included in the Test Year or require
15 an adjustment in base rates?

16 A. NYSEG proposes to increase the program budget to allow all divisions to move to
17 the best practice of a 100% annual management cycle. Previously, some divisions
18 maintained their ROWs on a three-year or variable cycle. NYSEG also proposes
19 to continue the use of contract forestry services to assist in program management
20 and electronic records conversion. Exhibit __ (NYSEGGASEDO-6) includes the
21 projected annual funding levels. The annual cost of the expanded NYSEG
22 Vegetation Management program is \$420,000.

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IX. INTEGRITY MANAGEMENT PROGRAM

A. Review of the Current Program, Expenses and Benefits

1
2
3 Q. What is the Integrity Management Program?

4 A. The Integrity Management Program is comprised of two individual integrity
5 programs applicable to the gas transmission and gas distribution systems. A
6 TIMP was established in accordance with 49 CFR Part 192 Subpart O, Gas
7 Transmission Integrity Management and 16 NYCRR 255. A DIMP was
8 established in accordance with 49 CFR Part 192 Subpart P, Gas Distribution
9 Integrity Management and 16 NYCRR 255.

10 Q. What amount does the Company currently include for the NYSEG Integrity
11 Management Program in its O&M expense?

12 A. The current amount is \$265,000 annually for the Integrity Management Program.

13 Q. What was the actual level of expenditure for Integrity Management?

14 A. Please refer to Exhibit __ (NYSEGGASEDO-7) – Integrity Management Program
15 which sets forth the Integrity Management Actuals, Proposal and Forecast.

16 Q. Can you please provide examples of how the Integrity Management Program has
17 been used by the Company for the benefit of customers?

18 A. Yes, the federally-mandated TIMP and DIMP programs have resulted in NYSEG
19 expenses of \$600,000 in total for the period of 2012-2014.

20 The TIMP and DIMP activities included in this incremental program
21 include the implementation of a comprehensive pipeline integrity data
22 management software package. The software package leverages the existing

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1 Geographical Information System (“GIS”) to allow for the maintenance and
2 cumulative integration of pipeline operational and integrity inspection data over
3 the lifetime of the pipeline system. Elements of the software are uniquely
4 applicable to the transmission system and leverage spatially referenced
5 operational data, and internal and/or external events on the pipeline system. This
6 data is utilized to determine pipe segment risk, and support the identification of
7 High Consequence Area (“HCA”) to meet defined program elements established
8 through TIMP regulatory requirements. The software also provides
9 complementary elements applicable to the distribution system in support of DIMP
10 regulatory requirements. These elements serve to aid in evaluating distribution
11 system risk and serve as a tool to establish a basis for recommended system
12 replacements.

13 TIMP activities also included in this incremental program include
14 completing in-line inspections, anomaly excavations and non-destructive
15 testing/inspections, systematic transmission system Class Location studies and
16 HCA location confirmation and identification activities. From 2010- 2014,
17 NYSEG identified and remediated seven anomalies on transmission mains
18 including one “immediate repair” discovered through the integrity assessment
19 process.

20 DIMP activities included in this incremental program include plotting of
21 paper record gas leak locations within the GIS, developing a repaired leak
22 database to support the identification of leak prone mains for capital replacement

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1 and implementing the aforementioned pipeline integrity data management
2 software package. Activities also consisted of records research, cathodic
3 protection surveys and pipe anomaly direct examinations on distribution system
4 piping operating at greater than 125 psig to expand upon available system
5 knowledge.

6 This program has proven to be very beneficial to NYSEG. NYSEG has
7 discovered facilities requiring repair due to pre-existing construction damage,
8 material defects and/or third-party damages and has established improved tools to
9 aid in the decision making and recordkeeping processes associated with Integrity
10 Management activities.

11 **B. Proposed Treatment of the Existing Program**

12 Q. Does NYSEG propose to continue the current Integrity Management Program?

13 A. Yes, based on the success of the existing Integrity Management Program, NYSEG
14 proposes its continuance. Exhibit __ (NYSEGGASEDO-7) – Integrity
15 Management Program identifies incremental O&M to cover known and
16 anticipated projects in years 2016 and beyond.

17 Q. Does NYSEG propose any changes in the accounting treatment of the Integrity
18 Management Program?

19 A. Yes. It was observed that under the current rate plan, the initiation and
20 implementation of inspections, programs and new processes required time to
21 complete that occasionally exceeded a single year. The current rate plan does not
22 have the flexibility to defer unspent Integrity Management Program funds into a

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1 subsequent year. NYSEG proposes that up to 20% of the annual Integrity
2 Management monies be deferrable into a subsequent Rate Year. NYSEG believes
3 this flexibility will maximize the benefit of the program to the customer.

4 **C. Proposal for New Initiatives for New Integrity Management Funding**

5 Q. What changes in the Integrity Management Program does NYSEG propose to
6 include in this rate proceeding that were not included in the Test Year?

7 A. Exhibit __ (NYSEGGASEDO-7) – Integrity Management Program identifies
8 additional incremental O&M to cover currently known and unknown projects in
9 years 2016 and beyond that would be subject to true up. The stakeholder focus on
10 Integrity Management continues to evolve to include additional emphasis on
11 integrity and safe operation of the transmission and distribution systems.

12 Anticipated new regulations that will affect the Integrity Management Program
13 include:

14 1) Pipeline and Hazardous Materials Safety Administration (“PHMSA”) IMP
15 Medium Consequence Areas: PHMSA continues to evaluate the effectiveness of
16 the TIMP regulations and processes including the potential extension of HCA
17 inspection requirements to additional locations within the gas transmission
18 system, referred to as Medium Consequence Areas (“MCA”). NYSEG presently
19 maintains 0.2 miles of HCA mileage within a 20-mile transmission system. It is
20 anticipated that implementation of new MCA integrity management requirements
21 will result in the extension of existing program requirements to cover significantly
22 more system mileage than presently included within HCA pipe segments.

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1 2) Gas Transmission Integrity Verification Process: In 2013, PHMSA
2 previewed proposed additions to its integrity management program (TIMP) which
3 will require operators to apply additional assessments to pipe segments located in
4 HCAs and MCAs to ensure integrity. These additions will result in what are
5 known as Integrity Verification Process regulations. As it stands, these
6 requirements would require pipeline operators to verify MAOP and material
7 properties of gas transmission lines, including pipelines constructed before 1970
8 that have been grandfathered from testing protocols. The effect on NYSEG is
9 anticipated to require the investigation, identification and documentation of all
10 system materials of construction where it may be determined that records are not
11 producible to indisputably confirm MAOP.

12 New initiatives that NYSEG intends to pursue that will further improve
13 the Integrity Management Program include:

14 1) Implementing software improvements that were not included within the
15 prior integrity data management software solution, such as developing a system
16 for periodically updating the transmission/high pressure pipeline centerline in the
17 Data Management database, updating risk models for TIMP and DIMP, and
18 providing for continuing training to utilize available tools and data. Additional
19 considerations may include linking data between SAP, GIS, and other record
20 databases for data reporting (Commission and NYSDOT Annual Reports) and
21 verification/validation of data to achieve a better confidence level of reporting
22 accuracy.

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1 2) Completing In-Line Inspection on all NYSEG NYSDOT transmission
2 piping to establish baseline condition data to support future integrity assessments
3 and condition evaluation.

4 3) Evaluating and implementing a main replacement prioritization software
5 program with automated data management and with industry standard risk
6 algorithms. NYSEG presently utilizes a manual process for evaluating and
7 prioritizing piping for replacement and expects this implementation to provide for
8 more robust capabilities to evaluate piping for recommended replacement.

9 4) Establishing a program to rehabilitate TIMP and DIMP applicable high
10 pressure pipelines to offset capital expenditures and replacement. Rehabilitation
11 efforts are anticipated to include activities, such as evaluation and redesign of
12 cathodic protection systems, identification and repair of corrosion, external
13 damages, material or construction defect repair, weld joint reinforcement or
14 coating repair. Rehabilitation of pipelines will prolong asset life and mitigate
15 identified threats and risk in lieu of full pipeline replacement.

16 **X. ADDITIONAL REQUESTED BASE RATE**
17 **COST RECOVERY PROGRAMS**

18
19 Q. What additional base rate cost recovery programs is NYSEG requesting
20 associated with the increased capital program discussed previously?

21 A. NYSEG is requesting an increase in O&M costs associated with the capital
22 program to convert low-pressure to medium-pressure systems. O&M costs are for
23 work associated with the conversions, such as leak surveys and service meter

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1 relocations.

2 Q. What additional base rate cost recovery programs is NYSEG requesting
3 associated with the Incremental O&M Program?

4 A. The Company recommends that successfully demonstrated programs in the
5 Incremental O&M Program 2010-2014 Compliance Filings associated with Public
6 Awareness, Exposed Piping on Bridges, and Additional System Leak Survey
7 continue to be included in future base rates and no longer be included in the
8 annual true up. It should also be noted that the Company has increased the
9 spending level for the Additional System Leak Survey to cover 100% of the
10 NYSEG gas system each year. Based upon existing contract pricing, the
11 estimated annual expense increase for the new incremental 1/3 leak survey is
12 \$169,500. NYSEG also requests additional O&M to repair the leaks associated
13 with expanding the annual non-mandated leak survey by an incremental 1/3.
14 During the period 2011-2014, NYSEG discovered 362 below-ground additional
15 leaks by surveying an additional 1/3 of the mains and services. As proposed
16 above, NYSEG requests additional O&M to increase the annual survey to cover
17 the remaining 1/3 of our system. That means that NYSEG will be leak surveying
18 100% of the mains and services annually. The average cost to repair a leak is
19 approximately \$3,000. If that amount is multiplied by the four-year average
20 associated with the current 1/3 non-mandated leaks found, it amounts to an
21 incremental \$276,000 ($362/4 * \$3,000$, escalated from 2015). The Company

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1 believes there is no better investment than to find and fix all leaks to provide the
2 highest level of public safety.

3 Q. Is the Company requesting base rate cost recovery associated with the Vegetation
4 Management Program?

5 A. Yes. NYSEG proposes to move the current Vegetation Management Program
6 annual expense shown in Exhibit __ (NYSEGGASEDO-6) – Incremental
7 Vegetation Management to base rates and forgo the need to perform an annual
8 reconciliation. As stated previously, NYSEG proposes to increase the program
9 budget to allow all divisions to move to a 100% annual management cycle.
10 Previously, some divisions maintained their ROWs on a three-year or variable
11 cycle. NYSEG also proposes to continue the addition of contract forestry services
12 to assist in program management and electronic records conversion. Exhibit __
13 (NYSEGGASEDO-6) – Incremental Vegetation Management includes the
14 projected annual funding levels. The annual cost of the expanded NYSEG
15 Vegetation Management program is \$420,000.

16 Q. Is the Company requesting base rate cost recovery associated with the Integrity
17 Management Program?

18 A. Yes. The Integrity Management Program was developed and implemented to
19 ensure the overall integrity of the gas transmission systems. TIMP and DIMP
20 activities address the requirements, processes, plans, schedules, and activities
21 associated with the identification of anomalies requiring repair, but not the actual
22 cost of the repair itself. NYSEG is also seeking deferred cost recovery for the

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1 cost of the actual repairs emanating from the Integrity Management Program.

2 Repair costs will be based on the findings and until the testing is performed, it is
3 not possible to provide an estimated cost of repair associated with any of the
4 programs. Deferral accounting is recommended in this case since the costs are
5 uncertain in scope and amount on an annual basis.

6 Q. What additional base rate cost recovery programs is NYSEG requesting?

7 A. NYSEG proposes the following eleven additional base rate programs:

8 1) American Gas Association (“AGA”) Dues: NYSEG rejoined the AGA in
9 2013. The AGA is a national trade association comprising over 200 distribution
10 companies serving 64 million customers. As such, it fulfills the needs of local
11 natural gas distribution companies and thereby improves the industry’s ability to
12 better serve its customers. Membership in this organization makes a wide and
13 valuable array of technical, management, safety and regulatory resources
14 available to NYSEG management and technical staff. Data about all aspects of
15 the natural gas industry is collected and compiled in ready-reference form.
16 Among these publications are GAS FACTS and Heating/Cooling Degree-Day
17 Statistics. The AGA also undertakes a wide range of analyses on environmental,
18 financial, gas supply, gas demand, consumer cost, capital requirements, resource
19 efficiency and other issues facing the gas industry. These analyses are of great
20 value in assisting a member company and other decision-makers in resolving the
21 country’s current energy problems and in establishing public policies that will be
22 in the nation’s best interest. The annual cost of this membership is approximately

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1 \$180,000 per operating company.

2 2) Public Awareness – Enhanced Outreach (Horseheads): On
3 February 20, 2014, the Commission issued the Horseheads Order which requires
4 that utilities conduct a more robust outreach and education program regarding
5 natural gas safety. In response, NYSEG is proposing an enhanced project that
6 includes print, radio, transit, mail, NGA and educational services. This project is
7 divided into two sub-projects: a) a program designed to help customers recognize
8 and respond to gas odors; and b) a program to increase municipality and third-
9 party damage awareness. The annual cost of this new project is estimated at
10 \$355,000 based upon existing, known costs for these types of services. Detailed
11 cost estimates are included in Exhibit __ (NYSEGGASEDO-10) – Consolidated
12 Statement of Public Awareness and Outreach Efforts.

13 3) Regulator Station Building Maintenance and Construction: NYSEG
14 proposes an enhanced program to maintain, repair and construct regulator station
15 buildings, fencing and facilities to provide enhanced safety and security of this
16 above-ground infrastructure. The estimated annual expense for this program is
17 \$143,000.

18 4) Purchase Point Gas Heater Service: NYSEG operates gas heaters at
19 approximately 25 purchase points. NYSEG proposes to initiate service
20 agreements with the heater equipment vendors to provide regular service and
21 maintenance. This will minimize long-term operating costs and forced outages
22 and improve downstream service reliability. The estimated annual cost of this

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1 program is \$35,000.

2 5) Enhanced Training Program: Approximately 40% of existing gas workers
3 are currently eligible for retirement and approximately 70% will be eligible to
4 retire within the next 10 years. NYSEG requests \$200,000 annually to enhance
5 the capabilities of the training department to address the increased operator
6 qualification training associated with new gas field workers and to send gas
7 personnel to external training programs. External training allows interaction with
8 industry experts and peers in order to gain valuable knowledge and contacts that
9 will prove beneficial in the performance of their jobs.

10 6) Safety Program: NYSEG requests \$20,000 annually to enhance safety
11 programs associated with reducing injuries and motor vehicle accidents. NYSEG
12 employees take their individual responsibility to protect public safety seriously.
13 They also take individual responsibility to achieve safety performance metrics.

14 7) Residential Meter Atmospheric Corrosion Coating Repairs: NYSEG
15 requests \$50,000 annually to re-coat meters, risers and other above-ground piping
16 that are identified during the new Incremental Maintenance atmospheric corrosion
17 inspection process as having severe coating loss. Work will primarily involve re-
18 painting of residential meters, but may also include commercial/industrial meters
19 and other coating methods as needed. Initial sampling data indicates that
20 approximately 2,000 meters/risers per year will require re-coating.

21 8) O&M Related to Capital: NYSEG requests an increase to O&M in the
22 amount of \$400,000 associated with the increase in the number of miles of main

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1 proposed in the capital program to raise low-pressure mains to medium-pressure
2 service. The estimated annual increase to O&M is associated with increases in
3 leak survey costs and meter upgrades not included in the base period.

4 9) O&M Related to Reducing Gas Record Audit Deficiencies: NYSEG
5 requests an annual increase of \$200,000 to evaluate and implement sustainable
6 processes (and program changes) related to Gas Record Audits.

7 10) O&M Related to Terminating Service to Inactive Inside Meters on Low-
8 Pressure Systems: NYSEG requests an annual increase of \$590,000 to disconnect
9 services at the main to inactive inside meters on low-pressure systems. When a
10 new customer calls to re-establish service, NYSEG will use the opportunity to
11 move the inside meter outside so the problem will not be incurred in the future.

12 11) O&M Related to Remediation Meter Replacement Program: NYSEG
13 requests an annual increase of \$648,000 to replace an abnormal number of 4,700
14 remediation meters over the next several years. This is due to the failure of
15 approximately 20,000 Rockwell 275 meters that need to be replaced by code over
16 a seven-year period. This is a significant increase above what is included in the
17 Test Year for remediation meter exchanges.

18 **XI. PROPOSED ADDITIONAL GAS OPERATIONS POSITIONS**

19 Q. Is NYSEG proposing to add additional Gas Operations positions, not included in
20 the Test Year, to address the aging workforce and resulting retirements and to
21 help complete its required work and to continue providing safe and reliable
22 service?

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1 A. Yes. Currently NYSEG has approximately 150 gas field workers to complete all
2 required work identified as core business. The Company is required to operate
3 approximately seven distinct business functions within Gas Operations. These
4 seven business areas are: 1) an emergency business; 2) mandated surveys and
5 inspection business; 3) construction business; 4) maintenance and repair business;
6 5) a corrosion business; 6) safety and training; and 7) an administrative business.
7 The Company has staffed itself with permanent fully-qualified internal positions
8 to perform all work tasks identified as core business, which includes: emergency
9 response; a majority of the mandated surveys and inspections; leak repairs;
10 construction inspection; corrosion control; safety and training; and administrative
11 functions. Some work functions are contracted with qualified external companies
12 which include: capital construction; leak surveys; locating; incremental damage
13 surveys; and some corrosion surveys.

14 Approximately 40% of the existing gas field workers are currently eligible
15 for retirement and approximately 70% will be eligible to retire within the next
16 10 years. Replacement of the retiring gas field workers will require a
17 combination of bringing in partially-qualified external hires and internal
18 apprentices. The Gas Fitter training progression program requires a minimum of
19 three years to complete before employees are eligible to be fully-qualified to
20 perform work tasks independently. The increases in gas workforce are reflected
21 in the Workforce, Compensation and Benefits Panel's direct testimony and
22 exhibits.

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XII. RESEARCH AND DEVELOPMENT

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Q. Does NYSEG have a R&D Program for gas projects?

A. Yes. NYSEG has a Gas R&D program and files a three-year gas R&D report with the Commission which contains a summary of projects and expenditures as required in Case 09-G-0716. NYSEG’s last R&D report was filed on May 2, 2013.

Q. Does the Company propose any changes in the R&D program and if so, what does the Company propose?

A. Yes, the Company is proposing an increase in funding for its internal R&D program at NYSEG and to maintain similar internal program costs and program benefits between NYSEG and RG&E.

Q. What is the current budget for the NYSEG Gas R&D Program?

A. The current NYSEG Gas R&D Program consists of two parts, an internal program which is funded at \$847,000 annually (which includes \$475,000 for internal projects and \$372,000 for the New York State Energy Research and Development Authority (“NYSERDA”)) and an external program referred to as “Millennium Surcharge Funds,” which is funded at \$650,000 annually. The actuals, current and proposed spend amounts are set forth in Exhibit __ (NYSEGGASEDO-8) – NYSEG Gas R&D Actuals, Proposal and Forecast.

Q. What types of projects are in the internal program?

A. Internal projects concentrate on projects near the end of the R&D cycle and are short-term in nature. Internal projects consist of final field testing and

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1 demonstrations of applications of new technologies. The semi-annual payment of
2 the Commission Assessment of the NYSERDA statutory program is collected as
3 part of the internal program.

4 Q. What is the Millennium Surcharge program, and what types of projects are
5 included in this program?

6 A. The Millennium Surcharge program is based upon Case 99-G-1369 and includes
7 medium to long-term projects in nature.

8 Q. What is the proposed funding level for the NYSEG Gas R&D Program?

9 A. NYSEG is proposing to increase the NYSEG Internal program category from
10 \$847,000 annually to \$1,089,000 in the Rate Year and leave the Millennium
11 Surcharge funding at the current level of \$650,000 annually, resulting in the total
12 NYSEG R&D program funding going from \$1,497,000 annually to \$1,739,000 in
13 the Rate Year.

14 However, NYSEG is proposing that the level of funding created for the
15 NYSERDA portion of R&D be separated from the Internal funding amount as
16 shown in Exhibit __ (NYSEGGASEDO-8) – NYSEG Gas R&D Actuals,
17 Proposal and Forecast, and be allowed to vary automatically with increases or
18 decreases in the actual NYSERDA gas assessment. Under this proposal,
19 \$439,000 in NYSERDA payments would be separated out of the Internal program
20 costs, thereby reducing the Internal program R&D expenditures to \$650,000 per
21 year. As in previous rate cases, all funds collected (except those collected for
22 NYSERDA) will be dedicated for R&D costs and will not be used for any other

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1 purpose. Differences between actual expenditures and actual collections will be
2 deferred from year to year with any balance available for R&D in subsequent
3 years to be used to recover any deferred cost from a previous year.

4 Q. Are there any restrictions placed on the use of the NYSEG Gas R&D funds?

5 A. Yes. NYSEG is not permitted to use any R&D funds for any other purpose,
6 without approval of the Commission. The funds collected via the surcharge are
7 restricted pursuant to the Commission's order in Case 99-G-1369 issued on
8 February 14, 2000.

9 Q. Can you provide examples of how the Gas R&D program has been used by the
10 Company for the benefit of customers?

11 A. The NYSEG/RG&E Gas R&D program has had several significant successes.
12 For NYSEG, these successfully deployed technologies come from NYSEARCH's
13 and Operations Technology Development/Gas Technology Institute's
14 ("OTD/GTI") collaboratively-funded projects as well as from in-house projects.
15 The R&D projects yield positive safety, customer service, and environmental
16 benefits. Examples of these projects include:

17 1) The DPV Project, discussed earlier in this testimony, started as an R&D
18 project that was developed to evaluate the effectiveness of using DPVs to monitor
19 third-party damages. The program was piloted in NYSEG and RG&E territories
20 and was effective regarding third-party damages. An enhanced DPV program is
21 proposed as an incremental O&M project.

22 2) The Aluminum Flame Spray Project was an R&D project that supported a

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1 technical evolution and economic feasibility of thermal spray aluminum on gas
2 meter and regulator stations. Compared to traditional paint, thermal spray
3 aluminum is a long-lasting coating that is resistant to atmospheric corrosion. The
4 thermal aluminum spray was successfully piloted at both NYSEG and RG&E and
5 is proposed as an incremental O&M project.

6 3) The VacHoe keyhole excavation R&D project successfully evaluated and
7 deployed keyhole technologies to reduce damages to public and private
8 properties as well as damages to NYSEG's and RG&E's gas distribution system.
9 The VacHoe also reduced excavation and restoration costs.

10 4) The automation of cathodic rectifier data was initiated as an R&D project
11 to evaluate automated corrosion technologies and to perform an economic
12 feasibility study of their use. The automation of rectifier data has been
13 successfully deployed throughout NYSEG and RG&E.

14 5) The NYSEARCH Pipeline Integrity Management portfolio of projects
15 continues to develop a suite of advanced technologies to conduct the direct or
16 remote assessment of pipelines. These projects are supported by significant
17 Federal Office of Pipeline Safety co-funding monies and continue to be tested at
18 NYSEG's training/R&D center in Binghamton. Several Integrity Management
19 projects supported by NYSEG include:

- 20 ○ The development and commercialization of the explorer 6-8" and 20-26"
21 robotic un-tethered internal inspection tools for un-piggable pipelines;

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- 1 ○ Support technologies to enhance the robotics system which include an
- 2 inline charging system, rescue tool, development of a crack detection
- 3 sensor, and mechanical damage (dent and ovality) sensor; and
- 4 ○ NYSEARCH and Kiefner Inc. developed and enhanced a pipeline system
- 5 assessment model to prioritize interactive threats that will impact pipe
- 6 integrity. The Kiefner interactive threat model defines, assesses and
- 7 prioritizes interactive threats to a pipeline system and aids in decision
- 8 making for improving pipeline safety.
- 9 6) The OTD/GTI Leak Rupture Calculator is a tool that enables operators to
- 10 determine the leak rupture boundary for pipe segments based on pipe properties.
- 11 The operator can use the model for risk modeling and consequence analysis for
- 12 improving pipeline safety and integrity.
- 13 7) NYSEARCH – Soil Vapor Intrusion associated with Manufactured Gas
- 14 Plant (“MPG”). The characterization of MPG tar vapors were tested to determine
- 15 the compounds specific to MPG tar vapors to minimize expensive and intrusive
- 16 customer indoor and sub-slab vapor sampling. This resulted in savings of
- 17 approximately \$15,000 per residence affected in MPG locations.
- 18 8) The OTD/GTI – Acoustic pipe locator involved the development and
- 19 commercialization of a portable handheld acoustic based pipe locator capable of
- 20 detecting multiple buried plastic pipes in various ground conditions up to depths
- 21 of five feet. The locator will reduce the risk of third-party damages to
- 22 underground utilities, enhance pipeline safety and reduce gas industry costs

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1 evolving pipeline repairs.

2 NYSEG Gas R&D has deployed 50 new technologies into the workplace
3 from 2010-2014.

4 **XIII. GAS EMERGENCY PREPAREDNESS**

5 Q. How is NYSEG proposing to improve Gas Emergency Preparedness?

6 A. As outlined in previous sections of this testimony, NYSEG is proposing to
7 develop an Outage Management System that will provide more responsive
8 estimates of impacted customers due to unforeseen circumstances that could cause
9 sections of the gas system to be out of service. NYSEG has requested additional
10 funding to further facilitate public outreach that has been summarized in Exhibit
11 __ (NYSEGGASEDO-10) – Consolidated Statement of Public Awareness and
12 Outreach Efforts. NYSEG has included program funding in the Incremental
13 Maintenance Plan to implement a First Responder Training Program for local fire
14 departments on the dangers of natural gas. NYSEG has also modified the
15 Binghamton Service Center into an Incident Command Center that can be used
16 during flood events and joint emergency training exercises with local and state
17 agencies.

18 **XIV. PUBLIC AWARENESS AND COMMUNICATIONS**

19 Q. Can you please provide an overview and summary of all public awareness and
20 communication programs/proposals (i.e., RP-1162, Horseheads, Gas Emergency
21 Preparedness, other)?

22 A. Yes. Please refer to Exhibit __ (NYSEGGASEDO-10) that sets forth a

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1 Consolidated History, Proposal and Forecast of the Company's public awareness
2 and communication programs/proposals. NYSEG Public Affairs presently spends
3 approximately \$250,000 annually in base rates to comply with various RP-1162
4 outreach efforts. As described earlier, the NYSEG Gas Incremental Maintenance
5 program provided a historic incremental \$56,000 Public Awareness RP-1162
6 support and proposes to increase this to \$79,000 and move it to base rates. Also
7 as described earlier, NYSEG proposes one new Incremental Maintenance project,
8 the Public Awareness - Fire Department Emergency Response Project at
9 \$200,000 per year, and one new Base Rates program, the Public Awareness -
10 Enhanced Outreach (Horseheads Order) program at \$355,000 per year.

XV. CONCLUSION

12 Q. Will the programs and resources requested in this testimony allow the Company
13 to continue to provide a high level of service to the public?

14 A. The Company takes its responsibility to serve and provide safe and reliable
15 service seriously and continues to be a leader in the industry. NYSEG has
16 demonstrated good stewardship, continuous improvement and is committed to
17 providing safe, reliable and cost-efficient service to our customers. The resources
18 requested will allow NYSEG to continue to upgrade infrastructure, maintain the
19 gas network and serve current and new customers safely and expeditiously.

20 Q. Does this complete your testimony at this time?

21 A. Yes.