

December 23, 2014

BY HAND DELIVERY & ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

**RE: National Grid's Proposed FY 2016 Gas Infrastructure, Safety, and Reliability Plan
Docket No. _____**

Dear Ms. Massaro:

On behalf of National Grid,¹ I have enclosed ten (10) copies of the Company's proposed Gas Infrastructure, Safety, and Reliability Plan (Gas ISR Plan or Plan) for fiscal year 2016.² This proposed Gas ISR Plan is designed to enhance the safety and reliability of the Company's natural gas distribution system. As required by law, the Company submitted the proposed the Plan to the Rhode Island Division of Public Utilities and Carriers (Division) for review. In refining the proposed Plan, the Company met with the Division's representatives regarding the proposed Plan.

The Gas ISR Plan is designed to protect and improve the gas delivery system through proactively replacing leak-prone gas mains and services, accelerating the Company's replacement of leak-prone facilities, upgrading the system's pressure regulating systems, and addressing conflicts that arise out of public works projects. The Plan is intended to achieve these safety and reliability goals through a cost-effective, coordinated work plan. The level of work that the Plan provides will sustain and enhance the safety and reliability of the Rhode Island gas pipeline infrastructure and directly benefit all Rhode Island gas customers.

The Plan includes a description of the categories of work the Company proposes to perform in fiscal year 2016 as well as the proposed targeted spending levels for each work category. This filing includes the pre-filed direct testimony of three witnesses: Mr. David Iseler introduces the Plan document and describes the program components of the Plan; Ms. Melissa A. Little describes the calculation of the Company's revenue requirement; and Ms. Suhila Nouri Nutile describes the calculation of the Gas ISR factors proposed in this filing and provides the bill impacts from the

¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

² The Gas ISR Plan is submitted in compliance with the provisions of R.I. Gen. Laws § 39-1-27.7.1.

proposed rate changes. For the average residential heating customer using 846 therms annually, implementation of the proposed ISR factors will result in an annual increase of \$25.87, or 2.2%.

Please note that on December 19, 2014, the President of the United States signed into law the Tax Increase Prevention Act of 2014 (HR 5771), which temporarily extends over 50 expired incentives for individuals and businesses through 2014, including 50 percent bonus depreciation for certain qualified investments. As agreed to with the Division, the Company will supplement this filing for any impacts this newly signed federal legislation will have on the Company's ISR Plan cost of service as soon as the Company has had an opportunity to review and understand the implications of this newly enacted law.

This Gas ISR Plan presents an opportunity to facilitate and encourage investment in the Company's gas utility infrastructure and enhance its ability to provide safe, reliable, and efficient gas service to customers.

Thank you for your attention to this transmittal. If you have any questions, please contact me at (781) 907-2121.

Very truly yours,



Raquel J. Webster

Enclosures

cc: Steve Scialabba
Leo Wold, Esq.
James Lanni
Don Ledversis

National Grid

The Narragansett Electric Company

**Gas Infrastructure,
Safety, and Reliability Plan
FY 2016 Proposal**

December 23, 2014

Docket No. _____

Submitted to:
Rhode Island Public Utilities Commission

Submitted by:

nationalgrid

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. _____
RE: FY 2016 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN
WITNESS: DAVID G. ISELER

DIRECT TESTIMONY

OF

DAVID G. ISELER

December 23, 2014

Table of Contents

I.	Introduction and Qualifications.....	1
II.	Purpose of Testimony	3
III.	Overview	3
IV.	Capital Investment Plan	6

1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Mr. Iseler, please state your name, business address , title and areas of**
3 **responsibility.**

4 A. My name is David G. Iseler. My business address is 40 Sylvan Road, Waltham, MA
5 02451. I am employed by National Grid Corporate Services LLC as the Director of New
6 England Gas Network Strategy (National Grid or Company). I am the Rhode Island state
7 Jurisdictional Lead for all gas Network Strategy issues, including those related to the
8 Company's capital investment strategy. In my role, I work closely with the Rhode Island
9 Jurisdictional President and staff on all local issues related to the Company's Rhode
10 Island gas system. My responsibilities also include working with Regulators on issues
11 related to the gas system, development of strategies to support company objectives
12 regarding investment in the gas system, and to provide testimony regarding capital
13 investments in National Grid's gas system during state regulatory proceedings.

14
15 **Q. Please describe your educational background and professional experience.**

16 A. I earned a B.S. in Electrical Engineering from the University of Massachusetts at
17 Amherst in 1986 and a M.B.A with a concentration in finance from Boston College in
18 1991. I have worked for National Grid and/or its predecessor companies for the past 27
19 years. My experience during that time includes working in the field along with various
20 engineering aspects associated with the gas distribution system. In 2007, I was the
21 Manager of Reliability Engineering and Planning for New England, and in 2008, I was

1 promoted to Director of Gas Reliability for National Grid. In 2010, I worked as the
2 Director of Project Engineering and Design for National Grid and in August of 2014, I
3 assumed my current position as Director of Gas Network Strategy for New England. In
4 these roles, I have been responsible for gas system reliability planning, long term system
5 planning in support of growth, engineering and design of complex capital projects and
6 public works. In addition, I have also worked with regulatory and jurisdiction personnel
7 regarding the development and communication of gas network strategy and capital
8 planning.

9
10 **Q. Have you previously testified before the Rhode Island Public Utilities Commission**
11 **(PUC)?**

12 A. Yes, on February 17, 2011, I testified before the PUC in Docket No. 42-19 in support of
13 the Company's FY 2012 Gas ISR Plan. I have also represented the Company in
14 negotiations with the Division on the Rhode Island FY 2016 Gas ISR Plan. In addition, I
15 recently filed testimony with the Massachusetts Department of Public Utilities in support
16 of the Company's leak-prone pipe replacement plan, which is mandated by recent
17 legislation designed to implement a gas system enhancement and proactive main
18 replacement program similar to the Rhode Island Gas ISR plan.

1 **II. PURPOSE OF TESTIMONY**

2 **Q. What is the purpose of your testimony?**

3 A. The purpose of this testimony is to describe the Company's proposed Infrastructure,
4 Safety and Reliability Plan (Gas ISR Plan or Plan for Fiscal Year (FY) 2016.¹ In my
5 testimony, I provide a description of the Company's proposed FY 2016 Gas ISR Plan,
6 which details the work the Company will perform under the proposed ISR Plan and the
7 anticipated capital investments associated with that work. Ms. Melissa A. Little provides
8 testimony on the calculation of the revenue requirement impact associated with the
9 Company's proposed FY 2016 ISR Plan, and Ms. Suhila Nouri Nutile provides testimony
10 relative to (1) how the rate design was established for the ISR mechanism; (2) the
11 calculation of the ISR rate factors; and (3) the customer bill impacts of the proposed ISR
12 factor rates.

13
14 **III. OVERVIEW**

15 **Q. How was the FY 2016 Gas IRS Plan prepared?**

16 A. The Company prepared the FY 2016 ISR Plan and submitted it to the Division for
17 review. The Company met with the Division and responded to questions from the

¹ Pursuant to R.I. Gen. Laws § 39-1-27.7.1, An Act Relating to Public Utilities and Carriers – Revenue Decoupling (the Act), the Company is required to annually file an infrastructure, safety, and reliability spending plan with the PUC for review and approval. In addition to budgeted spending, the annual Gas ISR Plan must include a reconcilable allowance for the anticipated capital investments and other spending for the upcoming fiscal year. The Company's FY 2015 runs from April 1, 2014 through March 31, 2015, and the proposed Gas ISR Plan would be effective April 1, 2015.

1 Division about the components of the Plan, including the gas expansion pilot program.

2 The Division has agreed to the overall spending portion of the Plan, and will continue to
3 review particular Plan provisions as the PUC conducts its proceeding in this matter. The
4 proposed ISR Plan will allow the Company to meet state and federal safety and reliability
5 requirements and to maintain its gas distribution system in a safe and reliable condition.

6 The FY 2016 ISR Plan should improve the safety and reliability of the Company's gas
7 system for the immediate and long-term benefit of Rhode Island's natural gas customers.
8

9 **Q. What is the FY 2016 Gas ISR Plan designed to accomplish?**

10 A. The FY 2016 Gas ISR Plan is designed to maintain and upgrade the Company's gas
11 delivery system by proactively replacing leak-prone gas mains and services, upgrading
12 the system's pressure regulating systems, responding to emergency leak situations, and
13 addressing conflicts that arise out of public works projects. The Plan attempts to attain
14 these safety and reliability goals through a cost-effective, coordinated work plan. The
15 level of work that the Plan provides will sustain and enhance the safety and reliability of
16 the Rhode Island gas pipeline infrastructure and directly benefit Rhode Island gas
17 customers. The Company now submits this Plan to the PUC for final review and
18 approval.²

²Pursuant to R.I. Gen. Laws. § 39-1-27.7.1 (d), the Company and the Division must work together over the course of 60 days in an attempts to reach an agreement on a proposed plan, which the Company must submit to the PUC for review and approval.

1 **Q. Are you sponsoring any exhibits through your testimony?**

2 A. Yes. The proposed FY 2016 Gas ISR Plan is attached as Exhibit 1 to my testimony. It is
3 organized as follows:

4 Section 1 – Introduction and Summary

5 Section 2 – Gas Capital Investment Plan (including major categories of work)

6 Section 3 – Revenue Requirement Calculation

7 Section 4 – Rate Design and Bill Impacts

8 In addition, as noted above, Ms. Little provides testimony regarding the revenue
9 requirement calculation included in Section 3, and Ms. Nutile provides testimony
10 regarding the rate design and bill impacts outlined in Section 4.

11
12 **Q. What types of infrastructure, safety, and reliability work does the proposed FY**
13 **2016 Gas ISR Plan include?**

14 A. The Plan seeks not only to maintain the system, but also to proactively upgrade its
15 condition to head off problems before they arise. A safe and reliable gas delivery system
16 in Rhode Island is essential to health, safety, and well-being of its citizens and is
17 functional to maintaining a healthy economy and continuing to attract new residents and
18 businesses. In 2008, the PUC embarked on a course of addressing Rhode Island's aging
19 gas infrastructure with the establishment of the Accelerate Replacement Plan (ARP). In
20 addition to the type of infrastructure, safety, and reliability work performed under the

1 ARP, the FY 2016 Gas ISR Plan contains spending related to safety and reliability for
2 public works, mandated programs, special projects, and reliability programs. Included in
3 the ISR Plan document is a description of the Company's proposed budget for capital
4 investment for FY 2016 and a capital forecast for FY 2016 through FY 2020.

5
6 **IV. CAPITAL INVESTMENT PLAN**

7 **Q. What levels of spending are proposed in the FY 2016 Gas ISR Plan?**

8 A. For FY 2016, the Company proposes ISR spending totaling \$78.50 million. The ISR
9 Plan is broken down into categories of programs designed to maintain the safety and
10 reliability of the Company's gas delivery infrastructure. For each program category in
11 the Plan, the Company proposes the following levels of spending:

- 12 • \$46.64 million combined for proactive Main and Service
13 Replacement Programs
- 14 • \$0.20 million for Reactive Main Replacement
- 15 • \$4.59 million for Public Works Programs
- 16 • \$14.3 million for Mandated Programs (capital leak repairs,
17 meter replacements, corrosion and non-leak other)
- 18 • \$9.21 million for Gas System Reliability, including work
19 relative to System Automation and Gas Control, Pressure
20 Regulating Facilities (including Heater Program, Vent Pole
21 Installation and Control Line Integrity Work), System
22 Reliability Enhancement, Water Intrusion Program, and
23 Valve installation/replacement

- \$3.00 million in the Special Projects category for the continuation of the gas expansion pilot program designed to provide commercial and residential customers with incentives in providing main extensions.
- \$0.56 million of Operation and Maintenance (O&M) expense for the hiring and training of incremental personnel to support the increase in leak-prone pipe (LPP) replacement.

The Company will continue to file quarterly reports with the Division and PUC detailing the progress of its FY 2016 Gas ISR Plan programs.

Q. Does the proposed FY 2016 Gas ISR Plan include any incremental O&M costs?

A. Yes. The Company is proposing to include \$160,000 of incremental O&M expense to support the increase in the miles of pipe replaced and abandoned in its Main Replacement Programs. In FY 2015, the Company hired and trained 11 additional personnel to work on the Main Replacement Program and support the increase in the program to 53 miles. For FY 2016, the Company is proposing to increase the target to replace 56 miles of LPP, which will require the Company to hire and train an additional 5 full-time equivalent (FTE) positions for the Proactive Main Replacement Program. This need to increase the number of FTE personnel is also driven, in part, by the fact that the Company will be increasing the percentage of the more expensive cast iron main to be replaced. As in FY 2015, the total amount of FTE O&M expense will be tracked and reconciled to actual FTE O&M expense in the next reconciliation filing.

1 **Q. Please provide an update on the Gas Expansion Pilot Program.**

2 A. In the FY 2015 Gas ISR, the PUC approved the Company's modifications to simplify the
3 pilot program process and to increase the pool of eligible customers by introducing a
4 Density Test and new minimum customer requirements. Under the Density Test,
5 customers within seventy (70) feet of the main now qualify for the pilot program. In
6 addition, to increase the flexibility for the Company to consider small gas expansion
7 projects as well as major gas expansion projects, the customer commitment requirements
8 were modified to require that a minimum of ten percent (10%) of prospective customers
9 commit to the project, with a minimum of at least three customers. Finally, the current
10 variable customer Contribution In Aide of Construction (CIAC) charge was changed to
11 include a modest incremental fixed charge of \$150 (\$950 vs \$800), that will be
12 reconciled and credited back to customers in the annual Gas IS reconciliation filing.
13 As a result of these modifications, in FY 2015 the Company has been able to sell six
14 projects under the Gas Expansion Pilot Program of which three have been installed (two
15 in Cranston and one in East Providence) and three are in progress (Cranston, Bristol and
16 Narragansett). To date, the Company has identified 395 potential new gas customers
17 under the pilot program and has received 120 signed applications for new service of
18 which 86 applications are on the approved projects. Additionally, 23,934 feet of new gas
19 main has been approved under the pilot program, of which 22,031 feet has been installed.
20 For FY 2015, the Company has spent approximately \$2.1 million of the approved \$3.0
21 million Gas Expansion Pilot Program budget and continues to receive increased interest

1 in the program. As such, the Company has proposed to continue the pilot program at a
2 level of \$3.0 million for the FY 2016 Gas ISR Plan.
3

4 **Q. In your opinion doe the FY 2016 Gas ISR Plan fulfill the requirements established**
5 **in relation to the safety and reliability of the Company’s gas distribution system in**
6 **Rhode Island?**

7 A. Yes. The Gas ISR Plan for FY 2016 is designed to establish the capital investments in
8 Rhode Island that are necessary to meet the needs of its customers and maintain the
9 overall safety and reliability of the Company’s Rhode Island gas distribution system.
10

11 **Q. Does this conclude your testimony?**

12 A. Yes, it does.

Section 1

Introduction and Summary

FY 2016 Proposal

Introduction and Summary
FY 2016 Proposal

In consultation with the Rhode Island Division of Public Utilities and Carriers (Division), National Grid¹ has developed the following proposed fiscal year (FY) 2016 gas infrastructure, safety, and reliability (Gas ISR Plan or Plan) in compliance with R.I. Gen. Laws § 39-1-27.7.1, An Act Relating to Public Utilities and Carriers – Revenue Decoupling (the Act), which provides for an annual “gas infrastructure, safety and reliability spending plan for each fiscal year and an annual rate reconciliation mechanism that includes a reconcilable allowance for the anticipated capital investments and other spending pursuant to the annual pre-approved budget.”² The proposed Gas ISR Plan addresses capital spending on gas infrastructure and other costs related to maintaining the safety and reliability of the gas distribution system. The proposed Plan that the Company is submitting for its gas distribution operations is the product of a collaborative effort with the Division. The Gas ISR Plan is designed to maintain and upgrade the Company’s gas delivery system through proactively replacing leak-prone gas mains and services, accelerating the Company’s replacement of leak-prone facilities, upgrading the system’s pressure regulating systems, responding to emergency leak situations, and addressing conflicts that arise out of public works projects. The Plan attempts to attain these safety and reliability goals through a cost-effective, coordinated work plan. The level of work that the plan provides will sustain and enhance the safety and reliability of the Rhode Island gas pipeline infrastructure and directly

¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

² R.I. Gen. Laws § 39-1-27.7.1 of the Decoupling Act.

benefit Rhode Island gas customers. The Company now submits this Plan to the Rhode Island Public Utilities Commission (PUC) for final review and approval.³

This Introduction and Summary presents an overview of the proposed FY 2016 Plan for the statutory categories of costs, the resulting FY 2016 revenue requirement associated with the proposed Gas ISR Plan, an illustrative rate design, and the estimated typical bill impacts resulting from the illustrative rate design.

The proposed Gas ISR Plan describes the Company's safety and reliability activities and the multi-year plan upon which its FY 2016 Plan is based and the Plan also addresses capital investment in utility infrastructure for the upcoming fiscal year. The proposed Plan itemizes the recommended work activities by general category and provides budgets for capital investment and associated Operations and Maintenance (O&M) expenses.

As envisioned in the Act, after the end of the fiscal year, the Company will true up the Gas ISR Plan's budgeted levels to actual investment and expenditures and reconcile the revenue requirement associated with the actual investment and expenditures to the revenue billed from the rate adjustments implemented at the beginning of each fiscal year. The Company will continue to file quarterly reports with the Division and PUC concerning the progress of its Gas ISR programs. In addition, when the Company makes its reconciliation and rate adjustment filing described below, the Company will file an annual report on the prior fiscal year's

³ Pursuant to R.I. Gen. Laws § 39-1-27.7.1(d), the Company and the Division must work together over the course of 60 days in an attempt to reach an agreement on a proposed Plan, which the Company must submit to the PUC for review and approval.

activities. In implementing the Gas ISR Plan in any fiscal year, the circumstances encountered during the year may require reasonable deviations from the original Gas ISR Plan. In such cases, the Company would include an explanation of any significant deviations in its quarterly reports.

The FY 2016 level of capital and related investment provided in the Gas ISR Plan to maintain the safety and reliability of the Company's gas delivery infrastructure is \$77.94 million. A description of the Company's proposed capital investment plan for FY 2016 is provided in Section 2. The revenue requirement description and calculations are contained in Section 3. A description of the rate design and bill impacts are provided in Section 4.

Gas Capital Investment Plan

The Company's proposed gas capital investment plan is contained in Section 2 which summarizes capital investments in terms of the following key categories:

- A. Main Replacements and Service Replacements
- B. Reactive Main Replacements
- C. Public Works
- D. Mandated Programs
- E. Gas System Reliability
- F. Special Projects

Section 2 itemizes the proposed activities by sub-categories and provides budgets for capital investment. The Company has included its capital budget, identified the relevant projects that would be part of the FY 2016 Gas ISR Plan, and provided its rationale for the need for and benefit of performing that work to provide safe and reliable service to its customers. The

Company has also provided a five-year capital plan to provide a longer-term approach to infrastructure, safety, and reliability and to demonstrate how the FY 2016 Plan would be incorporated into that longer-term planning approach.

Operations and Maintenance Expense

As discussed in greater detail in Section 2, the Company is requesting \$0.56 million of incremental O&M expense dollars (a) to continue paying for the 11 full-time equivalents (FTEs) that were hired in FY 2015 to support the increase in Main Replacement work, and (b) to hire and train an additional five FTEs to support the additional 5 mile increase from 60 miles to 65 miles in Main Replacement work for FY 2016. The Company's FY 2016 Gas ISR Plan includes the replacement of a total of 65 miles of leak-prone pipe (56 miles of Proactive Main Replacement work, 8 miles of Public Works replacement work, and one mile of Reliability project replacement work). This is an increase from the 60 miles of leak-prone pipe replacement authorized in the FY 2015 Gas ISR Plan (53 miles of Proactive Main Replacement and 7 miles of Public Works projects).

Revenue Requirement

Based upon the estimated amounts for the proposed Plan, the Company has provided a calculation of the proposed cumulative revenue requirement resulting from the proposed FY 2016 capital investment plan. Section 3 contains a description of the revenue requirement model and an illustrative calculation for FY 2016. This calculation would form the basis for the Gas ISR rate adjustment, which would become effective April 1, 2015, upon PUC approval. As

provided in Section 3, in accordance with RIPUC No. 101, Schedule A, Sheet 6 of the Company's gas tariff, the Company will reconcile this rate adjustment as part of its annual Distribution Adjustment Charge (DAC) filing. The pre-tax rate of return on rate base would be that rate of return approved by the PUC in the Company's last general rate case and in the future it would change to reflect changes to the rate of return approved by the PUC in future rate case proceedings. Any change in the rate of return would be applicable on a prospective basis effective on the date on which the change is effective.

Rate Design

For purposes of rate design, the revenue requirement associated with the capital investment is allocated to rate classes based upon the latest rate base allocator approved in the Company's Amended Settlement Agreement in Docket No. 4323. For each rate class, the allocated revenue requirement is divided by the applicable fiscal year forecasted therm deliveries to arrive at a per-therm factor unique to each rate class. The Company is allocating other related costs associated with incremental O&M costs to all rate classes on a per-unit basis.

The estimated typical bill impacts associated with the rate design and bill impacts are provided in Section 4. The bill impact of the proposed Gas ISR Plan for the average residential heating customer for the period April 1, 2015 through March 31, 2016 would be an annual increase of \$25.87 or 2.2 percent.

Section 2

Gas Capital Investment Plan

FY 2016 Proposal

Gas Capital Investment Plan FY 2016 Proposal

The Company and the Division have worked diligently to arrive at a Gas ISR Plan that meets the Act's goals of providing a safe and reliable gas distribution system for Rhode Island.

Background

The Company developed its proposed capital investment and associated O&M expense plan to meet its obligation to provide safe, reliable, and efficient gas distribution service for customers at reasonable costs.⁴ The Gas ISR Plan includes capital investment spending needed to meet state and federal regulatory requirements applicable to the Company's gas system and to maintain its distribution infrastructure in a safe and reliable condition. To address the replacement of leak-prone gas main and at-risk services, the Plan includes infrastructure safety and reliability work for cast-iron and non-cathodically protected steel mains and non-cathodically protected steel inside services. The Plan also contains capital spending related to safety and reliability for public works, mandated programs, gas reliability, and special projects.

Consistent with the goals of the Act, in order to continue to provide safe and reliable gas delivery service to customers, it is critical that the Company remain vigilant with respect to investing in its infrastructure and have appropriate and timely cost recovery. To that end, the Company's proposed FY 2016 Plan,⁵ identifies the capital spending investment that it expects to place into service during FY 2016. Table 1 contains a description of the proposed budget for the

⁴ The Company delivers natural gas to approximately 259,000 Rhode Island residential and commercial and industrial customers in 33 cities and towns in Rhode Island. To provide this service, the Company owns and maintains approximately 3,200 miles of mains and approximately 193,000 services.

FY 2016 Plan. Table 2 contains a proposed five-year spending forecast for FY 2016 through FY 2020. Table 3 provides an alternative five-year spending plan based upon maintaining the FY 2016 main replacement schedule for each future year through FY 2020. The Company proposes to invest a total of \$78.50 million of Gas ISR Plan investments (\$77.94 million in capital expenditures and \$0.56 million in O&M expenditures), which would be included in the FY 2016 Gas ISR recovery mechanism.⁶

As set forth on Table 1, of the \$78.50 million that the Company proposes for its FY 2016 Gas ISR Plan spending, the Company proposes the following levels of spending for each category of programs:

- \$46.64 million combined for proactive Main and Service Replacement Programs
- \$0.20 million for Reactive Main Replacement
- \$4.59 million for Public Works Programs, plus \$1.33 million in reimbursable work
- \$14.30 million for Mandated Programs (capital leak repairs, meter replacements, corrosion and non-leak other)
- \$9.21 million for Gas System Reliability, including work relative to System Automation and Gas Control, Pressure Regulating Facilities, System Reliability Enhancement, Water Intrusion Program and Valve installation/replacements

⁵ FY 2016 is defined as the twelve months ending March 31, 2016.

⁶ For FY 2016, the Company plans to make \$101.0 million of total capital investment. Of that total amount, \$23.1 million will be for projected growth and allocated spending which is not included for recovery in the FY 2016 Gas ISR plan.

- \$3.00 million for Special Projects for, the continuation of the gas expansion pilot program designed to provide commercial and residential customers with incentives in providing main extensions
- \$0.56 million incremental O&M expense for the hiring, training and supervision of additional personnel to support the increase in leak-prone pipe replacement

As noted above, the Company will continue to file quarterly reports with the Division and PUC detailing the progress of its Gas ISR Plan programs.

Description of Large Programs and Projects

The proposed FY 2016 Gas ISR Plan includes several programs that account for the total amount of Plan spending. Those programs are described in detail below.

A. Main Replacement Program and Service Replacement Program

The value of and need for targeted spending on the replacement of leak-prone gas main and services is well-documented and has been accepted by both the Division and the PUC. For FY 2016, the Company forecasts spending \$46.14 million on its main replacement program (approximately 56 miles of leak-prone gas main and 3,800 service relay, inserts or tie-ins, of which approximately 90% are expected to be leak prone pipe) and \$0.5 million on the service replacement program (200 services) for a total spend of \$46.64 million on these two programs.

Pro-active main replacement program costs have increased over the past several years because the proportion of cast iron gas mains that the Company replaced has increased.

Moreover, the costs for replacement of cast iron main is typically greater than unprotected bare steel because of several key factors, which include the following: cast iron is predominant on low and intermediate pressure systems consisting of larger diameter mains; and cast iron facilities are typically centralized in urban areas where costs are driven by higher customer density, greater underground congestion (e.g., excavation), and increased restoration and traffic control. National Grid has analyzed costs associated with work performed in FY 2014 and has developed project costs based on historic values. More specifically, costs have been calculated for 29 miles of cast iron at a rate of \$184 per/foot and for 27 miles of unprotected steel at a rate of \$126 per/foot.

To support the increase in the Proactive Main Replacement Program this year, in FY 2015 the Company hired and trained 11 additional personnel to work on the Main Replacement Program. In Record Request No.1 in Docket No. 4380 (the FY 2014 Gas ISR proceeding), the PUC requested that the Company provide detailed information on the estimated cost of accelerating the number of miles of proactive replacement of leak-prone pipe, including cast iron pipe, beginning in FY 2015. In response to this request, the Company indicated that it would need to incur incremental O&M expense associated with the resources needed to achieve an aggressive replacement program. In that response, the Company provided a very high level estimate of incremental O&M expense:

The proactive main replacement program has been implemented to replace high risk facilities each year. In general, the cost to replace cast iron is greater than the cost to replace unprotected steel. The Company anticipates increasing the percentage of cast iron replaced in future years. Therefore, starting in FY 2015, the annual cost of the proactive main

replacement program has been updated to reflect this strategy, including an annual adjustment for inflation of two percent per year after FY 2015.

In addition, the Company will incur incremental Operations and Maintenance (O&M) costs associated with the hiring and training of Company personnel as well as costs associated with work performed by such incremental personnel outside of construction season. The Company estimates that for each incremental mile of main above 50 miles included in the current plan, it will incur incremental O&M costs of approximately \$20,000 per mile. Please note that these incremental O&M costs are associated only with the personnel who would complete physical field work, an additional O&M costs may be incurred for additional supervision and for other office-based workers that provide support services.⁷ (Emphasis added.)

As compared to FY 2015 when the Company targeted the replacement of 60 miles of leak-prone pipe (53 miles Proactive Main Replacement and 7 miles of Public Works), in the FY 2016 Gas ISR Plan, the Company is proposing to increase this target to 65 miles of leak-prone pipe (56 miles of Proactive Main Replacement work, 8 miles of Public Works replacement work and one mile of Reliability replacement work) which would result in the need to hire and train an additional five FTE for the Main Replacement Program. This need to increase the number of FTE personnel is, in part, driven by the fact that under the FY 2016 Plan, the Company will be increasing the percentage of the more expensive cast iron main to be replaced from 29 miles in FY 2015 to 38 miles in FY 2016. Thus, in order to achieve this aggressive replacement schedule, the Company will need to hire an incremental five additional FTE personnel and incur associated incremental O&M expenses. The Company is proposing to include \$0.56 million of O&M expense related to this need for increased resources. (\$0.4 million for the 11 FY 2015 hires and \$0.16 for the FY 2016 new hires) As in FY 2015, this total amount of O&M expense will be tracked and reconciled to

actual O&M associated with the FTE for FY 2015 and the FTE for FY 2016 in the next annual Gas ISR reconciliation filing.

B. Reactive Main Replacement

The Company proposes to level fund the budget for Reactive Main Replacement of \$0.20 million for FY 2016. This category of work consists of emergency main replacements because of leaks or other unplanned work where main conditions dictate immediate replacement. Over the past few years, the Company has received minimal requests in this category, primarily because the Company's increased Proactive Main Replacement Program work has made the need for this work unnecessary in many areas.

C. Public Works

The purpose of the Public Works program is to address existing gas infrastructure conflicts, as appropriate, and to improve the safety and reliability of the Company's natural gas distribution system in conjunction with public works projects, providing significant incremental benefits to customers and communities. Municipal work affords the Company an opportunity to replace additional leak-prone pipe and reduce paving costs by coordinating the Company's main replacement work with these planned public works construction projects, while also benefitting customers and communities by improving service delivery and minimizing construction impacts and inconvenience. National Grid has an ongoing plan to replace targeted (integrity-based selections) mains on a risk-based approach. Coordinating the Company's Integrity programs

⁷ Docket No. 4380, FY 2014 Gas ISR Plan, Record Request No. 1, pages 2-3 (filed on April 26, 2013).

with planned public works projects has yielded increased system reliability, system integrity, and optimized capital spending. Although the one of the primary purposes of Public Works spending is to address direct conflicts between planned public works projects and existing gas infrastructure, Public Works spending also provides the opportunity to coordinate other system improvement work, such as replacement of leak-prone pipe, system reliability upgrades, elimination of redundant main, and regulator station upgrades.

The Company will manage multiple projects to address the dynamic nature of the public works process through effective liaison activity. Although municipal schedules and plans change due largely to funding, importantly, other factors also contribute to the scheduling of these projects (e.g., political, demand maintenance, etc.). Changes in municipal projects can and do create additional work in developing and coordinating the Company's planning and budgeting processes. Using the Company's five-year work planning process, the Company can provide some flexibility in scheduling, coordinating, and engineering projects in concert with municipal public works initiatives. For FY 2016, the proposed plan incorporates \$4.59 million in spending under the Public Works category and an additional \$1.33 million in reimbursable projects. Overall, the Public Works budget provides for the replacement of approximately eight miles of leak prone gas main consisting primarily of cast iron main.

D. Mandated Programs

Spending for Mandated Programs falls into four categories: Corrosion, Meter Replacement, Capital Leak Repairs, and Non-leak Other.

- **Corrosion Program** - Cathodic protection effectively extends the service life of buried steel facilities (as compared to unprotected buried steel facilities) and can prolong replacement by twenty years or more. In 1971, the Code of Federal Regulations, Part 192, was amended to require the cathodic protection of all new buried steel gas facilities. The Corrosion Program adds cathodic protection to existing coated steel main installed prior to the U.S Department of Transportation's (DOT) 1971 cathodic-protection requirements. National Grid has standardized a process used to determine the cost effectiveness of cathodically protecting steel pipe installed prior to 1971. In addition, the Corrosion Program includes control line work at existing regulator stations and cathodic protection upgrades.
- **Meter Replacement Program** - Capital costs for the Meter Replacement Program are required for the procurement of replacement meters.
- **Capital Leak Repairs Program** - The Capital Leak Repair Program addresses leaking gas services, as well as extending the useful life of cast iron mains through the encapsulation of leaking cast iron joints.
- **Non-leak Other Program** - The Non-leak Other program contains the capital costs for service relocations, meter protection, service abandonments and the installation of curb valves.

For FY 2016, the proposed Plan contains \$14.30 million for all categories of mandated work.

E. Gas System Reliability

Reliability spending includes programs to address system automation and control, system pressure regulating facilities, water intrusion projects, liquefied natural gas (LNG) facilities, and valve installation and/or replacements. The proposed FY 2016 Gas ISR Plan contains \$9.21 million in spending for Reliability. A summary of each program is provided below:

1. System Automation and Control

The primary purpose of this program is to meet the DOT code requirements under 49 CFR Part 192, Docket ID 2007-27954, which were issued on December 3, 2009. These code provisions contain the following pipeline safety requirements: (a) Control Room Management/Human Factors, (b) modernization of the Company's system data and telemetry recording, and (c) increasing the level of system automation and control. The overall program will increase the safety, reliability, and efficiency of the gas system and, by extension, the level of service the Company provides to its customers.

National Grid's ability to provide safe and reliable service is governed to a large extent by the Company's ability to maintain adequate pressure in its gas mains. To accomplish this task, National Grid has approximately 180 gas pressure regulator stations disbursed throughout its Rhode Island gas service territory. Although a limited number of these regulator stations have full system telemetry and control capability, most do not.

In addition to monitoring and controlling the regulator stations, National Grid must also monitor system end points to ensure that adequate system pressures are being maintained in remote areas under a variety of operating conditions. Increased monitoring of these system low-pressure points is exacerbated by the need and desire to minimize the amount of system reinforcement necessary to support system load, thereby reducing the Company's capital requirement and maximizing the operational efficiency of the gas distribution system. For FY 2016, the Company is proposing to level fund spending of \$1.0 million for its system automation and control program. National Grid's proposal would provide AC power, telemetry and /or remote control to approximately 40 sites.

2. Pressure Regulating Facilities:

The pressure regulating facilities have been designed to reliably control gas distribution system pressures and maintain continuity of supply during normal and critical gas demand periods. Each station has specific requirements for flows and pressures based on the anticipated needs of the station. A facility includes both pressure-regulating piping and equipment as well as control lines, but it may also include a heater or a scrubber. A program has been instituted which provides for condition-based assessments of all stations. Accepted engineering guidelines provide for design, planning, and operation of these gas distribution facilities. Applicable state and federal codes are followed to help ensure safe and continuous supply of natural gas to our customers and the communities we serve. As shown in the table below, National Grid's

proposed Plan would include enhancements in response to station work prioritized through condition-based assessments. Enhancements are planned for the following facilities in FY 2016, and these enhancements will address station accessibility, pipe condition (i.e., corrosion), water intrusion, redundancy, station isolation, and common mode failure:

Type of Work	City	Location	Projected Cost
Regulator Replacement	East Providence	Brook and George (LP)	\$350,000
Regulator Replacement	East Providence	Brook and George (35 PSIG)	\$350,000
Regulator Replacement	East Providence	Bentley Street	\$500,000
Regulator Replacement and Abandonment	Providence	Allens Avenue (PhI)	\$1,850,000
Take Station Upgrades	Lincoln	George Washington Hwy TS	\$200,000
Regulator Abandonments and undocumented pipe replacement	East Providence	Wampanoag Trail	\$450,000
Engineering & Design	All	All	\$80,000
Total			\$3,780,000

3. Gas Planning Program:

The Gas Planning Program identifies projects that support system reliability through standardization and simplification of system operations (e.g. system up-ratings and de-ratings and regulator elimination), integration of systems (e.g. tie-ins), and new

supply sources (e.g. take stations). For FY 2016, the Company is proposing to spend approximately \$1.50 million for four projects in its Gas Planning program. (two projects in Bristol, one project in Lincoln, and one project in Providence). These projects include the added benefit of replacement of approximately one mile of leak-prone pipe in Bristol and Lincoln.

4. Water Intrusion Program:

The Water Intrusion Program identifies projects that address recurring customer outages resulting from water intrusion into low-pressure distribution systems through the replacement of existing leak-prone pipe. Similar to the Reactive Main Replacement Program, over the past few years, the Company has received a minimal number of requests in this category primarily because the Company's increased Proactive Main Replacement Program has made the need for this work unnecessary in many areas. Consequently, the FY2016 budget has been level funded at \$0.2 million for FY 2016.

5. LNG Facilities:

LNG facility upgrades include replacement of aging equipment and infrastructure at the Rhode Island stations, excluding the Providence facility. The Company has budgeted \$0.40 million for FY 2016 for this work, which is primarily associated with a new truck building and SCADA system at the Cumberland tank and coating the dome at the Exeter facility.

6. Valve Installation / Replacement:

Valves are used to sectionalize portions of the gas network when required to support both planned and unplanned field activities. Replacement of inoperable valves is necessary to ensure the Company's continued ability to effectively isolate portions of the distribution system. New valve installations are also occasionally needed to provide the capability to reduce the size of an isolation area where existing valves would result in broader shutdown than desired. The Company's agreement with the Division to continue curb valve installations will provide additional public safety benefits and assist in improving collection and meter reading opportunities in those situations where Company personnel have encountered difficulty gaining access to meters. For FY 2016, the Company has budgeted \$0.20 million for this work.

F. Special Projects:

One special project has been identified for FY 2016. In Docket No. 4380, the PUC approved a Gas Expansion Pilot Program, which was funded at a level of \$3.0 million for the FY 2014 Gas ISR. In Docket No. 4474, the PUC approved changes and modifications in the FY 2015 pilot program. These changes were designed to simplify the program process and better address the barriers to customer participation in the program. These changes include the following: (1) a more simple, fixed pilot offer, addressing customer comments that the current program was too complicated and uncertain for participation; (2) a significantly reduced offer

as customer conversion costs remain a barrier to participation; and (3) more flexibility for customers and the Company to respond to customer interest.

As a result of these changes and modifications, in FY 2015, the Company aggressively marketed the modified Gas Expansion Pilot Program and received sufficient customer commitments related to six projects, which are moving forward. At this time, the Company expects that those projects will result in the installation of 24,000 feet of main with the potential to service approximately 395 customers. Therefore, to complete these projects and continue the momentum from this program, the Company is proposing to level fund the Gas Expansion Pilot Program at \$3.0 million for FY 2016.⁸

FY 2015 Gas ISR Plan Approval

On December 16, 2014, the PUC issued its Order (Order No. 21779) approving the FY 2015 Gas ISR Plan requiring the Company to submit additional information in its FY 2016 Gas ISR Plan. Specifically, the Company must include the following in the FY 2016 Gas ISR Plan: (1) a FY 2014 System Integrity Report; (2) an analysis of program cost reductions that may be achieved without sacrificing safety; (3) an analysis of where efficiency gains may be achieved within the programs; and (4) a proposal how economic development benefits may be measured

⁸ Any part of the \$3.0 million funding the Company received for the FY 2015 Gas Expansion Program that is not spent in FY 2015 will be reconciled in the FY 2015 Gas ISR Annual reconciliation filing.

against increased costs related to each area of investment.⁹ Each of these requirements are addressed below:

1. FY 2014 System Integrity Report

The Company's most recent report reflects data through calendar year (CY) end 2013 is included as Exhibit 2 to this report. The Company's System Integrity Report is based in large part on data contained in the annual pipeline Department of Transportation (DOT) report, which is filed with the U. S. Department of Transportation in March of each year. The Company will make the CY14 System Integrity Report available in March 2015.

2. Cost Reduction Analysis

The PUC's directive that the Company analyze and consider possible program cost reductions that may be achieved without sacrificing public safety has been a key consideration during the development of the Company's FY 2016 Gas ISR plan. Specifically, for each category of the FY 2016 Gas ISR Plan, the Company sought to balance its proposed costs with the potential public safety benefits and risks, as well as the overall impact on customer rates. However, in considering potential program cost reductions, it is important to recognize that the major cost drivers of spending for the FY

⁹ FY 2015 Gas ISR Plan, Docket No. 4474, Order No. 21779, December 16, 2014 at 13-14.

2016 Gas ISR Plan are directly related to public safety, including programs mandated by Federal regulation.

The chart below provides a comparison of the FY 2015 Gas ISR Plan and the proposed FY 2016 Gas ISR Plan by category and an analysis of those categories as a percent of the budget:

	FY 2015		FY 2016	
	Budget	%	Budget	%
Proactive Main Replacement	\$36,500	51%	\$46,137	59%
Service Replacement	\$1,500	2%	\$500	1%
Public Works	\$3,857	5%	\$4,593	6%
Reactive Main Replacement	\$200	0%	\$200	0%
Mandated Programs	\$14,140	20%	\$14,300	18%
Reliability	\$10,424	15%	\$9,212	12%
Special Projects	\$4,675	7%	\$3,000	4%
O&M	\$400	1%	\$560	1%
TOTAL	\$71,696	100%	\$78,502	100%

As shown above, consistent with the PUC's concern about the public safety risks related to the replacement of legacy cast iron and bare steel mains¹⁰, the Company has proposed to accelerate its replacement of leak-prone pipe (LPP) for the Proactive Main Replacement Program to 56 miles at a cost of \$46.1 million. Because of the increased replacement footage and unit costs for the replacement of cast iron in more population dense areas planned for FY 2016, the costs for the Proactive Main Replacement Program will be \$9.6 million more than the costs for FY 2015. In addition, the FY 2016 Gas ISR

¹⁰ FY 2015 Gas ISR Plan, Docket No. 4474, Order No. 21779, December 16, 2014 at 12.

Plan also includes the replacement of eight miles of LPP under the Public Works Program. Moreover, the Company is limited in its ability to modify public works for the FY 2016 Gas ISR because this work is driven by and must be coordinated with state and municipal authorities. In summary, as shown in the above chart, approximately two-thirds, or 66% of the Company's proposed FY 2016 Gas ISR budget is directly related to public safety and meeting public work requirements.

Public safety issues are also a primary focus within the Company's Mandated Program category. The Mandated Program category includes costs to provide cathodic protection to steel main to prevent leaking pipe, as well as the spending necessary for the Company to respond to and repair gas leaks, install meters from physical damage, replace old meters, and abandon inactive facilities. These programs are integral to providing gas service and assuring public safety. For FY 2016, the Company has proposed a small reduction in the Mandated category at \$14.3 million as compared to \$14.1 million in FY 2015.

In the Reliability category, the Company has prioritized and incorporated those projects with increased risk to public safety. For FY 2016, the Company proposes to spend approximately \$1.5 million for four projects in its Gas Planning program in support of both reliability and safety. These projects include the added benefit of the replacement of approximately one mile of LPP in Bristol and Lincoln. Other reliability projects are essential for ensuring public safety and have been prioritized and selected including

regulator station and LNG Plant enhancements, system automation, and valve replacement. The Company has closely vetted projects in this category and, consequently, the Company proposes to spend \$9.2 million for the Reliability programs in FY 2016, which is a \$1.2 million reduction in spending from FY 2015.

Because of the interest in the Gas Pilot Expansion Program, which were due in large part to the program modifications approved by the PUC in FY 2015, the Company has level funded this program at \$3 million in the Special Projects category for FY 2016. Finally, for FY 2016, the Company has proposed to incrementally increase the O&M spending from \$400,000 to \$560,000 to hire and train five additional FTEs. This incremental O&M increase of \$160,000 is directly related to supporting the important public safety benefit of the Proactive Main Replacement Program.

In summary, because such a significant portion of the proposed spending in the FY 2016 Gas ISR Plan is directly related to public safety, the ability of the Company to undertake any significant cost reduction to the Plan without impacting public safety is limited. However, as discussed in the Five-Year Gas Investment Plan below, in addition to the Company's proposed Plan, National Grid has identified an alternative five-year LPP replacement program schedule that would modify the current LPP replacement schedule to 65 miles in FY 2017 and beyond. This five-year Plan would reduce the overall costs of the program by approximately \$14 million over five years while extending the LPP replacement schedule to 21 years.

3. Efficiency Plans Within Gas ISR Plan Programs

The Company is constantly seeking to improve its productivity and cost efficiency in its programs. This is reflected in several areas relating to the Company's efforts to provide for the competitive bidding of construction resources, materials, and equipment, as well as the Company's significant dialogue with State and municipalities to ensure reasonable permitting requirements, and close coordination on public work projects. The Company ensures for cost competitive labor, material, and equipment resources through a structured bid process. In addition, the Company closely manages project requirements through continuous interaction with the State, and municipalities during the permitting and construction period. To that end, the Company works daily with local police to address traffic management details in advance of gas work in street, and to coordinate with municipal official to minimize disruption in the work areas. The Company also makes significant efforts in outreach to State, City and Town agencies to coordinate field construction activities and address infrastructure where appropriate. These efforts lead to lower restoration costs on projects.

4. Economic Benefits of the Gas ISR Plan

The PUC's Order approving the FY 2015 Gas ISR Plan required that the Company include in its FY 2016 Gas ISR Plan a proposal to measure the economic benefits of investment made through the Gas ISR Plan. Today, the Company conducts an

economic benefit analysis associated with the Gas Expansion Pilot Program and would recommend extending that methodology to other categories in future Gas ISR filings.

Specifically, the Company's investments in gas infrastructure will result in increased economic activity across Rhode Island and will have broad economic benefits. In order to estimate the magnitude of these benefits, National Grid has developed a technique to analyze the benefits for the gas expansion programs that support a customer's decision to convert their heating system to natural gas service. The benefits to the Rhode Island economy are typically derived from the following:

- Construction impact of investment spending under the Plan
- Cost savings realized by customers
- Economic impact of reduced emissions of criteria pollutants and greenhouse gases based on avoided healthcare costs
- Job creation and increased tax revenue

To perform this analysis, National Grid utilizes economic models developed by Regional Economic Models, Inc. (REMI) and environmental factors develop by the US Environmental Protection Agency. With over 150 US and international clients, REMI is used extensively by federal, state and local government planning agencies, non-profit research institutions, energy consultants and utilities. While currently used to estimate the benefits of expansion programs, the Company proposes to adapt the same techniques to estimate the economic benefits of gas main replacement programs in Rhode Island.

Five Year Gas ISR Investment Plan

As of December 31, 2013, approximately 1,356 miles, or 43%, of the 3,179 miles in the Company's gas distribution system in Rhode Island is made up of leak-prone pipe. (LPP) These 1,356 miles of LLP are comprised of 508 miles of unprotected steel and 847 miles of cast iron and wrought iron gas main.

The Company's proposed five-year Rhode Island Gas ISR investment plan is provided in Table 2. This plan reflects spending projected within each of the primary categories for the period FY 2016 through FY 2020. A primary driver of change in the first two years of the plan includes the continued ramp-up of LLP replacement. The proposed plan includes capital investment supporting 65 miles of LPP replacement for FY 2016 and 70 miles of LPP replacement for FY 2017 and each year beyond. This replacement rate of 70 miles for FY 2017 and beyond provides for replacement of all LPP in Rhode Island over a 19-year period.

Since LPP replacement represents the major driver of capital costs for future Gas ISR plans, the Company recognizes the need to continue to balance these projected higher unit capital costs with the public safety benefits, as well as the potential impact on future customer rates. Table 3 provides a possible future alternate LPP replacement plan for the four-year period from FY 2017 through FY 2020 supporting the replacement of 65 miles per year for FY 2016 and maintaining this level for FY 2017 and beyond. This alternate plan would provide for replacement of all LPP in Rhode Island over a 21-year period.

EXHIBIT 1- DGI
RIPUC DOCKET NO. _____
The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas Infrastructure, Safety, and Reliability Plan
Section 2: Gas Capital Investment Plan
Tables

Table 1		
Narragansett Gas		
FY 2016		
(\$000)		
	Budget	Total
Proactive Main Replacement	46,137	46,137
Service Replacement Program	500	500
Public Works		
<i>City State Construction - Non Reimbursable</i>	4,593	
<i>City State Construction - Reimbursable</i>	1,327	
<i>City State Construction - Reimbursments</i>	(1,327)	
<i>Public Works - Total</i>		4,593
Reactive Main Replacements	200	200
Mandated Programs		
<i>Corrosion</i>	500	
<i>CI Joint Encapsulation</i>	3,050	
<i>Leaks</i>	6,000	
<i>Non-Leaks- Other</i>	2,050	
<i>Meter Purchases</i>	2,700	
<i>Mandated Totals</i>		14,300
Reliability		
<i>Gas System Control</i>	100	
<i>Heater Program</i>	532	
<i>I&R Reactive/CNG</i>	1,000	
<i>LNG</i>	400	
<i>Pressure Regulating Facilities-Proactive</i>	1,480	
<i>Valve Installation/Replacement</i>	200	
<i>Gas Planning</i>	1,500	
<i>Water Intrusion</i>	200	
<i>System Automation</i>	1,000	
<i>Dey Street</i>	150	
<i>Wampanog Trail</i>	300	
<i>Allens Ave.</i>	1,850	
<i>Tools-Maintenance</i>	250	
<i>Tools-Construction</i>	150	
<i>Tools-Service</i>	100	
<i>Reliability Total</i>		9,212
Special Projects		
<i>Gas Expansion Pilot</i>	3,000	
<i>Special Project Total</i>		3,000
Capital Spending Total		77,942
O&M		560
Gas ISR Plan Total		78,502

Table 2

RI Gas ISR Spending Forecast (\$000)									
Investment Categories	FY14 Actual	FY15 Budget	FY15 Forecast*	FY16	FY17	FY18	FY19	FY20	FY16 to FY20 TOTAL
Proactive Main Replacement	\$41,790	\$36,500	\$39,500	\$46,137	\$50,419	\$51,427	\$52,456	\$53,505	\$253,944
Service Replacement Program	\$2,550	\$1,500	\$1,500	\$500	\$0	\$0	\$0	\$0	\$500
Sub-total	\$44,340	\$38,000	\$41,000	\$46,637	\$50,419	\$51,427	\$52,456	\$53,505	\$254,444
Public Works	\$3,190	\$3,857	\$3,857	\$4,593	\$5,333	\$6,073	\$6,073	\$6,073	\$28,145
Reactive Main Replacements	\$210	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$1,000
Mandated Programs	\$15,770	\$14,140	\$14,366	\$14,300	\$14,300	\$14,300	\$14,300	\$14,300	\$71,500
Reliability	\$8,720	\$10,424	\$10,132	\$9,212	\$10,728	\$11,745	\$10,468	\$10,518	\$52,671
Special Projects	\$880	\$4,675	\$4,675	\$3,000	\$3,500	\$4,000	\$4,000	\$4,000	\$18,500
Sub-total	\$28,770	\$33,296	\$33,230	\$31,305	\$34,061	\$36,318	\$35,041	\$35,091	\$171,816
Capital Total (Excluding Growth)	\$73,110	\$71,296	\$74,230	\$77,942	\$84,480	\$87,745	\$87,497	\$88,596	\$426,260
O&M Total	N/A	\$400	\$400	\$560	\$720	\$720	\$720	\$720	\$3,440
GAS ISR TOTAL	\$73,110	\$71,696	\$74,630	\$78,502	\$85,200	\$88,465	\$88,217	\$89,316	\$429,700
Leak Prone Pipe Replacement for FY 2016 is 65 miles.									
Leak Prone Pipe Replacement for FY 2017 and beyond is 70 miles per year.									
* Forecast is from the RI FY 2015 Gas ISR 2Q Report									

Table 3

Leak Prone Pipe Replacement for FY 2016 and beyond is 65 miles per year.		
* Forecast is from the RI FY 2015 Gas ISR 2Q Report		

Section 3

Revenue Requirement

FY 2016 Proposal

**Revenue Requirement
FY 2016 Proposal**

The attached proposed revenue requirement calculation reflects the revenue requirement related to the Company's proposed investment in its Gas ISR Plan for the fiscal year FY ended March 31, 2016.

As shown on Page 1, Column (b) of Attachment 1, the Company's FY 2016 ISR Plan cumulative revenue requirement totals \$13,543,842, or an incremental \$9,151,362 over the amount currently being billed for the Gas ISR Plan, and consists of the following elements: (1) operation and maintenance (O&M) expenses of \$560,000 associated with hiring, training, and supervision of additional personnel to support the increase in leak prone pipe replacement for FY 2016 as described in Section 2 of this ISR Plan; (2) the revenue requirement of \$2,820,049 on FY 2016 proposed non-growth ISR capital investment of \$77,942,000 as calculated on Attachment 1, Page 2, plus the FY 2016 revenue requirement on incremental non-growth ISR capital investment of \$4,852,208, \$1,727,537, (\$320,133), and \$486,596 for FY 2015, FY 2014, FY 2013, and FY 2012 incremental investments, from Pages 4, 6, 8, and 10, respectively; and (3) property tax expense of \$3,417,586 as shown on Page 13 of Attachment 1 in accordance with the property tax recovery mechanism included in the Docket No. 4323 rate case settlement. Importantly, the incremental capital investment for the FY 2016 ISR revenue requirement excludes capital investment embedded in base rates in Docket No. 4323 for FY 2012, FY 2013, and FY 2014. Incremental non-growth capital investment for this purpose is intended to represent the net change in net plant for non-growth infrastructure investments during the

relevant FY and is defined as capital additions plus cost of removal, less annual depreciation expense ultimately embedded in the Company's base rates (excluding depreciation expense attributable to general plant which is not eligible for inclusion in the Gas ISR Plan).

For illustration purposes only, Column (c) of Page 1 of Attachment 1 provides the FY 2017 revenue requirement for the respective vintage year capital investments as calculated on Attachment 1, Pages 2, 4, 6, 8, and 10. Notably, these amounts will be trued up to actual investment activity after the conclusion of the FY, with rate adjustments for the revenue requirement differences incorporated in future ISR filings.

Gas Infrastructure Investment

Incremental Capital Investment

As noted above, Page 2 of Attachment 1 calculates the revenue requirement of incremental capital investment associated with the Company's FY 2016 ISR Plan, that is, gas infrastructure investment (net of general plant) incremental to the amounts embedded in the Company's base distribution rates. The proposed capital investment, including cost of removal, was obtained from Table 2 of Section 2 of this ISR Plan. The FY 2016 revenue requirement also includes the incremental capital investment associated with the Company's FY 2015, FY 2014, FY 2013, and FY 2012 ISR Plans, excluding investments reflected in rate base in Docket No. 4323 for each of those fiscal years, as shown on pages 4, 6, 8, and 10, respectively.

Page 12 of Attachment 1 calculates the incremental FY 2012 through FY 2014 ISR capital investment and the related incremental cost of removal and incremental retirements for

the FY 2016 ISR revenue requirement. The calculations on Page 12 compare ISR-eligible capital investment, cost of removal, and retirements for FY 2012 through FY 2014, to the corresponding amounts reflected in rate base in Docket No. 4323.

Gas Infrastructure Revenue Requirement

The revenue requirement calculation on incremental gas infrastructure investment for vintage year FY 2016 is shown on Page 2 of Attachment 1. The revenue requirement calculation incorporates the incremental ISR Plan capital investment, cost of removal, and retirements, which are the basis for determining the two components of the revenue requirement: (1) the return on investment (i.e., average ISR Plan rate base at the weighted average cost of capital), and (2) depreciation expense. The calculation on Page 2 begins with the determination of the depreciable net incremental capital that will be included in the ISR Plan rate base. Because depreciation expense is affected by plant retirements, retirements have been deducted from the total allowed capital included in ISR Plan rate base in determining depreciation expense. Retirements, however, do not affect rate base as both plant-in-service and the depreciation reserve are reduced by the installed value of the plant being retired and therefore have no impact on net plant. For purposes of calculating the revenue requirement, plant retirements have been estimated based on the percentage of actual retirements to additions during FY 2014 of 7.49 percent and have been deducted from the total depreciable capital amount as shown on Lines 1 through 3. Incremental book depreciation expense on Line 12 is computed based on the net depreciable additions from Line 3 at the 3.38 percent composite depreciation rate as approved in

RIPUC Docket No. 3943, reaffirmed in Docket No. 4323¹¹ and as shown on Line 9. The Company has assumed a half-year convention for the year of installation. Unlike retirements, cost of removal affects rate base but not depreciation expense. Consequently, the cost of removal, as shown on Line 7, is combined with the incremental depreciable amount from Line 6 (vintage year ISR Plan allowable capital additions less non-general plant depreciation expense included in base distribution rates) to arrive at the incremental investment on Line 8 to be included in the rate base upon which the return component of the annual revenue requirement is calculated.

The rate base calculation incorporates net plant from Line 8 and accumulated depreciation and accumulated deferred tax reserves as shown on Lines 18 and 19, respectively. The deferred tax amount arising from the capital investment, as calculated on Lines 14 through 16, equals the difference between book depreciation and tax depreciation on the capital investment, times the effective tax rate. The calculation of tax depreciation is described below.

The average rate base is shown on Line 21. This amount is multiplied by the pre-tax rate of return approved by the PUC in Docket No. 4323, as shown on Line 22, to compute the return and tax portion of the incremental revenue requirement, as shown on Line 23. To this, incremental depreciation expense is added to this amount on Line 24. The sum of these two amounts reflects the annual revenue requirement associated with the capital investment portion of the Company's ISR Plan on Line 26, which is carried forward to Page 1 as part of the total ISR Plan revenue

¹¹ The Company did not change depreciation rates in its base rate filing in Docket No. 4323.

requirement. Similar revenue requirement calculations for the vintage FY 2015, FY 2014, FY 2013, and FY 2012 incremental ISR Plan capital investment are shown on Pages 4, 6, 8, and 10, respectively. These capital investment revenue requirement amounts are added to the total O&M expense on Line 1, Page 1, and the total property tax recovery on Line 8, Page 1 to derive the total FY 2016 ISR Plan revenue requirement of \$13,543,842 as shown on Line 9, and represents an incremental \$9,151,362 increase from the FY 2015 ISR Plan revenue requirement, as shown on Line 10.

Tax Depreciation Calculation

The tax depreciation calculations for FY 2016 through FY 2012 are provided on Pages 3, 5, 7, 9, and 11 of Attachment 1. The tax depreciation amount assumes that a portion of the capital investment, as shown on Line 1 of those pages, will be eligible for immediate deduction on the Company's corresponding FY federal income tax return. This immediate deductibility is referred to as the capital repairs deduction.¹² In addition, plant additions not subject to the capital repairs deduction may be subject to bonus depreciation as shown on Lines 4 through 12 on

¹² During 2009, the Internal Revenue Service (IRS) issued additional guidance, under Internal Revenue Code Section 162, related to certain work considered to be repair and maintenance expense, and eligible for immediate tax deduction for income tax purposes, but capitalized by the Company for book purposes. As a result of this additional guidance, the Company recorded a one-time tax expense for repair and maintenance costs in its FY 2009 federal income tax return filed on December 11, 2009 by National Grid Holdings, Inc. Since that time, the Company has taken a capital repairs deduction on all subsequent FY tax returns. This has formed the basis for the capital repairs deduction assumed in the Company's revenue requirement. This tax deduction has the effect of increasing deferred taxes and lowering the revenue requirement that customers will pay under the capital investment reconciliation mechanism. The Company's federal income tax returns are subject to audit by the IRS. If it is determined in the future that the Company's position on its tax returns on this matter was incorrect, the Company will reflect any related IRS disallowances, plus any associated interest assessed by the IRS, in a subsequent reconciliation filing under the ISR Plan.

Page 7 for FY 2014, Lines 4 through 18 on Page 9 for FY 2013, and Lines 4 through 12 on Page 11 for FY 2012. The Company assumes no bonus depreciation for FY 2016 and FY 2015.

During 2010, Congress passed the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (Act) which provided for an extension of bonus depreciation. Specifically, the Act provided for the application of 100 percent bonus depreciation for investment constructed and placed into service after September 8, 2010 through December 31, 2011, and then 50 percent bonus depreciation for similar capital investment placed into service after December 31, 2011 through December 2012. The 50 percent bonus depreciation rate was later extended through December 31, 2013. In accordance with the Act, capital investments made from January 2012 through December 2013 are eligible for 50 percent bonus depreciation, as shown on Page 7, Line 12 for FY 2014, Page 9, Line 18 for FY 2013, and Page 11, Line 12 for FY 2012.¹³ The Company has assumed no bonus depreciation for its vintage years FY 2016 and FY 2015 capital investments. Finally, the remaining plant additions not deducted as bonus depreciation are then subject to the IRS Modified Accelerated Cost-Recovery System, or MACRS tax depreciation rate. The amount of depreciation deducted for MACRS is added to the amount of capital repairs deduction plus the bonus depreciation deduction and cost of removal to arrive at total tax depreciation. These annual total tax depreciation amounts are carried forward

¹³ The Company anticipates that the IRS will issue further guidance on this issue and, to the extent such guidance differs from the Company's interpretation of the 2010 Act, will reflect any resulting differences in a subsequent reconciliation filing under the ISR Plan.

to Line 10 of pages 2, 4, and 6, and Line 8 of pages 8 and 10 of Attachment 1, for the respective years and incorporated in the deferred tax calculation.

Property Tax Recovery Adjustment

The Property Tax Recovery Adjustment is shown on Page 13 of Attachment 1. The method used to recover property tax expense under the ISR has been modified by the Company's 2012 rate case settlement agreement. In determining the base on which property tax expense is calculated for purposes of the ISR revenue requirement, the Company includes an amount equal to the base-rate allowance for depreciation expense and depreciation expense on incremental ISR plant additions in the accumulated reserve for depreciation that is deducted from plant-in-service. The ISR property tax recovery adjustment also includes the impact of any changes in the Company's effective property tax rates on base-rate embedded property, plus cumulative ISR net additions. Property tax impacts associated with non-ISR plant additions are excluded from the property tax recovery formula. This provision of the settlement agreement took effect for ISR property tax recovery periods subsequent to the January 31, 2014 end of the rate year. The FY 2016 revenue requirement includes \$3,417,586 for the net property tax recovery adjustment.

The Narragansett Electric Company
d/b/a National Grid
Gas Infrastructure, Safety, and Reliability (ISR) Plan
Annual Revenue Requirement Summary

Line No.		As Approved Fiscal Year <u>2015</u> (a)	Fiscal Year <u>2016</u> (b)	Fiscal Year <u>2017</u> (c)
	Operation and Maintenance Expenses			
1	Forecasted Gas Infrastructure, Safety, and Reliability O&M Expenses	<u>\$400,000</u>	<u>\$560,000</u>	
	Capital Investment:			
2	Actual Revenue Requirement on Incremental FY 2012 Capital included in ISR Rate Base	\$511,415	\$486,596	\$470,068
3	Actual Revenue Requirement on Incremental FY 2013 Capital included in ISR Rate Base	(\$334,730)	(\$320,133)	(\$306,882)
4	Actual Annual Revenue Requirement on FY 2014 Capital included in ISR Rate Base	\$1,342,074	\$1,727,537	\$1,672,816
5	Forecasted Annual Revenue Requirement on FY 2015 Capital Included in ISR Rate Base	\$2,473,722	\$4,852,208	\$4,663,839
6	Forecasted Annual Revenue Requirement on FY 2016 Capital Included in ISR Rate Base	<u>\$0</u>	<u>\$2,820,049</u>	<u>\$5,536,119</u>
7	Total Capital Investment Revenue Requirement	<u>\$3,992,480</u>	<u>\$9,566,256</u>	<u>\$12,035,961</u>
8	Forecasted Annual Property Tax Recovery Mechanism		<u>\$3,417,586</u>	
9	Total Fiscal Year Revenue Requirement	<u>\$4,392,480</u>	<u>\$13,543,842</u>	
10	Total Incremental Fiscal Year Rate Adjustment		<u>\$9,151,362</u>	

Column Notes

(a) As approved in Docket No. R.I.P.U.C. 4474

Line Notes

1 O&M Expense for FY 2015 and FY 2016 per Exhibit DGI-1 Section 2A.
2(b)-(c) From Page 10 of 14, Line 24
3(b)-(c) From Page 8 of 14, Line 24
4(b)-(c) From Page 6 of 14, Line 26
5(b)-(c) From Page 4 of 14, Line 26
6(b)-(c) From Page 2 of 14, Line 26
7 Sum of Lines 2 through 6
8 From Page 13 of 14, Line 62(k)
9 Line 1 plus Line 7 plus Line 8
10 9(b) minus 9(a)

The Narragansett Electric Company
d/b/a National Grid
Computation of Gas Capital Investment Revenue Requirement
FY 2016 Investment

Line No.			Fiscal Year 2016 (a)	Fiscal Year 2017 (b)
<u>Depreciable Net Capital Included in ISR Rate Base</u>				
1	Total Allowed Capital Included in ISR Rate Base in Current Year	Per Company's books	\$74,228,000	\$0
2	Retirements	Line 1 * Retirement rate	\$5,559,677	\$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 2; Column (b) = Prior Year Line 3	\$68,668,323	\$68,668,323
<u>Change in Net Capital Included in ISR Rate Base</u>				
4	Capital Included in ISR Rate Base	Line 1	\$74,228,000	\$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant	\$24,356,183	\$0
6	Incremental Depreciable Amount	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	\$49,871,817	\$49,871,817
7	Cost of Removal	Per Company's books	\$3,714,000	\$3,714,000
8	Net Plant Amount	Line 6 + Line 7	\$53,585,817	\$53,585,817
<u>Deferred Tax Calculation:</u>				
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323	3.38%	3.38%
10	Tax Depreciation	Page 3 of 14, Line 10	\$56,587,254	\$1,601,661
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	\$56,587,254	\$58,188,915
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Column (b) = Line 3 * Line 9	\$1,160,495	\$2,320,989
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12	\$1,160,495	\$3,481,484
14	Cumulative Book / Tax Timer	Line 11 - Line 13	\$55,426,759	\$54,707,431
15	Effective Tax Rate		35.00%	35.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$19,399,366	\$19,147,601
<u>ISR Rate Base Calculation:</u>				
17	Cumulative Incremental Capital Included in ISR Rate Base	Line 8	\$53,585,817	\$53,585,817
18	Accumulated Depreciation	- Line 13	(\$1,160,495)	(\$3,481,484)
19	Deferred Tax Reserve	- Line 16	(\$19,399,366)	(\$19,147,601)
20	Year End Rate Base	Sum of Lines 17 through 19	\$33,025,957	\$30,956,732
<u>Revenue Requirement Calculation:</u>				
21	Average ISR Rate Base	Column (a) = Current Year Line 20 ÷ 2; Column (b) = (Prior Year Line 20 + Current Year Line 20) ÷ 2	\$16,512,978	\$31,991,344
22	Pre-Tax ROR		10.05%	10.05%
23	Return and Taxes	Line 21 * Line 22	\$1,659,554	\$3,215,130
24	Book Depreciation	Line 12	\$1,160,495	\$2,320,989
25	Property Taxes		\$0	\$0
26	Annual Revenue Requirement	Sum of Lines 23 through 25	\$2,820,049	\$5,536,119

1/ Assumes 7.49% retirement rate based on FY 2014 actual retirements (Per Page 12 of 14, Line 7(c) ÷ Line 1(c))

2/ Weighted Average Cost of Capital per Settlement Agreement R.I.P.U.C. Docket No. 4323

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	49.95%	5.70%	2.85%		2.85%
Short Term Debt	0.76%	0.80%	0.01%		0.01%
Preferred Stock	0.15%	4.50%	0.01%		0.01%
Common Equity	49.14%	9.50%	4.67%	2.51%	7.18%
	100.00%		7.54%	2.51%	10.05%

3/ Property taxes calculated on Page 13 of 14 for all vinatge years commencing with FY14 and reflected in total on Page 1 at Line 10.

The Narragansett Electric Company
d/b/a National Grid
R.I.P.U.C. Docket No. _____
Gas Infrastructure, Safety, and
Reliability Plan FY 2016 Proposal
Section 3: Attachment 1
Page 3 of 14

The Narragansett Electric Company
d/b/a National Grid
Calculation of Tax Depreciation
On FY 2016 Capital Investment

Line No.			Fiscal Year <u>2016</u> (a)	Fiscal Year <u>2017</u> (b)
	<u>Capital Repairs Deduction</u>			
1	Plant Additions	Page 2 of 14, Line 1	\$74,228,000	
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 70.11%	
3	Capital Repairs Deduction	Line 2 * Line 3	\$52,041,251	
	<u>Remaining Tax Depreciation</u>			
4	Plant Additions	Line 1	\$74,228,000	
5	Less Capital Repairs Deduction	Line 3	\$52,041,251	
6	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 4 - 5	\$22,186,749	\$22,186,749
7	20 YR MACRS Tax Depreciation Rates		3.750%	7.219%
8	Remaining Tax Depreciation	Line 6 * Line 7	\$832,003	\$1,601,661
9	Cost of Removal	Page 2 of 14, Line 7	\$3,714,000	
10	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 8, & 9	\$56,587,254	\$1,601,661

1/ Capital Repairs percentage is based on a three-year average of FYs 2012, 2013 and 2014 capital repairs rates.

The Narragansett Electric Company
d/b/a National Grid
Computation of Gas Capital Investment Revenue Requirement
FY 2015 Investment

Line No.			Fiscal Year 2015 (a)	Fiscal Year 2016 (b)	Fiscal Year 2017 (c)
<u>Depreciable Net Capital Included in ISR Rate Base</u>					
1	Total Allowed Capital Included in ISR Rate Base in Current Year	Per Company's books	\$67,807,000	\$0	\$0
2	Retirements	Line 1 * Retirement rate	\$6,936,656	\$0	\$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 2; Column (b) = Prior Year Line 3	\$60,870,344	\$60,870,344	\$60,870,344
<u>Change in Net Capital Included in ISR Rate Base</u>					
4	Capital Included in ISR Rate Base	Line 1	\$67,807,000	\$0	\$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant	\$24,356,183	\$0	\$0
6	Incremental Depreciable Amount	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	\$43,450,817	\$43,450,817	\$43,450,817
7	Cost of Removal	Per Company's books	\$3,489,000	\$3,489,000	\$3,489,000
8	Net Plant Amount	Line 6 + Line 7	\$46,939,817	\$46,939,817	\$46,939,817
<u>Deferred Tax Calculation:</u>					
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323	3.38%	3.38%	3.38%
10	Tax Depreciation	Page 5 of 14, Line 10	\$50,041,934	\$1,594,110	\$1,474,425
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	\$50,041,934	\$51,636,044	\$53,110,469
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Column (b) = Line 3 * Line 9	\$1,028,709	\$2,057,418	\$2,057,418
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12	\$1,028,709	\$3,086,127	\$5,143,544
14	Cumulative Book / Tax Timer	Line 11 - Line 13	\$49,013,225	\$48,549,917	\$47,966,925
15	Effective Tax Rate		35.00%	35.00%	35.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$17,154,629	\$16,992,471	\$16,788,424
<u>ISR Rate Base Calculation:</u>					
17	Cumulative Incremental Capital Included in ISR Rate Base	Line 8	\$46,939,817	\$46,939,817	\$46,939,817
18	Accumulated Depreciation	- Line 13	(\$1,028,709)	(\$3,086,127)	(\$5,143,544)
19	Deferred Tax Reserve	- Line 16	(\$17,154,629)	(\$16,992,471)	(\$16,788,424)
20	Year End Rate Base	Sum of Lines 17 through 19	\$28,756,479	\$26,861,220	\$25,007,849
<u>Revenue Requirement Calculation:</u>					
21	Average ISR Rate Base	Column (a) = Current Year Line 20 ÷ 2; Column (b) = (Prior Year Line 20 + Current Year Line 20) ÷ 2		\$27,808,849	\$25,934,534
22	Pre-Tax ROR			10.05%	10.05%
23	Return and Taxes	Line 21 * Line 22		\$2,794,789	\$2,606,421
24	Book Depreciation	Line 12		\$2,057,418	\$2,057,418
25	Property Taxes			\$0	\$0
26	Annual Revenue Requirement	Sum of Lines 23 through 25	N/A	\$4,852,208	\$4,663,839

1/ Assumes 10.23% retirement rate based on FY13 actual retirements

2/ Weighted Average Cost of Capital per Settlement Agreement R.I.P.U.C. Docket No. 4323

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	49.95%	5.70%	2.85%		2.85%
Short Term Debt	0.76%	0.80%	0.01%		0.01%
Preferred Stock	0.15%	4.50%	0.01%		0.01%
Common Equity	49.14%	9.50%	4.67%	2.51%	7.18%
	100.00%		7.54%	2.51%	10.05%

3/ Property taxes calculated on Page 13 of 14 for all vinatge years commencing with FY14 and reflected in total on Page 1 at Line 10.

The Narragansett Electric Company
d/b/a National Grid
Calculation of Tax Depreciation
On FY 2015 Capital Investment

Line No.			Fiscal Year <u>2015</u> (a)	Fiscal Year <u>2016</u> (b)	Fiscal Year <u>2017</u> (c)
	<u>Capital Repairs Deduction</u>				
1	Plant Additions	Page 4 of 14, Line 1	\$67,807,000		
2	Capital Repairs Deduction Rate	Per Tax Department 1/	67.43%		
3	Capital Repairs Deduction	Line 2 * Line 3	\$45,724,854		
	<u>Remaining Tax Depreciation</u>				
4	Plant Additions	Line 1	\$67,807,000		
5	Less Capital Repairs Deduction	Line 3	\$45,724,854		
6	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 4 - 5	\$22,082,146	\$22,082,146	\$22,082,146
7	20 YR MACRS Tax Depreciation Rates		3.750%	7.219%	6.677%
8	Remaining Tax Depreciation	Line 6 * Line 7	\$828,080	\$1,594,110	\$1,474,425
9	Cost of Removal	Page 4 of 14, Line 7	\$3,489,000		
10	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 8, & 9	\$50,041,934	\$1,594,110	\$1,474,425

1/ Capital Repairs percentage is based on a three year average, 2010, 2011, and 2012. Since growth is not included in the ISR, the percentage was derived by taking property qualifying for the repairs deduction as a percentage of the total annual gas plant additions in those categories that are considered as potentially qualifying for Capital Repairs deduction.

The Narragansett Electric Company
d/b/a National Grid
Computation of Gas Capital Investment Revenue Requirement
FY 2014 Investment

Line No.			Fiscal Year 2014 (a)	Fiscal Year 2015 (b)	Fiscal Year 2016 (c)	Fiscal Year 2017 (d)
Depreciable Net Capital Included in ISR Rate Base						
1	Total Allowed Capital Included in ISR Rate Base in Current Year	Page 12 of 14, Line 3, Column (c)	\$22,750,553	\$0	\$0	\$0
2	Retirements	Page 12 of 14, Line 9, Column (c)	\$1,615,155	\$0	\$0	\$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 2; Column (b) through (c) = Prior Year Line 3	\$21,135,397	\$21,135,397	\$21,135,397	\$21,135,397
Change in Net Capital Included in ISR Rate Base						
4	Capital Included in ISR Rate Base	Line 1	\$22,750,553	\$0	\$0	\$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant 1/	\$4,060,176	\$0	\$0	\$0
6	Incremental Depreciable Amount	Column (a) = Line 4 - Line 5; Column (b) through (c) = Prior Year Line 6	\$18,690,377	\$18,690,377	\$18,690,377	\$18,690,377
7	Cost of Removal	Page 12 of 14, Line 6, Column (c)	(\$1,210,006)	(\$1,210,006)	(\$1,210,006)	(\$1,210,006)
8	Net Plant Amount	Line 6 + Line 7	\$17,480,371	\$17,480,371	\$17,480,371	\$17,480,371
Deferred Tax Calculation:						
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323	3.38%	3.38%	3.38%	3.38%
10	Tax Depreciation	Page 7 of 14, Line 20	\$18,110,865	\$257,235	\$237,922	\$220,105
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	\$18,110,865	\$18,368,100	\$18,606,022	\$18,826,127
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50%; Column (b) = Line 3 * Line 9; Column (c) = Line 3 * Line 9	\$357,188	\$714,376	\$714,376	\$714,376
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12	\$357,188	\$1,071,564	\$1,785,941	\$2,500,317
14	Cumulative Book / Tax Timer	Line 11 - Line 13	\$17,753,677	\$17,296,536	\$16,820,082	\$16,325,810
15	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$6,213,787	\$6,053,788	\$5,887,029	\$5,714,034
ISR Rate Base Calculation:						
17	Cumulative Incremental Capital Included in ISR Rate Base	Line 8	\$17,480,371	\$17,480,371	\$17,480,371	\$17,480,371
18	Accumulated Depreciation	- Line 13	(\$357,188)	(\$1,071,564)	(\$1,785,941)	(\$2,500,317)
19	Deferred Tax Reserve	- Line 16	(\$6,213,787)	(\$6,053,788)	(\$5,887,029)	(\$5,714,034)
20	Year End Rate Base	Sum of Lines 17 through 19	\$10,909,396	\$10,355,019	\$9,807,402	\$9,266,020
Revenue Requirement Calculation:						
21	Average ISR Rate Base	Column (a) = Current Year Line 20 ÷ 2; Column (b) = (Prior Year Line 20 + Current Year Line 20) ÷ 2			\$10,081,210	\$9,536,711
22	Pre-Tax ROR				10.05%	10.05%
23	Return and Taxes	Line 21 * Line 22			\$1,013,162	\$958,439
24	Book Depreciation	Line 12			\$714,376	\$714,376
25	Property Taxes				\$	\$
26	Annual Revenue Requirement	Sum of Lines 23 through 25	N/A	N/A	\$1,727,537	\$1,672,816

1/ Depreciation Expense has been prorated for 2 months (February - March 2014)

2/ Weighted Average Cost of Capital per Settlement Agreement R.I.P.U.C. Docket No. 4323

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	49.95%	5.70%	2.85%		2.85%
Short Term Debt	0.76%	0.80%	0.01%		0.01%
Preferred Stock	0.15%	4.50%	0.01%		0.01%
Common Equity	49.14%	9.50%	4.67%	2.51%	7.18%
	100.00%		7.54%	2.51%	10.05%

3/ Property taxes calculated on Page 13 of 14 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.

The Narragansett Electric Company
d/b/a National Grid
Calculation of Tax Depreciation
On FY 2014 Capital Investment

Line No.			Fiscal Year 2014 (a)	Fiscal Year 2015 (b)	Fiscal Year 2016 (c)	Fiscal Year 2017 (d)
<u>Capital Repairs Deduction</u>						
1	Plant Additions	Page 6 of 14, Line 1	\$22,750,553			
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 74.94%			
3	Capital Repairs Deduction	Line 2 * Line 3	\$17,049,264			
<u>Bonus Depreciation</u>						
4	Plant Additions	Line 1	\$22,750,553			
5	Less Capital Repairs Deduction	Line 3	\$17,049,264			
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - 5	\$5,701,289			
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%			
8	Plant Eligible for Bonus Depreciation	Line 6 x Line 7	\$5,701,289			
9	Bonus Depreciation Rate (April 2013 - December 2013)	1 * 75% * 50%	37.50%			
10	Bonus Depreciation Rate (January 2014 - March 2014)	1 * 25% * 0%	0.00%			
11	Total Bonus Depreciation Rate	Line 9 + Line 10	37.50%			
12	Bonus Depreciation	Line 8 x Line 11	\$2,137,983			
<u>Remaining Tax Depreciation</u>						
13	Plant Additions	Line 1	\$22,750,553			
14	Less Capital Repairs Deduction	Line 3	\$17,049,264			
15	Less Bonus Depreciation	Line 12	\$2,137,983			
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	\$3,563,306	\$3,563,306	\$3,563,306	\$3,563,306
17	20 YR MACRS Tax Depreciation Rates		3.750%	7.219%	6.677%	6.177%
18	Remaining Tax Depreciation	Line 16 * Line 17	\$133,624	\$257,235	\$237,922	\$220,105
19	Cost of Removal	Page 6 of 14, Line 7	(\$1,210,006)			
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, and 19	\$18,110,865	\$257,235	\$237,922	\$220,105

1/ Capital Repairs percentage is based on the actual results of the FY 2014 tax return. Since growth is not included in the ISR, the percentage was derived by taking property qualifying for the repairs deduction as a percentage of the total annual plant additions in those categories that are considered as potentially qualifying for Capital Repairs deduction.

The Narragansett Electric Company
d/b/a National Grid
Computation of Gas Capital Investment Revenue Requirement
FY 2013 Investment

Line No.			Fiscal Year 2013 (a)	Fiscal Year 2014 (b)	Fiscal Year 2015 (c)	Fiscal Year 2016 (d)	Fiscal Year 2017 (e)
	<u>Depreciable Net Capital Included in Rate Base</u>						
1	Total Allowed Capital Included in Rate Base in Current Year	Page 12 of 14, Line 3, Column (b)	(\$723,236)	\$0	\$0	\$0	\$0
2	Retirements	Page 12 of 14, Line 9, Column (b)	\$3,276,842	\$0	\$0	\$0	\$0
3	Net Depreciable Capital Included in Rate Base	Line 1 - Line 2	(\$4,000,078)	(\$4,000,078)	(\$4,000,078)	(\$4,000,078)	(\$4,000,078)
	<u>Change in Net Capital Included in Rate Base</u>						
4	Capital Included in Rate Base	Line 1	(\$723,236)	(\$723,236)	(\$723,236)	(\$723,236)	(\$723,236)
5	Cost of Removal	Page 12 of 14, Line 6, Column (b)	2/ (\$1,548,831)	(\$1,548,831)	(\$1,548,831)	(\$1,548,831)	(\$1,548,831)
6	Net Plant Amount	Line 4 + Line 5	(\$2,272,067)	(\$2,272,067)	(\$2,272,067)	(\$2,272,067)	(\$2,272,067)
	<u>Deferred Tax Calculation:</u>						
7	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 4323 and 3943	3.38%	3.38%	3.38%	3.38%	3.38%
8	Tax Depreciation	Page 9 of 14, Line 20	(\$2,166,837)	(\$7,893)	(\$7,300)	(\$6,753)	(\$6,246)
9	Cumulative Tax Depreciation	Prior Year Line 9 + Current Year Line 8	(\$2,166,837)	(\$2,174,730)	(\$2,182,030)	(\$2,188,783)	(\$2,195,029)
	Column (a) = Line 3 * Line 7 * 50%; Column (b) through (d) = Line 3						
10	Book Depreciation	* Line 7	(\$67,601)	(\$135,203)	(\$135,203)	(\$135,203)	(\$135,203)
11	Cumulative Book Depreciation	Prior Year Line 11 + Current Year Line 10	(\$67,601)	(\$202,804)	(\$338,007)	(\$473,209)	(\$608,412)
12	Cumulative Book / Tax Timer	Line 9 - Line 11	(\$2,099,236)	(\$1,971,926)	(\$1,844,023)	(\$1,715,574)	(\$1,586,617)
13	Effective Tax Rate		35.00%	35.00%	35.000%	35.000%	35.000%
14	Deferred Tax Reserve	Line 12 * Line 13	(\$734,732)	(\$690,174)	(\$645,408)	(\$600,451)	(\$555,316)
	<u>O&M Expense for FY 2015 and FY 2016 per Exhibit DGI-1 Section 2A.</u>						
15	Cumulative Incremental Capital Included in Rate Base	Line 6	(\$2,272,067)	(\$2,272,067)	(\$2,272,067)	(\$2,272,067)	(\$2,272,067)
16	Accumulated Depreciation	- Line 11	\$67,601	\$202,804	\$338,007	\$473,209	\$608,412
17	Deferred Tax Reserve	- Line 14	\$734,732	\$690,174	\$645,408	\$600,451	\$555,316
18	Year End Rate Base	Sum of Lines 15 through 17	(\$1,469,733)	(\$1,379,089)	(\$1,288,652)	(\$1,198,406)	(\$1,108,339)
	<u>Revenue Requirement Calculation:</u>						
19	Average Rate Base	Current Year Line 18 ÷ 2; Column (b) through (d) = (Prior Year Line 18 + Current Year Line 18) ÷ 2				(\$1,243,529)	(\$1,153,373)
20	Pre-Tax ROR					10.05%	10.05%
21	Return and Taxes	Line 19 * Line 20				(\$124,975)	(\$115,914)
22	Book Depreciation	Line 10				(\$135,203)	(\$135,203)
23	Property Taxes	\$0 in Year 1, then Prior Year (Line 6 - Line 11) * Effective Property Tax Rate				(\$59,956)	(\$55,765)
24	Annual Revenue Requirement	Sum of Lines 21 through 23	N/A	N/A	N/A	(\$320,133)	(\$306,882)

1/ Actual Incremental Retirements

2/ Actual Incremental Cost of Removal

3/ Weighted Average Cost of Capital as approved in R.I.P.U.C. Docket No. 4323

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	49.95%	5.70%	2.85%		2.85%
Short Term Debt	0.76%	0.80%	0.01%		0.01%
Preferred Stock	0.15%	4.50%	0.01%		0.01%
Common Equity	49.14%	9.50%	4.67%	2.51%	7.18%
	100.00%		7.54%	2.51%	10.05%

4/ Columns (d) and (e) assume an effective Property Tax Rate of 3.1% per Page 13 of 14, Line 35(h)

The Narragansett Electric Company
d/b/a National Grid
Calculation of Tax Depreciation
On FY 2013 Capital Investment

Line No.			Fiscal Year 2013 (a)	Fiscal Year 2014 (b)	Fiscal Year 2015 (c)	Fiscal Year 2016 (d)	Fiscal Year 2017 (e)
<u>Capital Repairs Deduction</u>							
1	Plant Additions	Page 8 of 14, Line 1	(\$723,236)				
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 67.95%				
3	Capital Repairs Deduction	Line 1 x Line 2	(\$491,439)				
<u>Bonus Depreciation</u>							
4	Plant Additions	Line 1	(\$723,236)				
5	Less Capital Repairs Deduction	Line 3	(\$491,439)				
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	(\$231,797)				
7	Percent of Plant Eligible for 100% Bonus Depreciation	Per Tax Department	2/ 5.67%				
8	Plant Eligible for 100% Bonus Depreciation	Line 6 x Line 7	(\$13,137)				
9	Bonus Depreciation Rate (April 2012 - December 2012)	1 * 75% * 100%	75.00%				
10	Bonus Depreciation Rate (January 2013 - March 2013)	1 * 25% * 100%	25.00%				
11	Total Bonus Depreciation Rate	Line 9 + Line 10	100.00%				
12	100% Bonus Depreciation	Line 8 x Line 11	(\$13,137)				
13	Plant Additions Net of Capital Repairs Deduction and 100% Bonus Depreciation	Line 6 - Line 12	(\$218,660)				
14	Plant Eligible for 50% Bonus Depreciation	Per Tax Department	100.00%				
15	Bonus Depreciation Rate (April 2012 - December 2012)	1 * 75% * 50%	37.50%				
16	Bonus Depreciation Rate (January 2013 - March 2013)	1 * 25% * 50%	12.50%				
17	Total Bonus Depreciation Rate	Line 9 + Line 10	50.00%				
18	50% Bonus Depreciation	Line 13 x Line 17	(\$109,330)				
<u>Remaining Tax Depreciation</u>							
19	Plant Additions	Line 1	(\$723,236)				
20	Less Capital Repairs Deduction	Line 3	(\$491,439)				
21	Less Bonus Depreciation	Line 12 + Line 18	(\$122,467)				
22	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 19 - 20 - 21	(\$109,330)	(\$109,330)	(\$109,330)	(\$109,330)	(\$109,330)
23	20 YR MACRS Tax Depreciation Rates		3.750%	7.219%	6.677%	6.177%	5.713%
24	Remaining Tax Depreciation	Line 22 x Line 23	(\$4,100)	(\$7,893)	(\$7,300)	(\$6,753)	(\$6,246)
25	Cost of Removal	Page 8 of 14, Line 5	(\$1,548,831)				
26	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 24, & 25	(\$2,166,837)	(\$7,893)	(\$7,300)	(\$6,753)	(\$6,246)

1/ Per Docket No. 4380 FY 2014 Gas ISR Reconciliation filing at Attachment WRR-1, Page 5, Line 2.

2/ Long period production assets qualifying for 100% bonus depreciation in FY 2013 totaled \$3.2 million, taken over total FY13 ISR-eligible capital investment of \$56.4 million equals 5.67%.

The Narragansett Electric Company
d/b/a National Grid
Computation of Gas Capital Investment Revenue Requirement
FY 2012 Investment

Line No.		Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)	Fiscal Year 2015 (d)	Fiscal Year 2016 (e)	Fiscal Year 2017 (f)
<u>Depreciable Net Capital included in ISR Rate Base</u>							
1	Incremental Capital Investment	\$7,020,631	\$0	\$0	\$0	\$0	\$0
2	Retirements	\$2,292,446	\$0	\$0	\$0	\$0	\$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 2; Columns (b) through (e) = Prior Year Line 3					
		\$4,728,185	\$4,728,185	\$4,728,185	\$4,728,185	\$4,728,185	\$4,728,185
<u>Change in Incremental Capital Investment Included in ISR Rate Base</u>							
4	Incremental Depreciable Amount	Line 1					
		\$7,020,631	\$7,020,631	\$7,020,631	\$7,020,631	\$7,020,631	\$7,020,631
5	Incremental Cost of Removal	Page 12 of 14, Line 6, Column (a)					
		(\$3,171,476)	(\$3,171,476)	(\$3,171,476)	(\$3,171,476)	(\$3,171,476)	(\$3,171,476)
6	Incremental Plant Amount	Line 4 + Line 5					
		\$3,849,155	\$3,849,155	\$3,849,155	\$3,849,155	\$3,849,155	\$3,849,155
<u>Deferred Tax Calculation:</u>							
7	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323					
		3.38%	3.38%	3.38%	3.38%	3.38%	3.38%
8	Tax Depreciation	Page 11 of 14, Line 20					
		\$3,285,182	\$42,299	\$39,124	\$36,194	\$33,475	\$30,967
9	Cumulative Tax Depreciation	Prior Year Line 9 + Current Year Line 8					
		\$3,285,182	\$3,327,481	\$3,366,605	\$3,402,798	\$3,436,274	\$3,467,241
10	Book Depreciation	Column (a) = Line 3 * Line 7 * 50%; Columns (b) through (e) = Line 3 * Line 7					
		\$79,906	\$159,813	\$159,813	\$159,813	\$159,813	\$159,813
11	Cumulative Book Depreciation	Prior Year Line 11 + Current Year Line 10					
		\$79,906	\$239,719	\$399,532	\$559,344	\$719,157	\$878,970
12	Cumulative Book / Tax Timer	Line 9 - Line 11					
		\$3,205,276	\$3,087,762	\$2,967,073	\$2,843,454	\$2,717,117	\$2,588,271
13	Effective Tax Rate	35.00%					
		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
14	Deferred Tax Reserve	Line 12 * Line 13					
		\$1,121,846	\$1,080,717	\$1,038,476	\$995,209	\$950,991	\$905,895
<u>ISR Rate Base Calculation:</u>							
15	Of Cumulative Incremental Capital Included in ISR Rate Base	Line 6					
		\$3,849,155	\$3,849,155	\$3,849,155	\$3,849,155	\$3,849,155	\$3,849,155
16	Accumulated Depreciation	- Line 11					
		(\$79,906)	(\$239,719)	(\$399,532)	(\$559,344)	(\$719,157)	(\$878,970)
17	Deferred Tax Reserve	- Line 14					
		(\$1,121,846)	(\$1,080,717)	(\$1,038,476)	(\$995,209)	(\$950,991)	(\$905,895)
18	Year End Rate Base	Sum of Lines 15 through 17					
		\$2,647,402	\$2,528,719	\$2,411,148	\$2,294,602	\$2,179,007	\$2,064,290
<u>Revenue Requirement Calculation:</u>							
19	Average ISR Rate Base	(Prior Year Line 18 + Current Year Line 18) ÷ 2				\$2,236,804	\$2,121,649
20	Pre-Tax ROR	1/				10.05%	10.05%
21	Return and Taxes	Line 19 * Line 20				\$224,799	\$213,226
22	Book Depreciation	Line 10				\$159,813	\$159,813
23	Property Taxes	\$0 in Year 1, then Prior Year (Line 6 - Line 11) * Effective Property Tax Rate				\$101,984	\$97,030
24	Annual Revenue Requirement	Sum of Lines 21 through 23			N/A	\$486,596	\$470,068

1/ Weighted Average Cost of Capital per Settlement Agreement R.I.P.U.C. Docket No. 4323

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	49.95%	5.70%	2.85%		2.85%
Short Term Debt	0.76%	0.80%	0.01%		0.01%
Preferred Stock	0.15%	4.50%	0.01%		0.01%
Common Equity	49.14%	9.50%	4.67%	2.51%	7.18%
	100.00%		7.54%	2.51%	10.05%

2/ Columns (e) and (f) assume an effective Property Tax Rate of 3.1% per Page 13 of 14, Line 35(h)

The Narragansett Electric Company
d/b/a National Grid
Calculation of Tax Depreciation
On FY 2012 Capital Investment

Line No.			Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)	Fiscal Year 2015 (d)	Fiscal Year 2016 (e)	Fiscal Year 2017 (f)
<u>Capital Repairs Deduction</u>								
1	Plant Additions	Page 10 of 14, Line 1	\$7,020,631					
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 67.43%					
3	Capital Repairs Deduction	Line 2 * Line 3	\$4,734,011					
<u>Bonus Depreciation</u>								
4	Plant Additions	Line 1	\$7,020,631					
5	Less Capital Repairs Deduction	Line 3	\$4,734,011					
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	\$2,286,620					
7	Percent of Plant Eligible for Bonus Depreciation		2/ 85.00%					
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	\$1,943,627					
9	Bonus Depreciation Rate (April 2011 - December 2011)	1 * 75%	75.00%					
10	Bonus Depreciation Rate (January 2012 - March 2012)	1 * 25% * 50%	12.50%					
11	Total Bonus Depreciation Rate	Line 9 + Line 10	87.50%					
12	Bonus Depreciation	Line 8 * Line 11	\$1,700,674					
<u>Remaining Tax Depreciation</u>								
13	Plant Additions	Line 1	\$7,020,631					
14	Less Capital Repairs Deduction	Line 3	\$4,734,011					
15	Less Bonus Depreciation	Line 12	\$1,700,674					
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 1 - 14 - 15	\$585,946	\$585,946	\$585,946	\$585,946	\$585,946	\$585,946
17	20 YR MACRS Tax Depreciation Rates		3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
18	Remaining Tax Depreciation	Line 16 * Line 17	\$21,973	\$42,299	\$39,124	\$36,194	\$33,475	\$30,967
19	Cost of Removal	Page 10 of 14, Line 5	(\$3,171,476)					
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19	\$3,285,182	\$42,299	\$39,124	\$36,194	\$33,475	\$30,967

1/ Per Docket No. 4306 FY 2013 Gas ISR Reconciliation filing at Attachment WRR-1, Page 9, Line 2.

2/ Since not all property additions qualify for bonus depreciation and because a project must be started after the beginning of the bonus period, January 1, 2008, an estimate of 85% is used rather than 100%.

The Narragansett Electric Company
d/b/a National Grid
FY 2012 - FY 2014 Incremental Capital Investment Summary

Line No.			Actual Fiscal Year 2012 (a)	Actual Fiscal Year 2013 (b)	Actual Fiscal Year 2014 (c)
<u>Capital Investment</u>					
1	ISR-eligible Capital Investment	Col (a) Docket No. 4219 FY 2012 ISR Reconciliation Filing; Col (b) Docket No. 4306 FY 2013 ISR Reconciliation Filing; Col (c) Docket No. 4380 FY 2014 ISR Reconciliation filing	\$54,681,347	\$56,460,955	\$70,404,045
2	ISR-eligible Capital Additions included in Rate Base per R.I.P.U.C. Docket No. 4323	Schedule MDL-3-GAS Page 51, Docket No. 4323; Col (a)= Line Note 1(a); Col (b)= Line Note 2(b); Col (c)= Line Note 3(e)	\$47,660,716	\$57,184,191	\$47,653,493
3	Incremental ISR Capital Investment	Line 3 - Line 4	\$7,020,631	(\$723,236)	\$22,750,553
<u>Cost of Removal</u>					
4	ISR-eligible Cost of Removal	Col (a) Docket No. 4219 FY 2012 ISR Reconciliation Filing; Col (b) Docket No. 4306 FY 2013 ISR Reconciliation Filing; Col (c) Docket No. 4380 FY 2014 ISR Reconciliation filing	\$2,583,612	\$3,152,565	\$2,707,824
5	ISR-eligible Cost of Removal in Rate Base per R.I.P.U.C. Docket No. 4323	Workpaper MDL-19-GAS Page 3, Docket No. 4323; Col (a)= Line Note 1(a); Col (b)= Line Note 2(b); Col (c)= Line Note 3(e)	\$5,755,088	\$4,701,396	\$3,917,830
6	Incremental Cost of Removal	Line 4 - Line 5	(\$3,171,476)	(\$1,548,831)	(\$1,210,006)
<u>Retirements</u>					
7	ISR-eligible Retirements	Col (a) Docket No. 4219 FY 2012 ISR Reconciliation filing; Col (b) Docket No. 4306 FY 2013 ISR Reconciliation filing; Col (c) Docket No. 4380 FY 2014 ISR Reconciliation filing	\$5,366,562	\$5,775,791	\$5,274,944
8	ISR-eligible Retirements per Docket 4323	Col (a) Docket No. 4219 Supplemental Testimony 2-17-2011; Col (b) Docket No. 4306 FY 2013 ISR Proposal Filing; Col (c)= Line 2(c) * 7.68% Retirement rate per Docket No. 4323 (Workpaper MDL-19-GAS p 4)	\$3,074,116	\$2,498,949	\$3,659,788
9	Incremental Retirements	Line 7- Line 8	\$2,292,446	\$3,276,842	\$1,615,155

The Narragansett Electric Company
d/b/a National Grid
Forecasted Property Tax Recovery Adjustment
(\$000s)

		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)			
<u>Line</u>	<u>Effective Tax Rate Calculation</u>	<u>RY End</u>	<u>ISR Additions</u>	<u>Non-ISR Add's</u>	<u>Total Add's</u>	<u>Bk Depr</u>	<u>Retirements</u>	<u>COR</u>	<u>End of FY14</u>			
1	Plant In Service	\$805,721	\$11,734	\$994	\$12,728		(\$879)		As filed \$817,569			
2												
3	Accumulated Depr	\$347,664				\$4,691	(\$879)	(\$451)	\$351,025			
4												
5	Net Plant	\$458,057							\$466,544			
6												
7	Property Tax Expense	\$13,995							\$15,624			
8												
9	Effective Prop tax Rate	3.06%							3.35%			
10												
11												
12		<u>End of FY14</u>	<u>ISR Additions</u>	<u>Non-ISR Add's</u>	<u>Total Add's</u>	<u>Bk Depr</u>	<u>Retirements</u>	<u>COR</u>	<u>End of FY15</u>			
13												
14	Plant In Service	\$817,569	\$67,807	\$19,415	\$87,222		(\$6,937)		\$897,854			
15												
16	Accumulated Depr	\$351,025				\$29,887	(\$6,937)	(\$3,489)	\$370,487			
17												
18	Net Plant	\$466,544							\$527,368			
19												
20	Property Tax Expense	\$15,624							\$16,340			
21												
22	Effective Prop tax Rate	3.35%							3.10%			
23												
24												
25		<u>End of FY15</u>	<u>ISR Additions</u>	<u>Non-ISR Add's</u>	<u>Total Add's</u>	<u>Bk Depr</u>	<u>Retirements</u>	<u>COR</u>	<u>End of FY16</u>			
26												
27	Plant In Service	\$897,854	\$74,228	\$25,749	\$99,977		(\$5,560)		\$992,272			
28												
29	Accumulated Depr	\$370,487				\$32,840	(\$5,560)	(\$3,714)	\$394,053			
30												
31	Net Plant	\$527,368							\$598,219			
32												
33	Property Tax Expense	\$16,340							\$18,545			
34												
35	Effective Prop tax Rate	3.10%							3.10%			
36												
37												
38	Property Tax Recovery Calculation											
39		Cumulative Incremental ISR Property Tax for FY14				Cumulative Incremental ISR Property Tax for FY15				Cumulative Incremental ISR Property Tax for FY16		
40												
41	ISR Additions		\$11,734				\$67,807			\$74,228		
42	Book Depreciation: base allowance on ISR eligible plant		(\$4,060)				(\$24,356)			(\$24,356)		
43	Book Depreciation: current year ISR additions		(\$631)				(\$1,029)			(\$1,160)		
44	COR		\$451				\$3,489			\$3,714		
45												
46	Net Plant Additions		\$7,494				\$45,911			\$52,425		
47												
48	Rate Year Effective Tax Rate		3.06%				3.06%			3.06%		
49	Property Tax Recovery on 2 mos FY14 vintage investment			\$229				\$236			\$225	
50	Property Tax Recovery on FY15 vintage investment							\$1,403			\$1,340	
51	Property Tax Recovery on FY16 investment										\$1,602	
52												
53	ISR Year Effective Tax Rate	3.35%				3.10%				3.10%		
54	RY Effective Tax Rate & differential	3.06%	0.29%			3.06%	0.04%			3.06%	0.04%	
55	RY Effective Tax Rate differential for 2 months FY 2014		0.05%									
56	RY Net Plant times Tax Rate differential	\$458,057	* 0.05%	\$225		\$458,057	* 0.04%	\$205		\$458,057	* 0.04%	\$205
57	2 mos FY14 Net Adds times ISR Year Effective Tax rate	\$7,494	* 0.29%	\$22		\$7,727	* 0.04%	\$3		\$7,360	* 0.04%	\$3
58	FY15 Net Adds times ISR Year Effective Tax rate					\$45,911	* 0.04%	\$21		\$43,854	* 0.04%	\$20
59	FY16 Net Adds times ISR Year Effective Tax rate									\$52,425	* 0.04%	\$23
60	Total Property Tax related to rate differential			\$247				\$229				\$251
61												
62	Total ISR Property Tax Recovery			\$476				\$1,868				\$3,418

The Narragansett Electric Company
d/b/a National Grid
Forecasted Property Tax Recovery Adjustment (continued)
(\$000s)

Line Notes

1(a) - 9(a) Per Rate Year cost of service per Compliance filing Attachment 6 at Docket No. 4323.
1(b) - 9(h) Per Docket 4380 FY 2014 Gas ISR Plan Reconciliation filing at Page 10 of 13
14(a) Line 1(h)
14(b) Per Page 4 of 14, Line 1
14(c) FY 2015 forecasted Growth investment of \$19,033k and General Plant of \$382k.
14(d) Line 14(a) + Line 14(b)
14(f) Per Page 4 of 14, Line 19
14(h) Line 14(a) + Line 14(d) + Line 14(f)
16(a) Line 3(h)
16(e) Rate Year depn allowance of \$28,130k + (Line 1(d)+Line 1(f)* composite depn rate of 3.38%) + (Line 14(d)+Line 14(f)* composite depn rate of 3.38% * 50%)
16(f) Line 14(f)
16(g) Less Page 4 of 14, Line 7
16(h) Sum of Line 16 (a) through (g)
18(a) Line 5(h)
18(h) Line 14(h) - Line 16(h)
20(a) Line 7(h)
20(h) FY 2015 forecasted property tax expense
22(a) Line 7(h)
22(h) Line 20(h) ÷ Line 18(h)
27(a) Line 14(h)
27(b) Per Page 2 of 14, Line 1
27(c) FY 2016 forecasted Growth investment of \$24,449k and General Plant of \$1,300k.
27(d) Line 27(b) + Line 27(c)
27(f) 7.49% FY 2014 retirement rate per Page 12 of 14 * Line 27(b)
27(h) Line 27(a) + Line 27(d) + Line 27(f)
29(a) Line 16(h)
29(e) Rate Year depn allowance of \$28,130k + (Line 1(d)+Line 1(f)* composite depn rate of 3.38%) + (Line 14(d)+Line 14(f)* composite depn rate of 3.38%) + (Line 27(d)+Line 27(f)* 3.38% * 50%)
29(f) Line 27(f)
29(g) Less Page 2 of 14, Line 7
31(a) Line 18(h)
31(h) Line 27(h) - Line 29(h)
33(a) Line 20(h)
33(h) through 2013.
35(a) Line 22(h)
35(h) Line 33(h) ÷ Line 31(h)

Line Notes

41(a) - 62(c) Per Docket 4380 FY 2014 Gas ISR Plan Reconciliation filing at Page 10 of 13
41(f) Line 14(b)
42(f)&(j) Per Pages 2 & 4 of 14, Line 5
43(f)&(j) Per Pages 2 & 4 of 14, Line 12
44(f)&(j) Col(f): Less Line 16(g); Col(j): Less Line 29(g)
46(f)&(j) Sum of Lines 41 through 44
48(f)&(j) Line 9(a)
49(g) ((Lines 41(b) + 42(b) + 44(b)) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate * 50% * 2/12) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate) * Line 48(f)
50(g) Line 46(f) * 49(g)
53(e) Line 22(h)
54(e)&(i) Line 9(a)
54(f) Line 53(e) - Line 54(e)
56(e)&(i) Line 5(a)
57(e) ((Lines 41(b) + 42(b) + 44(b)) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate * 50% * 2/12) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate)
58(e) Line 46(f)
56(f)-58(f) Line 54(f)
56(g)-58(g) Line 56(e) * Line 56(f) ; Line 57(e) * Line 57(f) ; Line 58(e) * Line 58(f)
60(g)&(k) Col(g): Sum of Lines 56 through 59; Col (k): Sum of Lines 56 through 59
62(g) Line 49(g) + Line 50(g) + Line 60(g)
68(g)&(k) Col(g): Sum of Lines 65 through 67; Col(k): Sum of Lines 65 through 67
70(g) & (k) Col(g): Line 62(g) - Line 68(g); Col(k): Line 62(k) - Line 68(k)
41(j) Line 27(b)
49(k) ((Lines 41(b) + 42(b) + 44(b)) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate * 50% * 2/12) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate) * Line 48(j)
50(k) ((Lines 41(f) + 42(f) + 44(f)) - ((Line 41(f)+Line 14(f)) * 3.38% composite depn rate * 50% * 2/12) - ((Line 41(f)+Line 14(f)) * 3.38% composite depn rate) * Line 48(j)
51(k) Line 46(j) * Line 48(j)
53(i) Line 35(h)
54(j) Line 53(i) - Line 54(i)
57(i) ((Lines 41(b) + 42(b) + 44(b)) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate * 50% * 2/12) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate) - ((Line 41(b)+Line 1(f)) * 3.38% composite depn rate)
58(i) ((Lines 41(f) + 42(f) + 44(f)) - ((Line 41(f)+Line 14(f)) * 3.38% composite depn rate * 50% * 2/12) - ((Line 41(f)+Line 14(f)) * 3.38% composite depn rate)
59(i) Line 46(j)
56(j)-58(j) Line 54(j)
56(k)-58(k) Line 56(i) * Line 56(j) ; Line 57(i) * Line 57(j) ; Line 58(i) * Line 58(j)
62(k) Sum of Lines 49(k) through 51(k) + Line 60(k)

Section 4

Rate Design and Bill Impacts

FY 2016 Proposal

**Rate Design and Bill Impacts
FY 2016 Proposal**

Like the revenue requirement, the proposed ISR rate design for FY 2016 is based on incremental capital investment in excess of capital investment that has been reflected in rate base in the Company's latest base rate case, Docket No. 4323, as well as incremental O&M as described in Section 2, and the property tax described in Section 2 in accordance with the property tax recovery mechanism included in the rate case settlement. For purposes of rate design, the revenue requirement associated with the capital investment and the property tax recovery is allocated to rate classes based upon the rate base allocator from the Company's Settlement agreement in Docket No. 4323. The incremental O&M expense associated with hiring, training, and supervising additional personnel to support an increase in Main Replacement work for FY 2016 has been allocated to all rate classes on a per-unit basis. The throughput has been updated for the April 2015 through March 2016 period based upon the most recent forecast filed in the Company's Gas Cost Recovery filing in Docket No. 4520. Attachment 1 of this section provides the proposed ISR factors by rate class. Attachment 2 of this section provides the FY 2016 ISR bill impact associated with the rate design in Attachment 1 by rate class. For the average residential heating customer utilizing 846 therms, the cumulative impact of the FY 2016 ISR Plan will represent an annual increase of \$25.87, or 2.2%.

Line No.

FY 2016 Revenue Requirement	Rate Class	Rate Base Allocator (%)	Allocation to Rate Class (\$)	Throughput (dth)	CapEx Factor (dth)	CapEx Factor (therm)	O&M Allocation (therm)	Total ISR Factor (therm)	Uncollectible %	ISR Factor (therm)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
\$12,983,842										
\$560,000										
	Res-NH	3.73%	\$484,429	773,739	\$0.6260	0.0626	0.0014	0.0640	3.18%	\$0.0661
	Res-H	61.56%	\$7,992,612	19,160,366	\$0.4171	0.0417	0.0014	0.0431	3.18%	\$0.0445
	Small	8.19%	\$1,062,990	2,595,800	\$0.4095	0.0409	0.0014	0.0423	3.18%	\$0.0436
	Medium	13.58%	\$1,763,638	5,318,377	\$0.3316	0.0331	0.0014	0.0345	3.18%	\$0.0356
	Large LL	6.04%	\$783,832	3,029,033	\$0.2587	0.0258	0.0014	0.0272	3.18%	\$0.0280
	Large HL	2.35%	\$305,682	1,201,563	\$0.2544	0.0254	0.0014	0.0268	3.18%	\$0.0276
	XI-LL	0.77%	\$99,836	1,063,738	\$0.0938	0.0093	0.0014	0.0107	3.18%	\$0.0110
	XI-HL	3.78%	\$490,822	5,354,247	\$0.0916	0.0091	0.0014	0.0105	3.18%	\$0.0108
	Total	100.00%	\$12,983,842	38,496,863						

(a) Proposed Capital Revenue Requirement & Forecasted Annual Property Tax Recovery Mechanism (Section 3, attachment 1, page 1, line 7 + line 8)

(b) Line 2 - Proposed O&M (Section 3, attachment 1, page 1, line 1)

(c) Docket 4323, RI 2012 Rate Case

(d) Column (a) line 1 * Column (c)

(e) Page 2, column (m), line 9

(f) Column (d) / Column (e), truncated to 4 decimal places

(g) Column (d) / (Column (e)*10), truncated to 4 decimal places

(h) Column (a) line 2 / (Column (e) line 11 * 10)

(i) Column (g) + Column (h)

(j) Docket 4323, RI 2012 Rate Case

(k) Column (i) / (1- Column (j)), truncated to 4 decimal places

Forecasted Throughput April 2015 - March 2016

Line No.	Apr-15 (a)	May-15 (b)	Jun-15 (c)	Jul-15 (d)	Aug-15 (e)	Sep-15 (f)	Oct-15 (g)	Nov-15 (h)	Dec-15 (i)	Jan-16 (j)	Feb-16 (k)	Mar-16 (l)	Total (m)
1	Res-NH	83,093	55,290	37,237	28,824	27,104	30,965	46,182	85,004	118,620	122,239	111,533	773,739
2	Res-H	2,151,864	1,342,728	702,519	482,963	461,730	539,594	1,059,953	2,259,040	3,286,553	3,374,411	3,032,620	19,160,366
3	Small	285,357	169,179	63,729	51,244	56,204	61,560	114,411	299,040	489,188	512,121	448,909	2,595,800
4	Medium	580,483	351,817	198,991	167,224	171,714	207,323	310,870	614,337	856,500	892,248	796,100	5,318,377
5	Large LL	358,586	201,379	60,055	40,524	64,859	130,722	189,425	385,905	512,310	567,967	442,819	3,029,033
6	Large HL	122,401	37,546	37,149	40,531	34,245	45,929	135,341	133,650	136,206	275,321	155,301	1,201,563
7	X-Large LL	99,898	113,255	43,717	37,340	38,593	95,275	56,650	121,810	133,464	141,146	100,182	1,063,738
8	X-Large HL	513,898	361,510	335,564	423,462	462,415	378,795	402,302	490,828	552,127	604,615	447,442	5,354,247
9		4,195,580	2,632,704	1,478,960	1,272,113	1,316,865	1,490,163	2,315,135	4,389,613	6,084,967	6,490,069	5,534,905	38,496,863

Source: Company forecast

Line
No.

- (1)
- (2)
- (3)
- (4)
- (5)
- (6)
- (7)
- (8)
- (9)
- (10)
- (11)
- (12)
- (13)
- (14)
- (15)

Residential Heating Low Income:

(16)

(17)

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

(26)

(27)

(28)

(29)

(30)

[illegible]

National Grid - RI Gas
Infrastructure, Safety, and Reliability (ISR) Filing
Bill Impact Analysis with Various Levels of Consumption:

Line
No.

Residential Non-Heating:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Difference due to:						
						GCR	Base DAC	DAC	ISR	EE	LIHEAP	GET
(31)												
(32)												
(33)												
(34)												
(35)	140	\$344.30	\$337.95	\$6.35	1.9%	\$0.00	\$0.00	\$0.00	\$6.16	\$0.00	\$0.00	\$0.19
(36)	155	\$362.99	\$355.99	\$7.00	2.0%	\$0.00	\$0.00	\$0.00	\$6.79	\$0.00	\$0.00	\$0.21
(37)	171	\$382.92	\$375.21	\$7.71	2.1%	\$0.00	\$0.00	\$0.00	\$7.48	\$0.00	\$0.00	\$0.23
(38)	184	\$399.12	\$390.79	\$8.33	2.1%	\$0.00	\$0.00	\$0.00	\$8.08	\$0.00	\$0.00	\$0.25
(39)	198	\$416.56	\$407.61	\$8.95	2.2%	\$0.00	\$0.00	\$0.00	\$8.68	\$0.00	\$0.00	\$0.27
(40)	214	\$436.14	\$426.48	\$9.66	2.3%	\$0.00	\$0.00	\$0.00	\$9.37	\$0.00	\$0.00	\$0.29
(41)	228	\$454.00	\$443.67	\$10.33	2.3%	\$0.00	\$0.00	\$0.00	\$10.02	\$0.00	\$0.00	\$0.31
(42)	244	\$473.93	\$462.88	\$11.04	2.4%	\$0.00	\$0.00	\$0.00	\$10.71	\$0.00	\$0.00	\$0.33
(43)	258	\$491.33	\$479.67	\$11.66	2.4%	\$0.00	\$0.00	\$0.00	\$11.31	\$0.00	\$0.00	\$0.35
(44)	275	\$512.57	\$500.11	\$12.46	2.5%	\$0.00	\$0.00	\$0.00	\$12.09	\$0.00	\$0.00	\$0.37
(45)	288	\$528.76	\$515.75	\$13.01	2.5%	\$0.00	\$0.00	\$0.00	\$12.62	\$0.00	\$0.00	\$0.39

Average Customer

Residential Non-Heating Low Income:

				Difference due to:											
	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	GCR			Base DAC		DAC	ISR	EE	LIHEAP	GET
(46)															
(47)															
(48)															
(49)															
(50)	140	\$321.88	\$315.53	\$6.35	2.0%	\$0.00	\$0.00	\$0.00	\$6.16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.19
(51)	155	\$339.90	\$332.90	\$7.00	2.1%	\$0.00	\$0.00	\$0.00	\$6.79	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.21
(52)	171	\$359.10	\$351.39	\$7.71	2.2%	\$0.00	\$0.00	\$0.00	\$7.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.23
(53)	184	\$374.71	\$366.38	\$8.33	2.3%	\$0.00	\$0.00	\$0.00	\$8.08	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.25
(54)	198	\$391.52	\$382.57	\$8.95	2.3%	\$0.00	\$0.00	\$0.00	\$8.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.27
(55)	214	\$410.39	\$400.73	\$9.66	2.4%	\$0.00	\$0.00	\$0.00	\$9.37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.29
(56)	228	\$427.60	\$417.27	\$10.33	2.5%	\$0.00	\$0.00	\$0.00	\$10.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.31
(57)	244	\$446.80	\$435.76	\$11.04	2.5%	\$0.00	\$0.00	\$0.00	\$10.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.33
(58)	258	\$463.57	\$451.91	\$11.66	2.6%	\$0.00	\$0.00	\$0.00	\$11.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.35
(59)	275	\$484.04	\$471.58	\$12.46	2.6%	\$0.00	\$0.00	\$0.00	\$12.09	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.37
(60)	288	\$499.64	\$486.63	\$13.01	2.7%	\$0.00	\$0.00	\$0.00	\$12.62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.39

Average Customer

National Grid - RI Gas
Infrastructure, Safety, and Reliability (ISR) Filing
Bill Impact Analysis with Various Levels of Consumption:

Line
No.

C & I Small:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Difference due to:									
						GCR	Base DAC		DAC	ISR	EE	LIHEAP	GET		
(61)															
(62)															
(63)															
(64)															
(65)	880	\$1,409.56	\$1,383.88	\$25.68	1.9%	\$0.00	\$0.00	\$0.00	\$24.91	\$0.00	\$0.00	\$0.00	\$0.77		
(66)	973	\$1,515.04	\$1,486.67	\$28.36	1.9%	\$0.00	\$0.00	\$0.00	\$27.51	\$0.00	\$0.00	\$0.00	\$0.85		
(67)	1,067	\$1,620.83	\$1,589.70	\$31.12	2.0%	\$0.00	\$0.00	\$0.00	\$30.19	\$0.00	\$0.00	\$0.00	\$0.93		
(68)	1,162	\$1,725.39	\$1,691.48	\$33.91	2.0%	\$0.00	\$0.00	\$0.00	\$32.89	\$0.00	\$0.00	\$0.00	\$1.02		
(69)	1,258	\$1,825.30	\$1,788.59	\$36.71	2.1%	\$0.00	\$0.00	\$0.00	\$35.61	\$0.00	\$0.00	\$0.00	\$1.10		
(70)	Average Customer	\$1,922.00	\$1,882.57	\$39.43	2.1%	\$0.00	\$0.00	\$0.00	\$38.25	\$0.00	\$0.00	\$0.00	\$1.18		
(71)	1,446	\$2,019.47	\$1,977.29	\$42.19	2.1%	\$0.00	\$0.00	\$0.00	\$40.92	\$0.00	\$0.00	\$0.00	\$1.27		
(72)	1,542	\$2,118.43	\$2,073.47	\$44.96	2.2%	\$0.00	\$0.00	\$0.00	\$43.61	\$0.00	\$0.00	\$0.00	\$1.35		
(73)	1,635	\$2,214.35	\$2,166.65	\$47.70	2.2%	\$0.00	\$0.00	\$0.00	\$46.27	\$0.00	\$0.00	\$0.00	\$1.43		
(74)	1,730	\$2,311.30	\$2,260.81	\$50.48	2.2%	\$0.00	\$0.00	\$0.00	\$48.97	\$0.00	\$0.00	\$0.00	\$1.51		
(75)	1,825	\$2,408.25	\$2,354.99	\$53.26	2.3%	\$0.00	\$0.00	\$0.00	\$51.66	\$0.00	\$0.00	\$0.00	\$1.60		

Average Customer

C & I Medium:

		Difference due to:											
	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base DAC			DAC	ISR	EE	LIHEAP	GET
(76)													
(77)													
(78)													
(79)													
(80)	7,941	\$9,201.22	\$9,003.94	\$197.28	2.2%	\$0.00	\$0.00	\$0.00	\$191.36	\$0.00	\$0.00	\$0.00	\$5.92
(81)	8,796	\$10,098.10	\$9,879.55	\$218.55	2.2%	\$0.00	\$0.00	\$0.00	\$211.99	\$0.00	\$0.00	\$0.00	\$6.56
(82)	9,650	\$10,993.42	\$10,753.67	\$239.75	2.2%	\$0.00	\$0.00	\$0.00	\$232.56	\$0.00	\$0.00	\$0.00	\$7.19
(83)	10,505	\$11,890.24	\$11,629.25	\$260.99	2.2%	\$0.00	\$0.00	\$0.00	\$253.16	\$0.00	\$0.00	\$0.00	\$7.83
(84)	11,361	\$12,787.47	\$12,505.20	\$282.27	2.3%	\$0.00	\$0.00	\$0.00	\$273.80	\$0.00	\$0.00	\$0.00	\$8.47
(85)	12,217	\$13,684.97	\$13,381.44	\$303.54	2.3%	\$0.00	\$0.00	\$0.00	\$294.43	\$0.00	\$0.00	\$0.00	\$9.11
(86)	13,073	\$14,582.52	\$14,257.73	\$324.79	2.3%	\$0.00	\$0.00	\$0.00	\$315.05	\$0.00	\$0.00	\$0.00	\$9.74
(87)	13,928	\$15,478.80	\$15,132.76	\$346.03	2.3%	\$0.00	\$0.00	\$0.00	\$335.65	\$0.00	\$0.00	\$0.00	\$10.38
(88)	14,782	\$16,374.70	\$16,007.43	\$367.27	2.3%	\$0.00	\$0.00	\$0.00	\$356.25	\$0.00	\$0.00	\$0.00	\$11.02
(89)	15,637	\$17,270.98	\$16,882.48	\$388.49	2.3%	\$0.00	\$0.00	\$0.00	\$376.84	\$0.00	\$0.00	\$0.00	\$11.65
(90)	16,492	\$18,167.79	\$17,758.05	\$409.74	2.3%	\$0.00	\$0.00	\$0.00	\$397.45	\$0.00	\$0.00	\$0.00	\$12.29

Average Customer

**National Grid - RI Gas
Infrastructure, Safety, and Reliability (ISR) Filing
Bill Impact Analysis with Various Levels of Consumption:**

Line
No.

C & ILLF Large:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Difference due to:							
						GCR	Base DAC	DAC	ISR	EE	LIHEAP	GET	
(91)													
(92)													
(93)													
(94)													
(95)	41,066	\$46,094.43	\$45,298.54	\$795.90	1.8%	\$0.00	\$0.00	\$772.02	\$0.00	\$0.00	\$0.00	\$23.88	
(96)	45,488	\$50,823.80	\$49,942.17	\$881.63	1.8%	\$0.00	\$0.00	\$855.18	\$0.00	\$0.00	\$0.00	\$26.45	
(97)	49,910	\$55,553.26	\$54,585.97	\$967.29	1.8%	\$0.00	\$0.00	\$938.27	\$0.00	\$0.00	\$0.00	\$29.02	
(98)	54,334	\$60,284.54	\$59,231.45	\$1,053.08	1.8%	\$0.00	\$0.00	\$1,021.49	\$0.00	\$0.00	\$0.00	\$31.59	
(99)	58,757	\$65,014.88	\$63,876.07	\$1,138.81	1.8%	\$0.00	\$0.00	\$1,104.65	\$0.00	\$0.00	\$0.00	\$34.16	
(100)	63,179	\$69,744.34	\$68,519.87	\$1,224.47	1.8%	\$0.00	\$0.00	\$1,187.74	\$0.00	\$0.00	\$0.00	\$36.73	
(101)	67,600	\$74,472.63	\$73,162.47	\$1,310.16	1.8%	\$0.00	\$0.00	\$1,270.86	\$0.00	\$0.00	\$0.00	\$39.30	
(102)	72,023	\$79,203.00	\$77,807.12	\$1,395.89	1.8%	\$0.00	\$0.00	\$1,354.01	\$0.00	\$0.00	\$0.00	\$41.88	
(103)	76,447	\$83,934.90	\$82,453.26	\$1,481.64	1.8%	\$0.00	\$0.00	\$1,437.19	\$0.00	\$0.00	\$0.00	\$44.45	
(104)	80,870	\$88,665.24	\$87,097.86	\$1,567.37	1.8%	\$0.00	\$0.00	\$1,520.35	\$0.00	\$0.00	\$0.00	\$47.02	
(105)	85,292	\$93,394.62	\$91,741.57	\$1,653.05	1.8%	\$0.00	\$0.00	\$1,603.46	\$0.00	\$0.00	\$0.00	\$49.59	

C & IHLF Large:

		Difference due to:										
	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg						GET	
						GCR	Base DAC	DAC	ISR	EE		LIHEAP
(106)												
(107)												
(108)												
(109)												
(110)	50,411	\$50,761.98	\$49,800.54	\$961.44	1.9%	\$0.00	\$0.00	\$932.60	\$0.00	\$0.00	\$0.00	\$28.84
(111)	55,841	\$55,995.61	\$54,930.60	\$1,065.01	1.9%	\$0.00	\$0.00	\$1,033.06	\$0.00	\$0.00	\$0.00	\$31.95
(112)	61,273	\$61,230.98	\$60,062.37	\$1,168.61	1.9%	\$0.00	\$0.00	\$1,133.55	\$0.00	\$0.00	\$0.00	\$35.06
(113)	66,699	\$66,461.12	\$65,189.03	\$1,272.09	2.0%	\$0.00	\$0.00	\$1,233.93	\$0.00	\$0.00	\$0.00	\$38.16
(114)	72,129	\$71,694.70	\$70,319.04	\$1,375.66	2.0%	\$0.00	\$0.00	\$1,334.39	\$0.00	\$0.00	\$0.00	\$41.27
(115)	77,558	\$76,927.40	\$75,448.20	\$1,479.21	2.0%	\$0.00	\$0.00	\$1,434.83	\$0.00	\$0.00	\$0.00	\$44.38
(116)	82,989	\$82,161.13	\$80,578.34	\$1,582.79	2.0%	\$0.00	\$0.00	\$1,535.31	\$0.00	\$0.00	\$0.00	\$47.48
(117)	88,416	\$87,392.16	\$85,705.89	\$1,686.27	2.0%	\$0.00	\$0.00	\$1,635.68	\$0.00	\$0.00	\$0.00	\$50.59
(118)	93,847	\$92,626.65	\$90,836.77	\$1,789.88	2.0%	\$0.00	\$0.00	\$1,736.18	\$0.00	\$0.00	\$0.00	\$53.70
(119)	99,275	\$97,858.54	\$95,965.13	\$1,893.41	2.0%	\$0.00	\$0.00	\$1,836.61	\$0.00	\$0.00	\$0.00	\$56.80
(120)	104,705	\$103,092.14	\$101,095.18	\$1,996.96	2.0%	\$0.00	\$0.00	\$1,937.05	\$0.00	\$0.00	\$0.00	\$59.91

**National Grid - RI Gas
Infrastructure, Safety, and Reliability (ISR) Filing
Bill Impact Analysis with Various Levels of Consumption:**

Line
No.

C & I LLF Extra-Large:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Difference due to:							
						GCR	Base DAC	DAC	ISR	EE	LIHEAP	GET	
(121)													
(122)													
(123)													
(124)													
(125)	174,357	\$162,111.92	\$160,637.95	\$1,473.97	0.9%	\$0.00	\$0.00	\$0.00	\$1,429.75	\$0.00	\$0.00	\$0.00	\$44.22
(126)	193,136	\$179,004.43	\$177,371.72	\$1,632.71	0.9%	\$0.00	\$0.00	\$0.00	\$1,583.73	\$0.00	\$0.00	\$0.00	\$48.98
(127)	211,912	\$195,894.59	\$194,103.15	\$1,791.43	0.9%	\$0.00	\$0.00	\$0.00	\$1,737.69	\$0.00	\$0.00	\$0.00	\$53.74
(128)	230,688	\$212,785.24	\$210,835.10	\$1,950.14	0.9%	\$0.00	\$0.00	\$0.00	\$1,891.64	\$0.00	\$0.00	\$0.00	\$58.50
(129)	249,466	\$229,676.97	\$227,568.06	\$2,108.91	0.9%	\$0.00	\$0.00	\$0.00	\$2,045.64	\$0.00	\$0.00	\$0.00	\$63.27
(130)	268,243	\$246,567.79	\$244,300.15	\$2,267.64	0.9%	\$0.00	\$0.00	\$0.00	\$2,199.61	\$0.00	\$0.00	\$0.00	\$68.03
(131)	287,018	\$263,457.21	\$261,030.86	\$2,426.35	0.9%	\$0.00	\$0.00	\$0.00	\$2,353.56	\$0.00	\$0.00	\$0.00	\$72.79
(132)	305,796	\$280,349.55	\$277,764.47	\$2,585.08	0.9%	\$0.00	\$0.00	\$0.00	\$2,507.53	\$0.00	\$0.00	\$0.00	\$77.55
(133)	324,573	\$297,240.52	\$294,496.69	\$2,743.84	0.9%	\$0.00	\$0.00	\$0.00	\$2,661.52	\$0.00	\$0.00	\$0.00	\$82.32
(134)	343,350	\$314,131.41	\$311,228.87	\$2,902.54	0.9%	\$0.00	\$0.00	\$0.00	\$2,815.46	\$0.00	\$0.00	\$0.00	\$87.08
(135)	362,127	\$331,022.34	\$327,961.04	\$3,061.30	0.9%	\$0.00	\$0.00	\$0.00	\$2,969.46	\$0.00	\$0.00	\$0.00	\$91.84

C & I HLF Extra-Large:

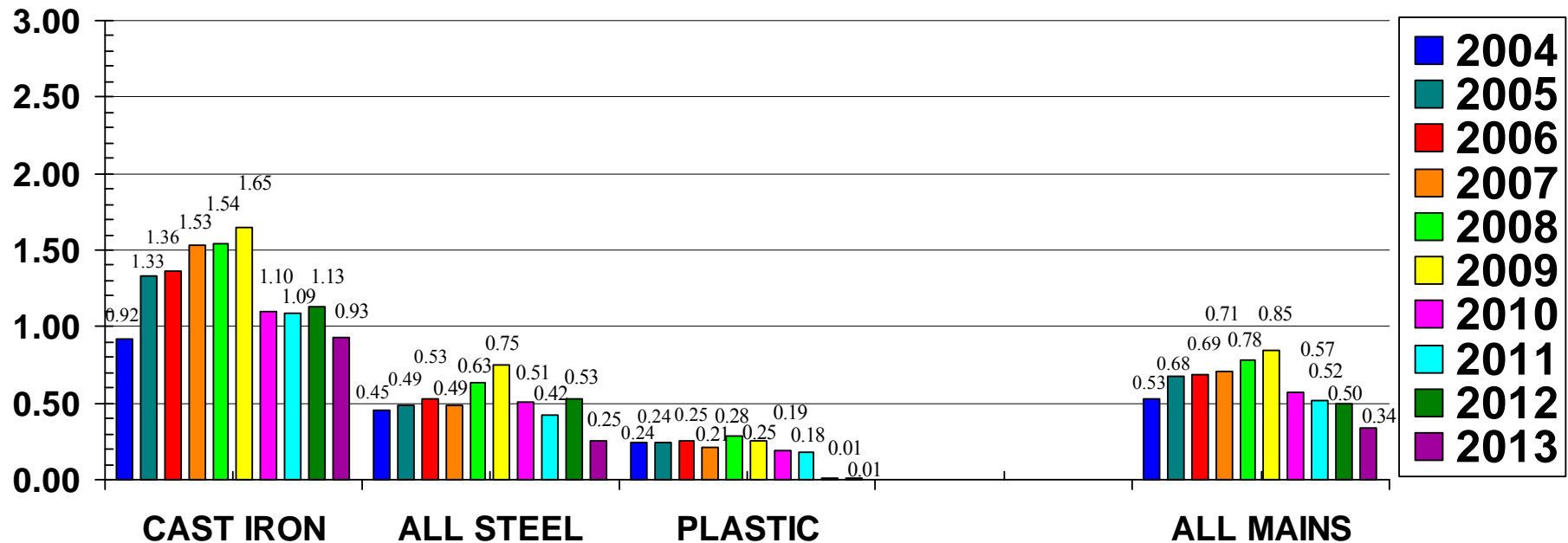
	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Difference due to:										
						GCR	Base DAC		DAC	ISR	EE	LIHEAP	GET			
(136)																
(137)																
(138)																
(139)																
(140)	447,421	\$388,588.50	\$385,221.32	\$3,367.19	0.9%	\$0.00	\$0.00	\$0.00	\$3,266.17	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$101.02	
(141)	495,605	\$429,869.16	\$426,139.38	\$3,729.78	0.9%	\$0.00	\$0.00	\$0.00	\$3,617.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$111.89	
(142)	543,789	\$471,150.59	\$467,058.16	\$4,092.43	0.9%	\$0.00	\$0.00	\$0.00	\$3,969.66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$122.77	
(143)	591,972	\$512,430.49	\$507,975.47	\$4,455.02	0.9%	\$0.00	\$0.00	\$0.00	\$4,321.37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$133.65	
(144)	640,155	\$553,710.35	\$548,892.69	\$4,817.66	0.9%	\$0.00	\$0.00	\$0.00	\$4,673.13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$144.53	
(145)	688,340	\$594,992.23	\$589,811.92	\$5,180.31	0.9%	\$0.00	\$0.00	\$0.00	\$5,024.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$155.41	
(146)	736,523	\$636,272.44	\$630,729.53	\$5,542.91	0.9%	\$0.00	\$0.00	\$0.00	\$5,376.62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$166.29	
(147)	784,708	\$677,553.89	\$671,648.37	\$5,905.53	0.9%	\$0.00	\$0.00	\$0.00	\$5,728.36	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$177.17	
(148)	832,891	\$718,834.55	\$712,566.40	\$6,268.14	0.9%	\$0.00	\$0.00	\$0.00	\$6,080.10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$188.04	
(149)	881,074	\$760,114.41	\$753,483.62	\$6,630.78	0.9%	\$0.00	\$0.00	\$0.00	\$6,431.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$198.92	
(150)	929,259	\$801,396.64	\$794,403.24	\$6,993.39	0.9%	\$0.00	\$0.00	\$0.00	\$6,783.59	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$209.80	
Average Customer																

2013 SYSTEM INTEGRITY REPORT

RI MAIN LEAK "RATES" COMPARISON BY MATERIAL

EXCLUDING Damages

LEAK REPAIRS
 PER MILE OF MAIN



MATERIAL

COUNTING EACH INDIVIDUAL REPAIR AS A LEAK

**THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. _____
RE: FY 2016 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN
WITNESS: MELISSA A. LITTLE**

PRE-FILED DIRECT TESTIMONY

OF

MELISSA A. LITTLE

December 23, 2014

Table of Contents

I.	Introduction, Qualifications, and Purpose of Testimony	1
II.	Gas Infrastructure, Safety, and Reliability Plan Revenue Requirement	2

1 **I. INTRODUCTION**

2 **Q. Please state your full name and business address.**

3 A. My name is Melissa A. Little, and my business address is 40 Sylvan Road, Waltham,
4 Massachusetts 02451.

5 **Q. Please state your position.**

6 A. I am a Lead Specialist for New England Revenue Requirements in the Regulation and
7 Pricing department of National Grid USA Service Company, Inc. (Service Company).
8 Service Company provides engineering, financial, administrative, and other technical
9 support to subsidiary companies of National Grid USA (National Grid). My current
10 duties include revenue requirements responsibilities for National Grid's electric and gas
11 distribution activities in New England, including the gas operations of The Narragansett
12 Electric Company d/b/a National Grid (Narragansett or the Company).

13 **Q. Please describe your education and professional experience.**

14 A. In 2000, I earned a Bachelor of Science degree in Accounting Information Systems from
15 Bentley College (now Bentley University) in Waltham, Massachusetts. In September
16 2000, I joined PricewaterhouseCoopers LLP in Boston, Massachusetts where I worked as
17 an associate and senior associate in the Assurance practice. In November 2004, I joined
18 National Grid in the Service Company as an analyst and then senior analyst in the general
19 accounting group. After the merger of National Grid and KeySpan in 2007, I joined the
20 Regulation and Pricing department as a senior analyst in the Regulatory Accounting
21 function, also supporting the Niagara Mohawk Power Corporation revenue requirement

1 team. After moving to the New England revenue requirement team, I was promoted to
2 my current position in July 2011.

3 **Q. Have you previously filed testimony or testified before the Rhode Island Public**
4 **Utilities Commission?**

5 A. Yes, I submitted pre-filed testimony in the Company's annual Revenue Decoupling
6 Adjustment factor filing for its gas operations.

7 **Q. What is the purpose of your testimony?**

8 A. The purpose of my testimony is to sponsor Section 3 of the Fiscal Year (FY) 2016 Gas
9 Infrastructure, Safety, and Reliability Plan (ISR Plan), which describes the calculation of
10 the Company's revenue requirement for FY 2016 in Attachment 1 of that section. This
11 revenue requirement is based on the Gas ISR Plan capital investment and associated
12 operation and maintenance (O&M) expenses described in the testimony of Mr. David G.
13 Iseler.

14 **II. ISR PLAN REVENUE REQUIREMENT**

15 **Q. Please summarize the revenue requirement for the Company's FY 2016 Gas ISR**
16 **Plan.**

17 A. As shown on Page 1, Column (b) of the attachment, the Company's FY 2016 Gas ISR
18 Plan revenue requirement totals \$13,543,842, or an incremental \$9,151,362 over the
19 amount currently being billed for the Gas ISR Plan and consists of the following
20 elements: (1) \$560,000 of incremental O&M expense for the hiring, training and
21 supervision of additional personnel to support the increase in leak-prone pipe

1 replacement for FY 2016, (2) a revenue requirement of \$2,820,049 comprised of the
2 Company's return, taxes and depreciation expense associated with FY 2016 proposed
3 non-growth ISR capital investment in gas utility infrastructure of \$77,942,000 plus the
4 FY 2016 revenue requirement on incremental non-growth ISR capital investment of
5 \$4,852,208, \$1,727,537, (\$320,133), and \$486,596 for FY 2015, FY 2014, FY 2013, and
6 FY 2012 incremental investments, respectively, and (3) FY 2016 property tax expense of
7 \$3,417,586 as shown on Page 13 of Attachment 1. Importantly, these amounts will be
8 trued up to actual O&M and capital investment activity after the conclusion of the FY,
9 with rate adjustments for the revenue requirement differences incorporated in future ISR
10 filings.

11 For illustration purposes only, Column (c) of Page 1 provides the FY 2017 revenue
12 requirement. A detailed description of the calculation of the Company's revenue
13 requirement for FY 2016 can be found in Section 3 of the FY 2016 Gas ISR Plan.

14 **Q. Does this conclude your testimony?**

15 A. Yes, it does.

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. _____
RE: FY 2016 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN
WITNESS: SUHILA NOURI NUTILE

PRE-FILED DIRECT TESTIMONY

OF

SUHILA NOURI NUTILE

December 23, 2014

Table of Contents

I. Introduction1

II. Rate Design2

III. ISR Rate Factors4

IV. Bill Impacts4

1 **I. INTRODUCTION**

2 **Q. Please state your names and business address.**

3 A. My name is Suhila Nouri Nutile, and my business address is 40 Sylvan Road, Waltham,
4 Massachusetts 02451.

6 **Q. By whom are you employed and in what capacity?**

7 A. I am a Senior Analyst in the New England Pricing group of the Regulation and Pricing
8 department of National Grid USA Service Company, Inc. (Service Company). Service
9 Company provides engineering, financial, administrative, and other technical support to
10 subsidiary companies of National Grid USA. My responsibilities include the design,
11 implementation, and administration of rates and tariffs for the gas division of The
12 Narragansett Electric Company d/b/a National Grid (Narragansett or the Company).

14 **Q. Please provide your educational background.**

15 A. I received a Bachelor of Science in Mathematics with a concentration in Computer
16 Science from the University of New Hampshire in Durham, NH and a Master of Science
17 in Financial Mathematics from Worcester Polytechnic Institute in Worcester, MA.

19 **Q. Please provide your professional background.**

1 A. I was employed by John Hancock in Boston from July 2006 through November 2012 as a
2 Senior Analyst in the Pension Pricing Department. Beginning in November 2012, I was
3 employed by Computer Science Corporation as a Lead Analyst in the Cloud Business
4 Unit. In these roles, I designed and developed pricing strategies and provided cost
5 analyses. In October 2014, I became a Senior Analyst at National Grid in Regulation and
6 Pricing, the position I hold today.

7
8 **Q. What is the purpose of your testimony?**

9 A. The purpose of my testimony is to sponsor Section 4 and Section 5 of the Fiscal Year
10 (FY) 2016 Gas Infrastructure, Safety, and Reliability (ISR) Plan, which describe the rate
11 design calculations of the FY 2016 ISR factors and the customer bill impacts of the
12 proposed ISR factor.

13
14 **II. RATE DESIGN**

15 **Q. Please summarize the rate design used to develop the ISR factors presented as part**
16 **of this filing.**

17 A. Like the revenue requirement, the proposed ISR Plan rate design for FY 2016 is based on
18 the revenue requirement of incremental capital investment in excess of capital investment
19 that has been reflected in rate base in the Company's latest base rate case in Docket No.
20 4323, as well as incremental O&M and a property tax expense as described in Section 2
21 of this ISR Plan. The Company allocated the revenue requirement associated with the

1 capital investment to each rate class based on the rate base allocator from the Company's
2 Settlement agreement in Docket No. 4323. The Company allocated the proposed
3 incremental O&M expense described by Company Witness, Mr. David Iseler, to all rate
4 classes volumetrically, such that the Company proposed to assess all rate classes the same
5 per-unit factor. The Company also utilized the most recently available forecasted
6 throughput for the period April 2015 through March 2016 that had been developed for the
7 Company's 2014-2015 Gas Cost Recovery (GCR) filing (Docket No. 4520). That data
8 was compiled by rate class and summarized as set forth in Section 4, Attachment 1, Page
9 2, of the Gas ISR Plan. As shown in Section 4, Attachment 1, Page 1, of the Gas ISR
10 Plan, the Company divided the allocated rate class revenue requirement, as multiplied by
11 the rate base allocation, by the forecasted throughput for each rate class to develop
12 separate ISR capital factors per rate class on a per therm basis. Finally, the Company
13 divided the total incremental O&M expense of \$560,000 by the total forecasted
14 throughput to derive the O&M factor for all rate classes on a per therm basis. The
15 Company then adjusted each rate class's total ISR factor (capital and O&M factors) to
16 reflect the 3.18 percent uncollectible factor from the Amended Settlement Agreement
17 approved by the Commission in Docket No. 4323.

III. ISR FACTORS

Q. Please provide the ISR rate factors proposed by the Company.

A. The ISR factors proposed by the Company are shown in the table below and in Section 4, Attachment 1.

Table 3-1 FY 2016 ISR factors per rate class

Rate Class	ISR Rate (\$/therm)
Res- NH	\$0.0661
Res-H	\$0.0445
Small C&I	\$0.0436
Medium C&I	\$0.0356
Large LL	\$0.0280
Large HL	\$0.0276
XL-LL	\$0.0110
XL-HL	\$0.0108

*Rates include uncollectible allowance.

The same factors noted above for Residence Heating and Residence Non-Heating customers would also apply to each of the Low-Income customer rate classes.

IV. BILL IMPACTS

Q. Please describe the impact of the proposed ISR factors on customers' bills.

A. For the average residential heating customer using 846 therms annually, the ISR factor will result in an annual bill increase of \$25.87, or 2.2 percent¹. The annual impact of the

¹ Please note that the bill impact includes the Rhode Island Gross Earnings Tax of three percent.

1 proposed ISR factors for the period April 1, 2015 to March 31, 2016 for all rate classes
2 are shown in Section 5, Bill Impacts, of the Gas ISR Plan.

3

4 **Q. Does this conclude your testimony?**

5 A. Yes, it does.