National Grid

The Narragansett Electric Company

Gas Infrastructure, Safety, and Reliability Plan FY 2013 Proposal

December 29, 2011

Docket No. _____

Submitted to:
Rhode Island Public Utilities Commission

Submitted by:

nationalgrid

Letter

Thomas R. Teehan
Senior Counsel

December 29, 2011

VIA HAND DELIVERY & ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02889

RE: National Grid's Proposed FY 2013 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 (the "Gas ISR Plan" or "Plan") for fiscal year 2013 [2]. This proposed Gas ISR Plan is designed to enhance the safety and reliability of the Company's Rhode Island natural gas delivery system. The proposed Plan was submitted to the Division of Public Utilities and Carriers ("Division") for review. The Company received and responded to discovery requests from the Division and has met with the Division's representatives regarding this proposed Plan. The Division has agreed to the overall spending portion of this plan, but will continue to review and discuss particular Plan provisions as the Commission conducts its proceeding in this matter.

The ISR Plan is designed to protect and improve the gas delivery system through proactively replacing leak-prone gas mains and services, upgrading the system's pressure regulating systems, responding to emergency leak situations, 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 2013 as well as the proposed targeted spending levels for each work category. This filing includes the pre-filed direct testimony of three witnesses: Ms. Laurie T. Brown, whose testimony introduces the Plan document; Mr. William R. Richer, whose testimony explains the Company's revenue requirement calculation; and Mr. John F. Nestor, III, whose testimony describes the rate design and calculation of the ISR rate factors, and provides the customer bill impacts of the proposed ISR factor rates.

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[1] The Narragansett Electric Company d/b/a National Grid (hereinafter referred to as "National Grid" or the "Company").
[2] The Gas ISR Plan is submitted in compliance with the provisions of R.I.G.L. §39-1-27.7.1.

Luly Massaro
FY 2013 Gas ISR Plan
December 29, 2011

For the average residential heating customer using 922 therms, the ISR rate will result in an annual rate increase of $19.25, or 1.4 percent.

This ISR Plan presents an opportunity to facilitate and encourage investment in our 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 feel free to contact me at (401) 784-7667.

Very truly yours,

Thomas R. Teehan

Enclosure

cc: Steve Scialabba
Leo Wold, Esq.
James Lanni

Testimony of
Laurie T. Brown

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
R.I.P.U.C. DOCKET NO. _____
RE: FY 2013 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN
WITNESS: LAURIE T. BROWN

DIRECT TESTIMONY

OF

LAURIE T. BROWN

December 29, 2011

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I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR FULL NAME, BUSINESS ADDRESS, AND TITLE.

A. My name is Laurie T. Brown and my business address is 300 Erie Blvd. West, Syracuse, NY 13202. I am the Director, Network Strategy - Gas, with responsibilities that relate to the Rhode Island gas operations of The Narragansett Electric Company d/b/a National Grid ("National Grid" or the "Company").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND TRAINING.

A. I received my Associates of Science in Engineering Science from Canton College in 1980 and a Bachelor of Science in Civil and Environmental Engineering from Clarkson University in 1982. I have worked for Niagara Mohawk Power Corporation and now National Grid for 29 years in various technical positions. I began my career as a Quality Assurance Engineer at Nine Mile Point Nuclear Plant in 1982, worked as an Engineer in Gas Research and Development, and later as an Engineer in Niagara Mohawk's Gas Engineering Department. I was then promoted to the Gas Engineering Supervisor, Gas Operations Support Manager, and then Lab and Testing Services Director. At the time of National Grid's acquisition of the Rhode Island regulated gas assets of the New England Gas Company, a division of Southern Union Company, I moved back to the gas line of business as Director, Operations Regulatory Compliance before taking my current position of Director, Network Strategy - Gas in 2011.

Q. ARE YOU A MEMBER OF ANY PROFESSIONAL ORGANIZATIONS OR ASSOCIATIONS?

A. Yes. I am currently a member of the American Gas Association, a member of the Northeast Gas Association, and a senior member of the Society of Women Engineering. I also serve on the Board of Directors for Dig Safely New York, the one-call center for upstate New York, and I serve as the Vice President for that Board of Directors.

Q. PLEASE DESCRIBE ANY TESTIMONY THAT YOU HAVE GIVEN RELATIVE TO THE COMPANY'S GAS OPERATIONS IN RHODE ISLAND.

A. I have submitted written testimony and have testified before the Division of Public Utilities and Carriers ("Division") regarding the Company's Petition for Amendment of Meter Accuracy and Testing Requirements Prescribed Under Section VII of Rules Prescribing Standards for Electric Utilities (Docket No. D-04-16).

Q. PLEASE BRIEFLY DESCRIBE YOUR CURRENT AREAS OF RESPONSIBILITY FOR NATIONAL GRID.

A. I am responsible for the gas capital investment for Rhode Island gas operations and interface between the Jurisdictional President and Network Strategy organization at National Grid.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to describe the Company's proposed Infrastructure Safety and Reliability ("ISR") Plan for Fiscal Year ("FY") 2013 ("ISR Plan" or the "Plan"). [1] Through my testimony, I provide the Rhode Island Public Utilities Commission ("Commission") with Exhibit 1, the Company's proposed FY 2013 Gas ISR Plan, which details the work to be done under the proposed ISR Plan and the anticipated capital investments associated with that work. Mr. William R. Richer is providing testimony on the calculation of the revenue requirement impact associated with the Company's proposed FY 2013 ISR Plan, and Mr. John F. Nestor, III, is providing testimony relative to (1) how the rate design was established for the ISR mechanism; (2) the calculation of the ISR rate factors; and (3) the customer bill impacts of the proposed ISR factor rates.

III. OVERVIEW

Q. HOW WAS THE ISR PLAN PREPARED?

A. The Company's FY 2013 ISR Plan was prepared by the Company and submitted to the

[1] Pursuant to Rhode Island statutory provisions, the Company is required to annually file an infrastructure , safety and reliability spending plan with the Commission for review and approval. (R.I.G.L. §39-1-27.7.1). In addition to budgeted spending, the annual ISR Plan is to contain a reconcilable allowance for the anticipated capital investments and other spending for the upcoming fiscal year. Because the Company's FY 2013 runs from April 1, 2012 through March 31, 2013, the proposed ISR Plan would be for effect April 1, 2013.

Division for review. The Company received and responded to discovery requests from the Division and had met with the Division's representatives regarding this proposed Plan. The Division has agreed to the spending portion of this Plan, and will continue to review particular Plan provisions as the Commission conducts its proceeding in this matter. The proposed ISR Plan will allow the Company to meet state and federal safety and reliability requirements and to maintain its gas distribution system in a safe and reliable condition. The FY 2013 ISR Plan should improve the safety and reliability of the Company's gas system for the immediate and long-term benefit of Rhode Island's natural gas customers.

Q. WHAT IS THE ISR PLAN DESIGNED TO DO?

A. 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, 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 benefit Rhode Island gas customers. The Company now submits this plan to the Commission for final review and approval.[2]

[2] Pursuant to R.I.G.L. §39-1-27.7.1(d), the Company and the Division are to work together over the course of 60 days in an attempt to reach an agreement on a proposed plan, which would then be submitted for Commission review and approval.

Q. ARE YOU SPONSORING ANY EXHIBITS THROUGH YOUR TESTIMONY?

A. The proposed FY 2013 Gas ISR Plan document is attached as Exhibit 1 to my testimony. It is organized as follows:

Section 1 – Introduction and Summary

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

Section 3 – Revenue Requirement Calculation

Section 4 – Rate Design

Section 5 – Bill Impacts

As noted above, Mr. Richer is testifying to and sponsoring the revenue requirement calculation included in Section 3. Mr. Nestor is testifying to and sponsoring rate design and bill impacts outlined in Sections 4 and 5.

Q. WHAT TYPES OF INFRASTRUCTURE, SAFETY, AND RELIABILITY WORK DOES THE PROPOSED ISR PLAN INCLUDE?

A. The Plan seeks not only to maintain the system, but also to proactively upgrade its condition to head off problems before they arise. A safe and reliable gas delivery system in Rhode Island is essential to the health, safety, and well-being of its citizens and is foundational to maintaining a healthy economy and continuing to attract new residents and businesses. The Commission embarked on a course of addressing Rhode Island's aging gas infrastructure in 2008, with the establishment of the Accelerated Replacement

Plan ("ARP"). In addition to the type of infrastructure safety, and reliability work performed under the ARP, the ISR Plan contains spending related to safety and reliability for public works, mandated programs, special projects, and reliability programs. Included in the ISR Plan document is a description of the Company's proposed budget for capital investments for FY 2013 and a capital forecast for FY 2013 through FY 2017.

IV. CAPITAL INVESTMENT PLAN

Q. WHAT LEVELS OF SPENDING ARE PROPOSED IN THE ISR PLAN?

A. For FY 2013, the Company proposes ISR capital investments totaling $61.89 million. The ISR Plan is broken down into categories of programs designed to maintain the safety and reliability of the Company's gas delivery infrastructure. For each program category in the Plan, the Company proposes the following levels of spending:

- $37.27 million for programs including proactive Main Replacement and Service Replacement programs;
- $1.02 million for Reactive Main Replacement;
- $1.79 million for Public Works programs;
- $12.13 million for Mandated programs, including capital leak repairs, meter replacements, and cathodic protection;
- $8.99 million for Gas System Reliability, including work relative to System Automation and Gas Control, Pressure Regulating Facilities (including Heater Program and Control Line Integrity work), System Reliability Enhancement, Water Intrusion Program, and Valve installation/replacement.
- $0.69 million for Special Projects, including work to install new main to aid in the economic development of Downtown Providence, related to the relocation of I-195.

Q. IN YOUR OPINION, DOES THE GAS ISR PLAN FULFILL THE REQUIREMENTS ESTABLISHED IN RELATION TO THE SAFETY AND RELIABILITY OF THE COMPANY'S GAS DISTRIBUTION SYSTEM IN RHODE ISLAND?

A. Yes. The Gas ISR Plan for FY 2013 is designed to establish the capital investments in Rhode Island that are necessary to meet the needs of its customers and maintain the overall safety and reliability of the Company's Rhode Island gas distribution system.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Exhibit 1 - LTB
Gas ISR Plan FY2013

Exhibit 1 - LTB
Section 1
Intro. & Summary

National Grid

The Narragansett Electric Company

Gas Infrastructure, Safety, and Reliability Plan FY 2013 Proposal

December 29, 2011

Submitted to:
Rhode Island Public Utilities Commission

Submitted by:
nationalgrid

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Introduction and Summary
FY 2013 Proposal

National Grid [1] has developed the following proposed fiscal year ("FY") 2013 gas infrastructure, safety, and reliability ("Gas ISR") plan (the "Gas ISR Plan" or "Plan") in compliance with Rhode Island's law providing 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 Plan was submitted to the Division of Public Utilities and Carriers ("Division") for review. The Company received and responded to discovery requests from the Division and has met with the Division's representatives regarding this proposed Plan. The Division has agreed to the overall spending portion of this Plan, but will continue to review and discuss particular Plan provisions as the Commission conducts its proceeding in this matter. The proposed Gas ISR Plan addresses capital spending on gas infrastructure and other costs relating to maintaining the safety and reliability of the gas distribution system. The proposed Plan that the Company is submitting for its gas distribution operations was submitted to the Division and reviewed. The ISR Plan is designed to maintain and upgrade the Company's gas delivery system through proactively replacing leak-prone gas mains and services, upgrading the system's pressure regulating systems, responding to emergency leak situations, and addressing conflicts that arise out of public works

[1] The Narragansett Electric Company d/b/a National Grid (hereinafter referred to as "National Grid" or the "Company").

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

This Introduction and Summary presents an overview of the proposed FY 2013 Plan for the statutory categories of costs, the resulting FY 2013 revenue requirement associated with the proposed Gas ISR Plan, a rate design and ISR factors, and the estimated typical bill impacts resulting from the illustrative rate design.

The proposed Gas ISR Plan describes the Company's multi-year plan upon which its FY 2013 Plan is based, and it describes the system safety and reliability activities and 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.

As envisioned in the legislation, after the end of the fiscal year, the Company would 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

[2] R.I.G.L. §39-1-27.7.1, *An Act Relating to Public Utilities and Carriers – Revenue Decoupling*.
[3] Pursuant to R.I.G.L. §39-1-27.7.1(d), the Company and the Division are to work together over the course of 60 days in an attempt to reach an agreement on a proposed plan, which would then be submitted for Commission review and approval.

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 Commission on the progress of its Gas ISR programs and, at the time it makes its reconciliation and rate adjustment filing described below, an annual report on the prior fiscal year's activities. The Company is cognizant that, 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 2013 level of capital investment provided in the Company's proposed Gas ISR Plan to maintain the safety and reliability of its gas delivery infrastructure is $61.89 million. A description of the Company's proposed capital investment plan for FY 2013 is provided in Section 2. Section 3 contains the revenue requirement description and calculations. Section 4 contains the proposed rate design and Section 5 provides a calculation of estimated typical bill impacts by rate class.

Gas Capital Investment Plan

The Company's proposed gas capital investment plan contained in Section 2 summarizes capital investments in terms of the following key categories: Main Replacements and Service Replacements, Reactive Main Replacements, Public Works, Mandated Programs, and Gas System Reliability. Additionally, the proposed FY 2013 Gas ISR Plan includes a new category for Special Projects. Section 2 itemizes the

proposed activities by sub-categories and provides budgets for capital investment. The Company proposes that capital investments be recovered in a manner consistent with the calculation of the rate base in Docket No. 3943. The Company has included its capital budget, identified the relevant projects that would be part of the FY 2013 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 2013 Plan would be incorporated into that longer-term planning approach.

Revenue Requirement

Based upon the estimated amounts for the proposed Plan, the Company has provided a calculation of the proposed revenue requirement resulting from the proposed FY 2013 capital investment plan. Section 3 contains a description of the revenue requirement model and an illustrative calculation for FY 2013. This calculation would form the basis for the Gas ISR rate adjustment, which would become effective April 1, 2012, upon Commission approval. 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 Commission in the Company's last general rate case and, going forward, it would change as the Commission may approve changes to the rate of return 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

The revenue requirement calculated under the proposed Gas ISR Plan is appropriately allocated to the Company's rate classes. For purposes of rate design, the revenue requirement associated with the capital investment is allocated to rate classes based upon the most recently approved rate base allocator in the Company's last general rate case. For rate classes, the allocated revenue requirement is divided by the applicable fiscal year forecasted therm deliveries for each rate class, arriving at a per-therm factor unique to each rate class. Other related costs mutually agreed upon between the Division and the Company would be allocated to all rate classes on a consistent per-unit basis. The proposed rate design is contained in Section 4.

Bill Impacts

The estimated typical bill impacts associated with the rate design contained in Section 4 are provided in Section 5. As noted above, because the Company proposes to reconcile the actual capital investment and other expenses approved by the Commission as part of its annual DAC filing, the Company has redesigned its bill impact summary to include both a base DAC rate and an ISR DAC rate. This modification provides a separate break out of the billing impact of the Gas ISR Plan. As shown in Section 5, the

bill impact of the Gas ISR Plan for the average residential heating customer for the period April 1, 2012 to March 2013 would be $19.25 or 1.4 percent.

Exhibit 1 - LTB
Section 2
Gas Capital Plan

Gas Capital Investment Plan
FY 2013 Proposal

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

Background

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

As the legislation recognizes, it is critical that the Company remain vigilant with respect to investing in its infrastructure and have the appropriate and timely cost recovery to do so, in order to continue to provide safe and reliable gas delivery service to

[4] The Company delivers natural gas to about 248,000 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 over 3,000 miles of mains and over 186,000 services.

customers. To that end, the Company is outlining the proposed FY 2013 Plan[5] identifying the capital spending it expects to place into service during FY 2013.

Attachment 1 contains a description of the proposed budget for capital investment plan for FY 2013. Attachment 2 contains a capital forecast for FY 2013 through FY 2017. The ISR Plan proposes to invest a total of $71.31 million, $61.89 million of which would be included in the FY 2013 Gas ISR Plan designed to maintain the safety and reliability of its gas delivery infrastructure. [6] Attachment 3 contains the FY 2012 capital Budget filed in the FY 2012 ISR Plan, the FY 2012 Forecast through Q1 2012 and the FY 2013 Budget. As set forth on Attachment 1, of the $61.89 million that the Company proposes for its FY 2013 Gas ISR Plan spending, the Company proposes the following levels of spending for each category of programs:

[5] FY 2013 is defined as the twelve months ending March 31, 2013.
[6] From the $71.31 million of total investment, the Company would remove $9.42 million of projected growth capital spending.

- $37.27 million for programs including proactive Main Replacement and Service Replacement programs;
- $1.02 million for Reactive Main Replacement;
- $1.79 million for Public Works programs;
- $12.13 million for Mandated programs, including capital leak repairs, meter replacements, and cathodic protection;
- $8.99 million for Gas System Reliability, including work relative to System Automation and Gas Control, Pressure Regulating Facilities (including Heater Program, and Control Line Integrity work), System Reliability Enhancement, Water Intrusion Program, and Valve installation/replacement.
- $0.69 million for Special Projects, including work to install new main to aid in the economic development of Downtown Providence, related to the relocation of I-195.

The Company is excluding from the proposed FY 2013 Gas ISR Plan the remaining $9.4 million for growth spending.

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

Description of Large Programs and Projects

The proposed FY 2013 Gas ISR Plan is comprised of several programs that account for the total amount of plan spending for FY 2013. Those programs are described in detail below:

A. Main Replacement Program and Service Replacement Program

The value 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 Commission. For FY 2013, the Company forecasts spending $33.4 million on its main replacement program and $3.9 million on the service replacement program for a total spend of $37.27 million on these two programs.

B. Reactive Main Replacement

The Company proposes to expand its main replacement category to include $1.0 million in Reactive Main Replacement. This category of work consists of emergency main replacements due to leaks or other unplanned work where main condition dictates immediate replacement. Reactive Main Replacement would account for approximately 1 ½ miles of emergency main replacements.

C. Public Works

The purpose of the Public Works program is to address existing gas infrastructure conflicts, as appropriate, 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. Integration of the Company's Integrity programs with the public works process has yielded increased system reliability, system integrity, and optimized capital spending through coordination with planned public works projects. While the primary purpose of Public Works spending is to address direct conflict with existing gas infrastructure, Public Works spending provides the opportunity to coordinate other system improvement work, such as replacement of leak-prone pipe, system reliability upgrades, internal sealing and lining projects, elimination of redundant main, and regulator station upgrades.

The Company will manage multiple projects to address the dynamic nature of the public work process through effective liaison activity. Specifically, it must be recognized that, while municipal schedules and plans change due largely to funding, other factors also contribute to the scheduling of these projects (e.g. political, demand maintenance, etc.). Municipal changes in 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 2013, the proposed plan incorporates $1.79 million in spending under the Public Works category.

D. Mandated Programs

Spending for Mandated Programs falls into three categories: cathodic protection, meter replacement, and capital leak repairs. The Cathodic Protection Program adds cathodic protection to existing coated steel main installed prior to U.S Department of Transportation ("DOT") requirements (pre-1971). In 1971, the Code of Federal Regulations, Part 192, required the cathodic protection of all new buried steel gas facilities. 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. National Grid has standardized a process used to determine the cost effectiveness of cathodically protecting steel pipe installed prior to 1971. National Grid is targeting adding cathodic protection to ten miles of pre-1971 pipe during FY 2013 for the purpose of extending the life of the pipe. Capital costs for the Meter Replacement Program are required for the procurement of replacement meters and are included under Mandated Programs. The Capital Leak Repair Program addresses leaking gas services and extends the useful life of cast iron mains through the encapsulation of leaking cast iron joints. For FY 2013, the proposed plan contains $12.13 million for all three Mandated Programs.

E. Reliability

Reliability spending includes programs to address system automation and control, system pressure regulating facilities (including heaters and control line integrity), system reliability enhancement, water intrusion projects, LNG facilities, and primary valve

installation and/or replacements. The proposed FY 2013 Gas ISR Plan contains $8.99 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 (a) meet the new DOT code requirements under 49 CFR Part 192, Docket ID 2007-27954, issued on December 3, 2009. These new 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 205 pressure regulator stations disbursed throughout its Rhode Island gas service territory. While 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 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 to maximize the operational efficiency of the gas

transmission and distributions system. National Grid is proposing implementation of a system automation and control program that would address approximately 20 percent of its pressure regulating facilities and adding select end-point monitoring.

2. Pressure Regulating Facilities

The pressure regulating facilities have been designed to reliably control 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 may also include a heater or a scrubber. A program has been recently initiated to address condition-based assessments. 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. National Grid's proposed plan would address condition-based assessments and perform the following work at pressure regulating facilities in FY 2013:

a. Westerly - Canal St - flood concern - relocate controls to above grade

b. Warren/Bristol - Revamp regulator runs in both buildings

c. Holder 20 – Moran Street, Providence - site rebuild - reorient runs, update building and monitoring equipment

d. Replace obsolete regulators

e. Install second by-pass valve at low pressure stations

f. Install intrusion alarms

g. Upgrade station control lines

h. Inlet/Outlet Valve Replacements

3. System Reliability Enhancement Program

The System Reliability Enhancement 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). The program also includes projects designed to address reliability issues (e.g. flooding of critical regulator/take stations) that surfaced during the Spring 2010 flooding. For FY 2013, this includes a regulator relocation and up-rating project in Westerly. Similar work will be identified, as appropriate, for East Providence (i.e. Dey Street Take Station) and Cumberland (i.e. Ann & Hope Way low-pressure district regulator), and will be targeted for construction over the 2013 through 2016 timeframe. As identified in Attachment 1, National Grid is proposing its System Reliability Enhancement Program plan for FY 2013.

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. As identified in

Attachment 1, National Grid is proposing one Water Intrusion job in Westerly in its Plan for FY 2013.

5. LNG Facilities

LNG facility upgrades include replacement of aging equipment and infrastructure at the Rhode Island stations excluding the Providence facility. One major identified project is the replacement of the fire alarm auto ring down system in Providence.

6. Valve Installation/Replacement

Valves are used to sectionalize portions of the gas network when required to support both planned and unplanned field activities. Valve replacement is necessary to ensure continued ability to effectively isolate portions of the distribution system as inoperable valves are identified. 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.

F. Special Projects

National Grid has added the Special Projects category to the proposed FY 2013 Gas ISR Plan for work that does not fall into one of the categories listed above. The FY 2013 Gas ISR Plan includes one project in this category. This project is for work associated with the Rhode Island Department of Transportation ("RIDOT") project to relocate I-195 in the City of Providence. The relocation project has been ongoing for the

past decade. Two of the remaining phases of this project include main replacement, or main relocation. A portion of this work qualifies for reimbursement by RIDOT and thus is not included in the FY 2013 ISR plan. However, a portion of the work does not qualify for RIDOT reimbursement. This work includes the addition of 4,400 feet of gas main at an estimated cost of $692,300 and is required to safely and reliably serve the new parcels of land and aid in the economic development of this area.

Attachment 1

Capital Investment Plan	FY 2013 ($000)	
Growth o **Mains** o **Services** o **Reinforcement**	**$9,423**	**Spending not included in ISR Plan.**
Replacement Program o **Main Replacement** o **Service Replacements**	**$37,268**	o **Includes the replacement of approximately 50 miles of leak prone main and 2,125 service replacements.**
Public Works	**$1,785**	o **Includes all municipal public works projects**
Reactive Main Replacement	**$1,020**	o **Includes approximately 1.5 miles of emergency main replacements resulting from leaks or other unplanned work where main condition dictates immediate replacement**
Mandated Programs	**$12,133**	o **Includes all mandated work** o **All emergency service replacements resulting from leaks** o **All capital leak repairs as a result of cast iron joint encapsulation** o **22,000 meter changes** o **Mandated corrosion work**
Reliability **Reliability (continued)**	**$8,987**	o **Includes the modification to the following Regulator Stations to address condition based assessment considerations:** o **Warren/Bristol - Revamp regulator runs in both buildings** o **Holder 20 – Moran Street, Providence -Site Rebuild - reorient runs, update building and monitoring equipment** o **Relocating regulator (RIS-00A) and reconfigure odorization operation in the**

		Westerly station due to flooding concerns. Will also necessitate the uprating of 1,850 feet of distribution pipe from 21 psig to 99 psig o **Replace obsolete regulators** o **Install second by-pass valve at Low Pressure Stations** o **Install intrusion alarms and upgrade station control lines** o **The following water intrusion project (LP to HP conversion) will be completed to address repeat customer outage considerations:** o **Judi Lane, Westerly**
Special Projects	**$692**	o **Install approximately 2,400 feet of new main in aid to economic development related to the RIDOT relocation of I-195**
Total	**$71,308**	

Attachment 2

	Capital Forecast ($000)					
Total Plan	**FY 13**	**FY 14**	**FY 15**	**FY 16**	**FY 17**	**Total**
Growth (including reinforcement)(1)	$ 9,423	$ 8,045	$ 8,131	$ 8,138	$ 8,191	$ 41,928
Main Replacement Program	$ 33,362	$ 41,206	$ 42,031	$ 42,871	$ 43,729	$ 203,199
Service Replacements	$ 3,906	$ 2,000	$ -	$ -	$ -	$ 5,906
Sub-Total	$ 37,268	$ 43,206	$ 42,031	$ 42,871	$ 43,729	$ 209,105
Public Works	$ 1,785	$ 1,821	$ 1,857	$ 1,857	$ 1,857	$ 9,177
Reactive Main Replacement	$ 1,020	$ 1,040	$ 1,061	$ 1,061	$ 1,061	$ 5,243
Mandated Programs	$ 12,133	$ 12,466	$ 12,665	$ 12,716	$ 12,768	$ 62,748
Reliability	$ 8,987	$ 8,070	$ 9,346	$ 8,659	$ 8,995	$ 44,057
Special Projects	$ 692	$ -	$ -	$ -	$ -	$ 692
Total	$ 71,308	$ 74,648	$ 75,091	$ 75,302	$ 76,601	$ 372,950

(1) Growth is generally not included in the ISR Plan

Attachment 3

	Capital Forecast ($000)		
	FY 12		FY 13
Total Plan	Budget	Q1 Forecast (2)	Budget
Growth (including reinforcement)(1)	$ 7,129	$ 7,784	$ 9,423
Main Replacement Program	$ 25,750	$ 25,750	$ 33,362
Service Replacements	$ 3,906	$ 3,906	$ 3,906
Sub-Total	$ 29,656	$ 29,656	$ 37,268
Public works	$ 1,750	$ 1,750	$ 1,785
Reactive Main Replacement	$ 1,000	$ 1,000	$ 1,020
Mandated Programs	$ 9,188	$ 9,259	$ 12,133
Reliability	$ 11,821	$ 11,952	$ 8,987
Special Projects	$ -	$ -	$ 692
Total	$ 60,545	$ 61,402	$ 71,308

(1) Growth is generally not included in the ISR Plan
(2) This chart will be updated with the Q2 filing. Curent total forecast spend is approximately $67 M.

Exhibit 1 – LTB
Section 3
Revenue Req.

Section 3
Revenue Requirement
FY 2013 Proposal

Revenue Requirement
FY 2013 Proposal

The attached illustrative revenue requirement calculation reflects the revenue requirement associated with the Company's proposed capital investment in the gas utility infrastructure program referred to as the Gas Infrastructure, Safety, and Reliability Plan (the "ISR Plan"). As shown on Page 1, Column (b) of the attachment, the Company's fiscal year ("FY") 2013 Gas ISR Plan revenue requirement amounts to $7,532,434 and consists of the revenue requirement on FY 2013 proposed capital investment, plus the FY 2013 revenue requirement on the FY 2012 ISR capital investment approved in the FY 2012 Gas ISR Plan. The vintage year revenue requirement calculations related to incremental non-growth capital investment (net of general plant) associated with the Company's Gas ISR Plan for FY 2013 and FY 2012 are provided on Pages 2 and 3 of Attachment 1, respectively. 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 fiscal year 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). These amounts are shown on Lines 1 through 8.

For illustration purposes only, Column (c) of Page 1 provides the FY 2014 revenue requirement for the respective vintage year proposed capital investments as calculated on Attachment 1, Pages 2 and 3. It is important to note that these proposed amounts will be trued up to actual investment activity after the conclusion of the respective FY, with rate adjustments for the revenue requirement differences incorporated in future Distribution Adjustment Clause filings.

Gas Infrastructure Investment

As noted above, Pages 2 and 3 of the attachment calculate the revenue requirement of incremental capital investment associated with the Company's FY 2013 and 2012 Gas ISR Plan investments, respectively; that is, gas infrastructure investment (net of general plant) incremental to the amounts embedded in the Company's base distribution rates. Incremental gas capital investment for this purpose is intended to represent the net change in rate base for gas infrastructure investments since the establishment of the ISR Mechanism, or April 1, 2011 and is defined as cumulative allowed capital plus cost of removal, less annual depreciation expense (net of depreciation expense attributable to general plant) embedded in the Company's base rates. These amounts are shown on Lines 1 through 8 of Pages 2 and 3.

Because depreciation expense is affected by plant retirements, retirements have been deducted from plant additions included in 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 the purposes of calculating the revenue requirement, plant retirements have been estimated based on the percentage of retirements to additions during calendar years 2010 and 2009 for the FY 2013 and FY 2012 revenue requirement calculations, respectively, 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, 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 (vintage year ISR allowable capital additions less non-general plant depreciation expense included in base rates) as shown on Lines 6 through 8 to arrive at the incremental investment to be included in the rate base upon which the annual revenue requirement is calculated.

The incremental change in rate base on Line 20 includes the incremental net plant amount from Line 8 adjusted for accumulated depreciation and accumulated deferred tax reserves as shown on Lines 13 and 16, respectively. The deferred tax amount arising from capital investment equals the difference between book depreciation and tax depreciation on capital investment, times the effective tax rate, as shown on Lines 14 through 16. The calculation of tax depreciation is described below. The average change in rate base, shown on Line 21 equals the average of the current and prior year-end rate base amounts shown on Line 20. This amount is multiplied by the pre-tax rate of return in the most recent rate case, in these calculations, the one approved by the Commission in Docket No. 3943, 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 on Line 24, as are property taxes, shown on Line 25. Property taxes are computed on net plant investment in the year following the investment to coincide with the timing in which property taxes are assessed. The sum of these three amounts reflects the annual revenue requirement of the Company's Gas ISR Plan as shown on Line 26, which is carried forward to Page 1 as part of the total Gas ISR Plan revenue requirement.

Tax Depreciation Calculation

The tax depreciation calculations for FY 2013 and FY 2012 are provided on Pages 4 and 5 of Attachment 1, respectively. 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.[7] In addition, plant additions not subject to the capital repairs deduction may be subject to bonus depreciation as shown on Lines 4 through 12. 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. In accordance with the Act, capital investments made from April 2012 through December 2012 are eligible for 50 percent bonus depreciation, as shown on Line 9.[8]

[7] 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 associated interest assessed by the IRS, in a subsequent reconciliation filing under the ISR Plan.

[8] 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.

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, as shown on Line 17. The amount of depreciation deducted for MACRS on Line 18 is added to the amount of capital repairs deduction plus the bonus depreciation deduction and cost of removal to arrive at total tax depreciation as shown on Line 20. These annual total tax depreciation amounts are carried forward to Line 10 of Attachment 1, Pages 2 and 3, for the respective years, and incorporated in the deferred tax calculation.

The Narragansett Electric Company
d/b/a National Grid
Gas Infrastructure, Safety, and Reliability Plan FY 2013
Section 3: Attachment 1

National Grid - RI Gas
d/b/a National Grid
Gas Infrastructure, Safety, and Reliability (ISR) Plan
Computation of Annual Revenue Requirement

Line No.		Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)
	Capital Investment:			
	Forecasted Revenue Requirement:			
1	FY 2012	$1,817,890	$5,025,507	$4,845,794
2	FY 2013		$2,506,927	$6,636,031
3	Total	$1,817,890	$7,532,434	$11,481,825
4	**Total Incremental Fiscal Year Rate Adjustment**	**$1,817,890**	**$5,714,544**	

Line Notes
1 Column (a) - From Page 3 Line 26 (Col a)
1 Column (b) - From Page 3 Line 26 (Col b)
1 Column (c) - From Page 3 Line 26 (Col c)
2 Column (b) - From Page 2 Line 26 (Col a)
2 Column (b) - From Page 2 Line 26 (Col b)
3 Line 2 + Line 1
4 (b) Line 3 Less Prior Year Line 4

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

Line No.				Fiscal Year 2013 (a)	Fiscal Year 2014 (b)
	Depreciable Net Capital Included in Rate Base				
1	Total Allowed Capital Included in Rate Base in Current Year			$57,184,191	$0
2	Retirements	Line 1 * Retirements Rate	1/	$2,498,949	$0
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 2; Column (b) = Prior Year Line 3		$54,685,242	$54,685,242
	Change in Net Capital Included in Rate Base				
4	Capital Included in Rate Base	Line 1		$57,184,191	$0
5	Depreciation Expense	As approved per Docket No. 3943, excluding general plant and 2009 CXT		$18,443,542	$0
6	Incremental Depreciable Amount	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6		$38,740,649	$38,740,649
7	Cost of Removal			$4,701,396	$4,701,396
8	**Net Plant Amount**	**Line 6 + Line 7**		**$43,442,046**	**$43,442,046**
	Deferred Tax Calculation:				
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943		3.38%	3.38%
10	Tax Depreciation	Page 4, Line 20		$43,137,661	$1,406,143
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$43,137,661	$44,543,804
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50%; Column (b) = Line 3 * Line 9		$924,181	$1,848,361
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12		$924,181	$2,772,542
14	Cumulative Book / Tax Timer	Line 11 - Line 13		$42,213,481	$41,771,262
15	Effective Tax Rate			35.00%	35.00%
16	Deferred Tax Reserve	Line 14 * Line 15		$14,774,718	$14,619,942
	Rate Base Calculation:				
17	Cumulative Incremental Capital Included in Rate Base	Line 8		$43,442,046	$43,442,046
18	Accumulated Depreciation	- Line 13		($924,181)	($2,772,542)
19	Deferred Tax Reserve	- Line 16		($14,774,718)	($14,619,942)
20	Year End Rate Base	Sum of Lines 17 through 19		$27,743,147	$26,049,562
	Revenue Requirement Calculation:				
21	Average Rate Base	Line 20÷2 for Year 1 then, (Prior Year Line 20 + Current Year Line 20)÷2		$13,871,573	$26,896,354
22	Pre-Tax ROR		2/	11.41%	11.41%
23	Return and Taxes	Line 21 * Line 22		$1,582,747	$3,068,874
24	Book Depreciation	Line 12		$924,181	$1,848,361
25	Property Taxes	$0 in Year 1, then Prior Year (Line 3 + Line 7 - Line 13) * Property Tax Rate	3/	$0	$1,718,796
26	**Annual Revenue Requirement**	**Sum of Lines 23 through 25**		**$2,506,927**	**$6,636,031**

1/ Assumes 4.37% based on 2010 retirements as a percent of capital spend; to be replaced with actual retirements

2/ Weighted Average Cost of Capital as approved in R.I.P.U.C. Docket No. 3943

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	40.63%	7.99%	3.25%		3.25%
Short Term Debt	11.66%	3.91%	0.46%		0.46%
Common Equity	47.71%	10.50%	5.01%	2.70%	7.71%
	100.00%		8.71%	2.70%	11.41%

3/ Property Tax Rate Calculation based on 2010 actual net plant in service and property tax expense applicable to distribution

Plant in Service	$613,322,109	
Completed Construction Not Classified	$41,756,384	
Total Plant in Service	$655,078,494	
Less: Intangible Plant	$28,697,923	
Distribution-Plant in Service	$626,380,570	$626,380,570
Accumulated Depreciation	$309,170,951	
Accumulated Depreciation -Intangible Plant	($18,669,589)	
Accumulated Depreciation Distribution-Plant in Service		$290,501,363
Distribution-Related Net Plant in Service	$335,879,208	$335,879,208
Distribution-Related Rate Year Property Tax Expense		$9,878,147
Distribution-Related Property Tax Rate		2.94%

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

Line No.				Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)
	Depreciable Net Capital Included in Rate Base					
1	Total Allowed Capital Included in Rate Base in Current Year			$47,660,716	$0	$0
2	Retirements	Line 1 * Retirements Rate	1/	$3,074,116	$0	$0
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 2; Columns (b) and (c) = Prior Year Line 3		$44,586,600	$44,586,600	$44,586,600
	Change in Net Capital Included in Rate Base					
4	Capital Included in Rate Base	Line 1		$47,660,716	$0	$0
5	Depreciation Expense	As approved per Docket No. 3943, excluding general plant and 2009 CXT		$18,443,542	$0	$0
6	Incremental Depreciable Amount	Column (a) = Line 4 - Line 5; Columns (b) and (c) = Prior Year Line 6		$29,217,174	$29,217,174	$29,217,174
7	Cost of Removal			$5,755,088	$5,755,088	$5,755,088
8	**Net Plant Amount**	**Line 6 + Line 7**		**$34,972,262**	**$34,972,262**	**$34,972,262**
	Deferred Tax Calculation:					
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943		3.38%	3.38%	3.38%
10	Tax Depreciation	Page 5, Line 20		$45,215,927	$615,012	$568,837
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$45,215,927	$45,830,939	$46,399,776
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50%; Columns (b) and (c) = Line 3 * Line 9		$753,514	$1,507,027	$1,507,027
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12		$753,514	$2,260,541	$3,767,568
14	Cumulative Book / Tax Timer	Line 11 - Line 13		$44,462,413	$43,570,398	$42,632,209
15	Effective Tax Rate			35.00%	35.00%	35.000%
16	Deferred Tax Reserve	Line 14 * Line 15		$15,561,845	$15,249,639	$14,921,273
	Rate Base Calculation:					
17	Cumulative Incremental Capital Included in Rate Base	Line 8		$34,972,262	$34,972,262	$34,972,262
18	Accumulated Depreciation	- Line 13		($753,514)	($2,260,541)	($3,767,568)
19	Deferred Tax Reserve	- Line 16		($15,561,845)	($15,249,639)	($14,921,273)
20	Year End Rate Base	Sum of Lines 17 through 19		$18,656,904	$17,462,082	$16,283,421
	Revenue Requirement Calculation:					
21	Average Rate Base	Line 20÷2 for Year 1 then, (Prior Year Line 20 + Current Year Line 20)÷2		$9,328,452	$18,059,493	$16,872,752
22	Pre-Tax ROR		2/	11.41%	11.41%	11.41%
23	Return and Taxes	Line 21 * Line 22		$1,064,376	$2,060,588	$1,925,181
24	Book Depreciation	Line 12		$753,514	$1,507,027	$1,507,027
25	Property Taxes	$0 in Year 1, then Prior Year (Line 3 + Line 7 - Line 13) * Property Tax Rate	3/	$0	$1,457,892	$1,413,586
26	**Annual Revenue Requirement**	**Sum of Lines 23 through 25**		**$1,817,890**	**$5,025,507**	**$4,845,794**

1/ Assumes 6.45% based on 2009 retirements as a percent of capital spend; to be replaced with actual retirements

2/ Weighted Average Cost of Capital as approved in R.I.P.U.C. Docket No. 3943

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	40.63%	7.99%	3.25%		3.25%
Short Term Debt	11.66%	3.91%	0.46%		0.46%
Common Equity	47.71%	10.50%	5.01%	2.70%	7.71%
	100.00%		8.71%	2.70%	11.41%

3/ Property Tax Rate Calculation based on 2010 actual net plant in service and property tax expense applicable to distribution

Plant in Service	$613,322,109	
Completed Construction Not Classified	$41,756,384	
Total Plant in Service	$655,078,494	
Less: Intangible Plant	$28,697,923	
Distribution-Plant in Service	$626,380,570	$626,380,570
Accumulated Depreciation	$309,170,951	
Accumulated Depreciation -Intangible Plant	($18,669,589)	
Accumulated Depreciation Distribution-Plant in Service		$290,501,363
Distribution-Related Net Plant in Service	$335,879,208	$335,879,208
Distribution-Related Rate Year Property Tax Expense		$9,878,147
Distribution-Related Property Tax Rate		2.94%

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

Line No.			Fiscal Year 2013 (a)	Fiscal Year 2014 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 2, Line 1	$57,184,191	
2	Capital Repairs Deduction Rate		50.00%	
3	Capital Repairs Deduction	Line 2 x Line 3	$28,592,096	
	Bonus Depreciation			
4	Plant Additions	Line 1	$57,184,191	
5	Less Capital Repairs Deduction	Line 3	$28,592,096	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$28,592,095	
7	Percent of Plant Eligible for Bonus Depreciation		85.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 x Line 7	$24,303,281	
9	Bonus Depreciation Rate (April 2012 - December 2012)	1 * 75% * 50%	37.50%	
10	Bonus Depreciation Rate (January 2013 - March 2013)		0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	37.50%	
12	Bonus Depreciation	Line 8 x Line 11	$9,113,730	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$57,184,191	
14	Less Capital Repairs Deduction	Line 3	$28,592,096	
15	Less Bonus Depreciation	Line 12	$9,113,730	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15	$19,478,365	$19,478,365
17	20 YR MACRS Tax Depreciation Rates		3.750%	7.219%
18	Remaining Tax Depreciation	Line 16 x Line 17	$730,439	$1,406,143
19	Cost of Removal		$4,701,396	
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19	$43,137,661	$1,406,143

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

Line No.			Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 3, Line 1	$47,660,716		
2	Capital Repairs Deduction Rate		48.00%		
3	Capital Repairs Deduction	Line 2 x Line 3	$22,877,144		
	Bonus Depreciation				
4	Plant Additions	Line 1	$47,660,716		
5	Less Capital Repairs Deduction	Line 3	$22,877,144		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$24,783,572		
7	Percent of Plant Eligible for Bonus Depreciation		75.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 x Line 7	$18,587,679		
9	Bonus Depreciation Rate (April 2011 - December 2011)	1 * 75% * 100%	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 x Line 11	$16,264,219		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$47,660,716		
14	Less Capital Repairs Deduction	Line 3	$22,877,144		
15	Less Bonus Depreciation	Line 12	$16,264,219		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15	$8,519,353	$8,519,353	$8,519,353
17	20 YR MACRS Tax Depreciation Rates		3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 16 x Line 17	$319,476	$615,012	$568,837
19	Cost of Removal		$5,755,088		
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19	$45,215,927	$615,012	$568,837

Exhibit 1 – LTB
Section 4
Rate Design

Section 4
Rate Design

Rate Design
FY 2013 Proposal

Like the revenue requirement, the ISR proposed rate design for FY 2013 follows the same methodology used in Docket No. 4219. Similar to that proceeding, as shown on Section 4, Attachment NG-JFN-3, the base allocators were developed using the investment allocations from Docket No. 3943, the Company's last rate case. Section 4, Attachment NG-JFN2 updates the throughput for the April 2012 to March 2013 period based upon the most recent forecast filed in the Company's Gas Cost Recovery filing in Docket No. 4283. These allocations and throughput are incorporated in Section 4, Attachment NG-JFN-1 with the proposed revenue requirement to develop the new ISR factors by rate class.

National Grid
Rhode Island - Gas

		System Total		Res-NH		Res-H		Small		Medium		Large LL		Large HL		XL-LL		XL-HL		
Distribution																				
Demand		$178,374,417		$2,768,983		$102,609,361		$13,862,322		$29,257,386		$15,362,579		$4,999,889		$2,162,329		$7,351,569		$178,374,418
Customer		$105,818,120		$11,669,558		$76,237,861		$9,454,916		$6,236,545		$1,334,485		$313,236		$208,314		$363,205		$105,818,120
Commodity		$817,961		$12,967		$408,499		$53,641		$119,583		$60,228		$23,460		$27,366		$112,217		$817,961
																				$285,010,499
Total Rate Base		$285,010,498		$14,451,508	5.07%	$179,255,721	62.89%	$23,370,879	8.20%	$35,613,514	12.50%	$16,757,292	5.88%	$5,336,585	1.87%	$2,398,009	0.84%	$7,826,991	2.75%	**$285,010,500**
					5.07%		62.89%		8.20%		12.50%		5.88%		1.87%		0.84%		2.75%	**100.00%**
																				100.00%

Res-NH	5.07%
Res-H	62.89%
Small	8.20%
Medium	12.50%
Large LL	5.88%
Large HL	1.87%
XL-LL	0.84%
XL-HL	2.75%
	100.00%

April 1, 2012

Revenue Requirement	Rate Class	Rate Base Allocator %	Allocation to Rate Class	Throughput dth	ISR Factor dth	ISR Factor therm	Uncollectible	ISR Factor therm
$7,532,434								
	Res-NH	5.07%	$381,933	556,875	$0.6859	0.0686	2.46%	$0.0703
	Res-H	62.89%	$4,737,481	17,489,866	$0.2709	0.0271	2.46%	$0.0278
	Small	8.20%	$617,660	2,471,503	$0.2499	0.0250	2.46%	$0.0256
	Medium	12.50%	$941,216	5,272,010	$0.1785	0.0179	2.46%	$0.0184
	Large LL	5.88%	$442,872	2,643,679	$0.1675	0.0168	2.46%	$0.0172
	Large HL	1.87%	$141,039	1,173,015	$0.1202	0.0120	2.46%	$0.0123
	XL-LL	0.84%	$63,376	890,996	$0.0711	0.0071	2.46%	$0.0073
	XL-HL	2.75%	$206,857	4,318,987	$0.0479	0.0048	2.46%	$0.0049

Firm and Transportation

Year		2,012	2,012	2,012	2,012	2,012	2,012	2,012	2,012	2,012	2,013	2,013	2,013	
Mon		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
1012		52,923	43,928	35,764	31,804	28,744	28,529	35,143	43,872	55,016	70,793	70,025	60,333	**556,875**
1247		1,705,118	1,081,596	473,491	422,847	362,367	345,116	409,966	1,048,113	2,257,226	3,484,287	3,376,822	2,522,916	**17,489,866**
2107		252,624	122,097	47,631	42,215	34,539	49,263	80,487	159,563	309,768	489,386	476,924	407,005	**2,471,503**
2237		221,483	139,756	36,185	79,349	38,735	74,952	106,391	230,515	405,412	673,489	679,448	514,566	**3,200,280**
22EN		71,408	36,080	29,613	21,096	17,126	24,884	46,772	76,592	120,261	146,470	128,106	100,861	**819,269**
2221		126,334	66,878	40,275	28,155	24,766	34,326	60,232	102,281	154,122	213,639	205,419	196,035	**1,252,461**
2367		25,423	20,938	17,489	17,110	15,420	15,741	20,602	23,109	27,283	32,170	28,897	30,365	**274,547**
23EN		45,806	39,741	40,916	32,135	37,197	28,359	51,562	52,931	47,832	88,742	70,169	70,479	**605,868**
2321		26,960	21,216	20,721	15,688	17,270	13,116	21,982	22,606	21,462	42,513	33,938	35,129	**292,601**
2496		15,311	13,959	13,868	14,111	12,049	11,516	15,605	14,920	15,832	17,311	19,880	16,528	**180,889**
24EN		333,466	263,359	298,321	264,001	247,551	262,574	330,188	334,658	360,785	472,292	378,725	394,159	**3,940,080**
2421		20,073	17,683	21,653	9,751	12,633	8,147	18,985	16,303	6,776	29,429	13,743	22,841	**198,017**
3367		86,548	34,767	13,067	6,089	6,033	12,504	24,255	52,733	84,144	120,574	125,122	116,023	**681,860**
33EN		89,135	37,078	22,600	13,962	12,200	20,776	53,992	101,546	159,988	180,721	161,286	149,449	**1,002,733**
3321		139,313	42,530	25,467	0	0	0	14,871	70,092	129,470	208,185	173,847	155,313	**959,087**
3496		2,551	1,202	0	435	0	151	77	2,796	5,519	10,150	9,737	7,269	**39,886**
34EN		69,932	27,373	20,518	11,695	8,024	16,349	36,914	72,590	114,736	132,559	120,164	106,656	**737,509**
3421		8,169	4,138	2,832	0	0	0	334	10,379	22,742	28,210	19,196	17,602	**113,601**
70EN		0	0	0	0	0	0	0	0	0	0	0	0	**0**
														34,816,931

Dth TOTALS		2011	2011	2011	2011	2011	2011	2011	2011	2011	2012	2012	2012	
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
1,012	Res-NH	52,923	43,928	35,764	31,804	28,744	28,529	35,143	43,872	55,016	70,793	70,025	60,333	**556,875**
1,247	Res-H	1,705,118	1,081,596	473,491	422,847	362,367	345,116	409,966	1,048,113	2,257,226	3,484,287	3,376,822	2,522,916	**17,489,866**
2,107	Small	252,624	122,097	47,631	42,215	34,539	49,263	80,487	159,563	309,768	489,386	476,924	407,005	**2,471,503**
2,237	Medium	221,483	139,756	36,185	79,349	38,735	74,952	106,391	230,515	405,412	673,489	679,448	514,566	**3,200,280**
22EN	Medium-FT1	71,408	36,080	29,613	21,096	17,126	24,884	46,772	76,592	120,261	146,470	128,106	100,861	**819,269**
2,221	Medium-FT2	126,334	66,878	40,275	28,155	24,766	34,326	60,232	102,281	154,122	213,639	205,419	196,035	**1,252,461**
2,367	Large-HL	25,423	20,938	17,489	17,110	15,420	15,741	20,602	23,109	27,283	32,170	28,897	30,365	**274,547**
23EN	Large HL-FT1	45,806	39,741	40,916	32,135	37,197	28,359	51,562	52,931	47,832	88,742	70,169	70,479	**605,868**
2,321	Large HL-FT2	26,960	21,216	20,721	15,688	17,270	13,116	21,982	22,606	21,462	42,513	33,938	35,129	**292,601**
2,496	XL-HL	15,311	13,959	13,868	14,111	12,049	11,516	15,605	14,920	15,832	17,311	19,880	16,528	**180,889**
24EN	XL-HL-FT1	333,466	263,359	298,321	264,001	247,551	262,574	330,188	334,658	360,785	472,292	378,725	394,159	**3,940,080**
2,421	XL-HL-FT2	20,073	17,683	21,653	9,751	12,633	8,147	18,985	16,303	6,776	29,429	13,743	22,841	**198,017**
3,367	Large-LL	86,548	34,767	13,067	6,089	6,033	12,504	24,255	52,733	84,144	120,574	125,122	116,023	**681,860**
33EN	Large-LL-FT1	89,135	37,078	22,600	13,962	12,200	20,776	53,992	101,546	159,988	180,721	161,286	149,449	**1,002,733**
3,321	Large-LL-FT2	139,313	42,530	25,467	-	-	-	14,871	70,092	129,470	208,185	173,847	155,313	**959,087**
3,496	XL-LL	2,551	1,202	-	435	-	151	77	2,796	5,519	10,150	9,737	7,269	**39,886**
34EN	XL-LL FT1	69,932	27,373	20,518	11,695	8,024	16,349	36,914	72,590	114,736	132,559	120,164	106,656	**737,509**
3,421	XL-LL FT2	8,169	4,138	2,832	-	-	-	334	10,379	22,742	28,210	19,196	17,602	**113,601**
70EN	NGV	-	-	-	-	-	-	-	-	-	-	-	-	**-**
														34,816,931

Dth forecast		2012	2012	2012	2012	2012	2012	2012	2012	2012	2013	2013	2013		
Apr 12-Mar 13		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar		
	Res-NH	52,923	43,928	35,764	31,804	28,744	28,529	35,143	43,872	55,016	70,793	70,025	60,333	**556,875**	
	Res-H	1,705,118	1,081,596	473,491	422,847	362,367	345,116	409,966	1,048,113	2,257,226	3,484,287	3,376,822	2,522,916	**17,489,866**	
	Small	252,624	122,097	47,631	42,215	34,539	49,263	80,487	159,563	309,768	489,386	476,924	407,005	**2,471,503**	
	Medium	419,224	242,713	106,073	128,600	80,627	134,162	213,395	409,388	679,795	1,033,598	1,012,973	811,462	**5,272,010**	
	Large LL	314,997	114,375	61,134	20,052	18,233	33,280	93,118	224,371	373,602	509,479	460,255	420,784	**2,643,679**	
	Large HL	98,188	81,895	79,126	64,933	69,886	57,216	94,147	98,647	96,577	163,425	133,004	135,973	**1,173,015**	
	XL-LL	80,652	32,713	23,350	12,130	8,024	16,500	37,324	85,765	142,997	170,919	149,097	131,527	**890,996**	
	XL-HL	368,850	295,000	333,842	287,863	272,233	282,236	364,779	365,882	383,393	519,032	412,349	433,528	**4,318,987**	
														34,816,931	
		3,292,576	2,014,317	1,160,410	1,010,444	874,655	946,302	1,328,358	2,435,601	4,298,374	6,440,918	6,091,449	4,923,527		**34,816,931**

Exhibit 1 – LTB
Section 5
Bill Impacts

Section 5
Bill Impacts

Bill Impacts
FY 2013 Proposal

Attachment JFN-1 provides the bill impact of the FY 2013 ISR by rate class. As shown on that Attachment, for the average annual residential heating customer utilizing 922 therms, the cumulative impact of the FY 2013 ISR will represent and annual increase of $19.25 or 1.4 percent.

Rhode Island
DAC Rates
April 1, 2012 to March 31, 2013

Rate Class	November 1, 2011 DAC Rate Component	April 1, 2012 DAC Rate Component	April 1, 2012 DAC Rate (per therm)
Res-NH	$0.0062	$0.0703	$0.0765
Res-NH-LI	$0.0062	$0.0703	$0.0765
Res-H	$0.0062	$0.0278	$0.0340
Res-H-LI	$0.0062	$0.0278	$0.0340
Small	$0.0062	$0.0256	$0.0318
Medium	$0.0062	$0.0184	$0.0246
Large LL	$0.0062	$0.0172	$0.0234
Large HL	$0.0062	$0.0123	$0.0185
XL-LL	$0.0062	$0.0073	$0.0135
XL-HL	$0.0062	$0.0049	$0.0111

National Grid
Rhode Island - Gas

Bill Impact Analysis with Various Levels of Consumption:
ISR Rates

Residential Heating:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
600	**$966**	**$953**	$13	1.3%	$0	$0.00	$0.00	**$12.51**	$0.00
664	**$1,053**	**$1,039**	$14	1.3%	$0	$0.00	$0.00	**$13.87**	$0.00
730	**$1,143**	**$1,128**	$15	1.4%	$0	$0.00	$0.00	**$15.26**	$0.00
794	**$1,228**	**$1,212**	$17	1.4%	$0	$0.00	$0.00	**$16.57**	$0.00
857	**$1,311**	**$1,293**	$18	1.4%	$0	$0.00	$0.00	**$17.92**	$0.00
Average Customer **922**	**$1,395**	**$1,375**	**$19**	**1.4%**	**$0**	**$0.00**	**$0.00**	**$19.25**	**$0.00**
987	**$1,478**	**$1,458**	$21	1.4%	$0	$0.00	$0.00	**$20.62**	$0.00
1,051	**$1,561**	**$1,539**	$22	1.4%	$0	$0.00	$0.00	**$21.99**	$0.00
1,114	**$1,639**	**$1,616**	$23	1.4%	$0	$0.00	$0.00	**$23.27**	$0.00
1,180	**$1,722**	**$1,697**	$25	1.5%	$0	$0.00	$0.00	**$24.68**	$0.00
1,247	**$1,805**	**$1,779**	$26	1.5%	$0	$0.00	$0.00	**$26.06**	$0.00

Residential Heating Low Income:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
600	**$928**	**$916**	$13	1.4%	$0	$0.00	$0.00	**$12.51**	$0.00
664	**$1,013**	**$999**	$14	1.4%	$0	$0.00	$0.00	**$13.87**	$0.00
730	**$1,101**	**$1,085**	$15	1.4%	$0	$0.00	$0.00	**$15.26**	$0.00
794	**$1,184**	**$1,167**	$17	1.4%	$0	$0.00	$0.00	**$16.57**	$0.00
857	**$1,264**	**$1,246**	$18	1.4%	$0	$0.00	$0.00	**$17.92**	$0.00
Average Customer **922**	**$1,346**	**$1,327**	**$19**	**1.5%**	**$0**	**$0.00**	**$0.00**	**$19.25**	**$0.00**
987	**$1,428**	**$1,407**	$21	1.5%	$0	$0.00	$0.00	**$20.62**	$0.00
1,051	**$1,508**	**$1,486**	$22	1.5%	$0	$0.00	$0.00	**$21.99**	$0.00
1,114	**$1,585**	**$1,562**	$23	1.5%	$0	$0.00	$0.00	**$23.27**	$0.00
1,180	**$1,666**	**$1,641**	$25	1.5%	$0	$0.00	$0.00	**$24.68**	$0.00
1,247	**$1,748**	**$1,722**	$26	1.5%	$0	$0.00	$0.00	**$26.06**	$0.00

Bill Impact Analysis with Various Levels of Consumption:

ISR Rates

Residential Non-Heating:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
123	**$292**	**$285**	$7	2.4%	$0	$0.00	$0.00	**$6.94**	$0.00
137	**$312**	**$304**	$8	2.5%	$0	$0.00	$0.00	**$7.74**	$0.00
147	**$326**	**$318**	$8	2.6%	$0	$0.00	$0.00	**$8.31**	$0.00
161	**$345**	**$336**	$9	2.7%	$0	$0.00	$0.00	**$9.09**	$0.00
176	**$367**	**$357**	$10	2.8%	$0	$0.00	$0.00	**$9.99**	$0.00
Average Customer **189**	**$385**	**$374**	**$11**	**2.9%**	**$0**	**$0.00**	**$0.00**	**$10.73**	**$0.00**
202	**$403**	**$391**	$11	2.9%	$0	$0.00	$0.00	**$11.46**	$0.00
217	**$424**	**$412**	$12	3.0%	$0	$0.00	$0.00	**$12.32**	$0.00
231	**$444**	**$430**	$13	3.1%	$0	$0.00	$0.00	**$13.14**	$0.00
241	**$458**	**$444**	$14	3.1%	$0	$0.00	$0.00	**$13.70**	$0.00
256	**$479**	**$464**	$15	3.1%	$0	$0.00	$0.00	**$14.54**	$0.00

Residential Non-Heating Low Income:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
123	**$275**	**$268**	$7	2.6%	$0	$0.00	$0.00	**$6.94**	$0.00
137	**$294**	**$287**	$8	2.7%	$0	$0.00	$0.00	**$7.74**	$0.00
147	**$308**	**$300**	$8	2.8%	$0	$0.00	$0.00	**$8.31**	$0.00
161	**$327**	**$318**	$9	2.9%	$0	$0.00	$0.00	**$9.09**	$0.00
176	**$347**	**$337**	$10	3.0%	$0	$0.00	$0.00	**$9.99**	$0.00
Average Customer **189**	**$365**	**$354**	**$11**	**3.0%**	**$0**	**$0.00**	**$0.00**	**$10.73**	**$0.00**
202	**$383**	**$371**	$11	3.1%	$0	$0.00	$0.00	**$11.46**	$0.00
217	**$403**	**$391**	$12	3.2%	$0	$0.00	$0.00	**$12.32**	$0.00
231	**$422**	**$409**	$13	3.2%	$0	$0.00	$0.00	**$13.14**	$0.00
241	**$436**	**$422**	$14	3.2%	$0	$0.00	$0.00	**$13.70**	$0.00
256	**$456**	**$442**	$15	3.3%	$0	$0.00	$0.00	**$14.54**	$0.00

Bill Impact Analysis with Various Levels of Consumption:
ISR Rates

C & I Small:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
824	**$1,411**	**$1,397**	$15	1.0%	$0	$0.00	$0.00	**$14.50**	$0.00
916	**$1,532**	**$1,515**	$16	1.1%	$0	$0.00	$0.00	**$16.13**	$0.00
1,003	**$1,644**	**$1,626**	$18	1.1%	$0	$0.00	$0.00	**$17.65**	$0.00
1,092	**$1,756**	**$1,737**	$19	1.1%	$0	$0.00	$0.00	**$19.22**	$0.00
1,179	**$1,862**	**$1,841**	$21	1.1%	$0	$0.00	$0.00	**$20.77**	$0.00
Average Customer **1,269**	**$1,971**	**$1,949**	**$22**	**1.1%**	**$0**	**$0.00**	**$0.00**	**$22.35**	**$0.00**
1,359	**$2,080**	**$2,056**	$24	1.2%	$0	$0.00	$0.00	**$23.91**	$0.00
1,447	**$2,186**	**$2,160**	$25	1.2%	$0	$0.00	$0.00	**$25.45**	$0.00
1,535	**$2,292**	**$2,265**	$27	1.2%	$0	$0.00	$0.00	**$27.03**	$0.00
1,622	**$2,396**	**$2,367**	$29	1.2%	$0	$0.00	$0.00	**$28.56**	$0.00
1,715	**$2,507**	**$2,477**	$30	1.2%	$0	$0.00	$0.00	**$30.18**	$0.00

C & I Medium:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
7,117	**$9,305**	**$9,294**	$11	0.1%	$0	$0.00	$0.00	**$10.60**	$0.00
7,884	**$10,229**	**$10,218**	$12	0.1%	$0	$0.00	$0.00	**$11.75**	$0.00
8,649	**$11,153**	**$11,140**	$13	0.1%	$0	$0.00	$0.00	**$12.88**	$0.00
9,416	**$12,077**	**$12,063**	$14	0.1%	$0	$0.00	$0.00	**$14.03**	$0.00
10,185	**$13,005**	**$12,990**	$15	0.1%	$0	$0.00	$0.00	**$15.17**	$0.00
Average Customer **10,950**	**$13,928**	**$13,912**	**$16**	**0.1%**	**$0**	**$0.00**	**$0.00**	**$16.31**	**$0.00**
11,715	**$14,850**	**$14,833**	$17	0.1%	$0	$0.00	$0.00	**$17.46**	$0.00
12,484	**$15,778**	**$15,760**	$19	0.1%	$0	$0.00	$0.00	**$18.60**	$0.00
13,251	**$16,703**	**$16,683**	$20	0.1%	$0	$0.00	$0.00	**$19.75**	$0.00
14,016	**$17,626**	**$17,605**	$21	0.1%	$0	$0.00	$0.00	**$20.88**	$0.00
14,783	**$18,551**	**$18,529**	$22	0.1%	$0	$0.00	$0.00	**$22.03**	$0.00

Bill Impact Analysis with Various Levels of Consumption:
ISR Rates

C & I LLF Large:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
37,532	**$47,543**	**$47,117**	$426	0.9%	$0	$0.00	$0.00	**$425.74**	$0.00
41,573	**$52,506**	**$52,035**	$472	0.9%	$0	$0.00	$0.00	**$471.59**	$0.00
45,616	**$57,473**	**$56,955**	$517	0.9%	$0	$0.00	$0.00	**$517.46**	$0.00
49,660	**$62,440**	**$61,877**	$563	0.9%	$0	$0.00	$0.00	**$563.33**	$0.00
53,699	**$67,402**	**$66,792**	$609	0.9%	$0	$0.00	$0.00	**$609.15**	$0.00
Average Customer **57,742**	**$72,368**	**$71,713**	**$655**	**0.9%**	**$0**	**$0.00**	**$0.00**	**$655.00**	**$0.00**
61,785	**$77,334**	**$76,633**	$701	0.9%	$0	$0.00	$0.00	**$700.87**	$0.00
65,824	**$82,296**	**$81,549**	$747	0.9%	$0	$0.00	$0.00	**$746.71**	$0.00
69,868	**$87,263**	**$86,470**	$793	0.9%	$0	$0.00	$0.00	**$792.56**	$0.00
73,911	**$92,229**	**$91,391**	$838	0.9%	$0	$0.00	$0.00	**$838.41**	$0.00
77,952	**$97,193**	**$96,309**	$884	0.9%	$0	$0.00	$0.00	**$884.27**	$0.00

C & I HLF Large:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
37,970	**$43,320**	**$42,986**	$334	0.8%	$0	$0.00	$0.00	**$334.13**	$0.00
42,061	**$47,832**	**$47,462**	$370	0.8%	$0	$0.00	$0.00	**$370.13**	$0.00
46,151	**$52,343**	**$51,937**	$406	0.8%	$0	$0.00	$0.00	**$406.13**	$0.00
50,240	**$56,853**	**$56,411**	$442	0.8%	$0	$0.00	$0.00	**$442.11**	$0.00
54,329	**$61,363**	**$60,885**	$478	0.8%	$0	$0.00	$0.00	**$478.06**	$0.00
Average Customer **58,418**	**$65,873**	**$65,359**	**$514**	**0.8%**	**$0**	**$0.00**	**$0.00**	**$514.06**	**$0.00**
62,508	**$70,384**	**$69,834**	$550	0.8%	$0	$0.00	$0.00	**$550.08**	$0.00
66,596	**$74,893**	**$74,307**	$586	0.8%	$0	$0.00	$0.00	**$586.02**	$0.00
70,686	**$79,404**	**$78,782**	$622	0.8%	$0	$0.00	$0.00	**$622.07**	$0.00
74,775	**$83,914**	**$83,256**	$658	0.8%	$0	$0.00	$0.00	**$658.04**	$0.00
78,867	**$88,427**	**$87,733**	$694	0.8%	$0	$0.00	$0.00	**$694.02**	$0.00

Bill Impact Analysis with Various Levels of Consumption:
ISR Rates

C & I LLF Extra-Large:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
189,450	**$207,186**	**$207,105**	$81	0.0%	$0	$0.00	$0.00	**$80.65**	$0.00
209,855	**$229,113**	**$229,024**	$89	0.0%	$0	$0.00	$0.00	**$89.33**	$0.00
230,255	**$251,035**	**$250,937**	$98	0.0%	$0	$0.00	$0.00	**$98.01**	$0.00
250,655	**$272,958**	**$272,851**	$107	0.0%	$0	$0.00	$0.00	**$106.70**	$0.00
271,059	**$294,884**	**$294,769**	$115	0.0%	$0	$0.00	$0.00	**$115.39**	$0.00
Average Customer **291,462**	**$316,810**	**$316,685**	**$124**	**0.0%**	**$0**	**$0.00**	**$0.00**	**$124.07**	**$0.00**
311,865	**$338,735**	**$338,602**	$133	0.0%	$0	$0.00	$0.00	**$132.75**	$0.00
332,269	**$360,661**	**$360,520**	$141	0.0%	$0	$0.00	$0.00	**$141.44**	$0.00
352,669	**$382,584**	**$382,434**	$150	0.0%	$0	$0.00	$0.00	**$150.13**	$0.00
373,069	**$404,506**	**$404,347**	$159	0.0%	$0	$0.00	$0.00	**$158.81**	$0.00
393,474	**$426,433**	**$426,266**	$168	0.0%	$0	$0.00	$0.00	**$167.50**	$0.00

C & I HLF Extra-Large:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
184,661	**$198,331**	**$197,666**	$665	0.3%	$0	$0.00	$0.00	**$664.80**	$0.00
204,549	**$219,304**	**$218,567**	$736	0.3%	$0	$0.00	$0.00	**$736.38**	$0.00
224,435	**$240,274**	**$239,466**	$808	0.3%	$0	$0.00	$0.00	**$807.97**	$0.00
244,321	**$261,244**	**$260,365**	$880	0.3%	$0	$0.00	$0.00	**$879.57**	$0.00
264,206	**$282,214**	**$281,263**	$951	0.3%	$0	$0.00	$0.00	**$951.14**	$0.00
Average Customer **284,094**	**$303,186**	**$302,164**	**$1,023**	**0.3%**	**$0**	**$0.00**	**$0.00**	**$1,022.74**	**$0.00**
303,982	**$324,159**	**$323,064**	$1,094	0.3%	$0	$0.00	$0.00	**$1,094.35**	$0.00
323,867	**$345,128**	**$343,962**	$1,166	0.3%	$0	$0.00	$0.00	**$1,165.92**	$0.00
343,753	**$366,099**	**$364,861**	$1,238	0.3%	$0	$0.00	$0.00	**$1,237.51**	$0.00
363,639	**$387,069**	**$385,760**	$1,309	0.3%	$0	$0.00	$0.00	**$1,309.09**	$0.00
383,527	**$408,041**	**$406,661**	$1,381	0.3%	$0	$0.00	$0.00	**$1,380.69**	$0.00

Testimony of
William R. Richer

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
R.I.P.U.C. DOCKET NO_____
RE: FY2013 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN
WITNESS: WILLIAM R. RICHER

DIRECT TESTIMONY

OF

WILLIAM R. RICHER

December 29, 2011

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I. INTRODUCTION

Q. PLEASE STATE YOUR FULL NAME AND BUSINESS ADDRESS.

A. My name is William R. Richer and my business address is 40 Sylvan Road, Waltham, Massachusetts 02451.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?

A. I am the Director of Revenue Requirements - Rhode Island and New Hampshire for National Grid USA Service Company, Inc. ("Service Company"). Service Company provides engineering, financial, administrative, and other technical support to subsidiary companies of National Grid USA. My current duties include revenue requirements oversight for National Grid's electric and gas distribution activities in the US, including the gas division of The Narragansett Electric Company, d/b/a National Grid ("Narragansett" or "Company").

Q. PLEASE DESCRIBE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. In 1985, I earned a Bachelor of Science degree in Accounting from Northeastern University. During my schooling I interned at the public accounting firm Pannell Kerr Forster in Boston, Massachusetts as a staff auditor and continued with this firm after my graduation. In February 1986, I joined Price Waterhouse in Providence, Rhode

Island where I worked as a staff auditor and senior auditor. During this time, I earned my certified public accountants license in the State of Rhode Island. In June 1990, I joined National Grid in the Service Company (then known as New England Power Service Company) as a supervisor of Plant Accounting. Since that time I have held various positions within the Service Company including Manager of Financial Reporting, Principal Rate Department Analyst, Manager of General Accounting, Director of Accounting Services, and Assistant Controller.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY OR TESTIFIED BEFORE THE RHODE ISLAND PUBLIC UTILITIES COMMISSION ("R.I.P.U.C" OR "COMMISSION")?

A. Yes. I have previously filed testimony with this Commission in R.I.P.U.C. Docket No. 4219 on the revenue requirement for the Company's fiscal year ("FY") 2012 Gas Infrastructure, Safety, and Reliability ("ISR") Plan, and testified in Gas Distribution Adjustment Clause proceedings to describe the calculation of the Company's gas earnings subject to the Earnings Sharing Mechanism for the fiscal years ended June 30, 2009, 2010, and 2011. I also testified before this Commission in R.I.P.U.C. Docket No. 2930 on pensions and postretirement benefits other than pensions ("PBOP") for the Company, and in R.I.P.U.C. Docket No. 2090 on revenue requirements in a base rate proceeding for The Narragansett Electric Company.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to describe the calculation of the Company's revenue requirement for FY 2013 in support of its Gas Infrastructure, Safety and Reliability Plan ("ISR Plan"), as described in the testimony of Ms. Laurie Brown.

Q. ARE THERE ANY SCHEDULES TO YOUR TESTIMONY?

A. Yes, I am sponsoring the following Schedule:

- WRR-1: Gas ISR Plan Revenue Requirement Calculation

II. ISR PLAN REVENUE REQUIREMENT

Q. PLEASE DESCRIBE HOW THE REVENUE REQUIREMENT FOR THE COMPANY'S FY 2013 GAS ISR PLAN WAS DEVELOPED.

A. As shown on Page 1, Column (b) of WRR-1, the Company's FY 2013 Gas ISR Plan revenue requirement amounts to $7,532,434 representing an incremental $5,714,544 from the FY 2012 Gas ISR Plan revenue requirement of $1,817,890. The FY 2013 Gas ISR Plan revenue requirement consists of the revenue requirement on FY 2013 proposed ISR capital investment, plus the FY 2013 revenue requirement on the FY 2012 ISR capital investment approved in the FY 2012 Gas ISR Plan. The vintage year revenue requirement calculations related to incremental non-growth capital investment (net of general plant) associated with the Company's Gas ISR Plan for FY 2013 and FY 2012 are provided on Pages 2 and 3 of Schedule WRR-1, respectively. 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 fiscal year and is defined as capital additions plus cost of removal, less annual depreciation expense embedded in the Company's base distribution rates, net of depreciation expense attributable to general plant. These amounts are shown on Lines 1 through 8, on Pages 2 and 3.[1]

Q. HOW HAVE PLANT RETIREMENTS BEEN HANDLED IN THE DEVELOPMENT OF THE REVENUE REQUIREMENT, SPECIFICALLY WITH REGARD TO THEIR IMPACT ON THE CALCULATION OF DEPRECIATION EXPENSE AND RATE BASE?

A. Because depreciation expense is affected by plant retirements, retirements have been deducted from plant additions included in 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 the purposes of calculating the revenue requirement, plant retirements have been estimated based on the percentage of retirements to additions during calendar years 2010 and 2009 for the FY 2013 and FY

[1] Because the ISR Plan is cumulative, Attachment WRR-1 Pages 2 and 3 also provides the FY2014 revenue requirement for the respective vintage year proposed capital investments for illustration purposes only.

2012 revenue requirement calculations, respectively, and have been deducted from the total depreciable capital amount as shown on Lines 1 through 3 of Schedule WRR-1. 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 R.I.P.U.C. Docket No. 3943, as shown on Line 9 of Schedule WRR-1, Pages 2 and 3. The Company has assumed a half year convention for the year of installation.

Q. HOW HAS COST OF REMOVAL BEEN HANDLED IN THE DEVELOPMENT OF THE REVENUE REQUIREMENT?

A. Unlike retirements, cost of removal affects rate base but not depreciation expense. Consequently, the cost of removal, as shown on Line 7 of Schedule WRR-1, Pages 2 and 3, is combined with the incremental depreciable amount from Line 6 (vintage year ISR allowable capital additions less non-general plant depreciation expense included in base distribution rates) to arrive at the incremental net plant investment on Line 8 to be included in the rate base upon which the annual revenue requirement is calculated.

Q. PLEASE DESCRIBE HOW TAX DEPRECIATION WAS CALCULATED IN THE REVENUE REQUIREMENT CALCULATION.

A. The tax depreciation calculations for FY 2013 and FY 2012 are provided on Pages 4 and 5 of Schedule WRR-1, respectively. 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.[2] In addition, plant additions not subject to the capital repairs deduction may be subject to bonus depreciation as shown on Lines 4 through 12. 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. In accordance with the Act, capital investments made from April 2012 through December 2012 are eligible for 50 percent bonus depreciation, as shown on Line 9 of Pages 4 and 5.[3]

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, as shown on Line 17. The amount of depreciation deducted for MACRS on Line 18 is added to the amount of capital repairs deduction plus the bonus

2 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 associated interest assessed by the IRS, in a subsequent reconciliation filing under the ISR Plan.

3 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.

depreciation deduction and cost of removal to arrive at total tax depreciation as shown on Line 20. These annual total tax depreciation amounts are carried forward to Line 10 of Schedule WRR-1, Pages 2 and 3, for the respective years, and incorporated in the deferred tax calculation.

Q. PLEASE DESCRIBE THE FINAL STEPS IN THE CALCULATION OF THE ISR PLAN REVENUE REQUIREMENT.

A. The average change in rate base, shown on Line 21 of Schedule WRR-1, Pages 2 and 3, equals the average of the current and prior year-end rate base amounts shown on Line 20. This amount is multiplied by the pre-tax rate of return in the most recent rate case, in these calculations, the one approved by the Commission in R.I.P.U.C. Docket No. 3943, 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 on Line 24, as are property taxes on Line 25, which are computed on net plant investment in the year following the investment to coincide with the timing in which property taxes are assessed. The sum of these three amounts reflects the annual revenue requirement of the Company's FY 2013 and FY 2012 Gas ISR Plan, as shown on Line 26 of Schedule WRR-1, Pages 2 and 3, respectively, which is carried forward to Schedule WRR-1 Page 1 as part of the total FY 2013 Gas ISR Plan revenue requirement of $7,532,434, as shown on Line 3 in Column (b), and represents an incremental $5,714,544 from the FY 2012 ISR Plan revenue requirement, as shown on Line 4 of that same Column.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Index of Schedules

Schedule WRR-1

Gas Infrastructure, Safety, and Reliability Plan Revenue Requirement Calculation

National Grid - RI Gas
d/b/a National Grid
Gas Infrastructure, Safety, and Reliability (ISR) Plan
Computation of Annual Revenue Requirement

Line No.		Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)
	Capital Investment:			
	Forecasted Revenue Requirement:			
1	FY 2012	$1,817,890	$5,025,507	$4,845,794
2	FY 2013		$2,506,927	$6,636,031
3	Total	$1,817,890	$7,532,434	$11,481,825
4	**Total Incremental Fiscal Year Rate Adjustment**	**$1,817,890**	**$5,714,544**	

Line Notes
1 Column (a) - From Page 3 Line 26 (Col a)
1 Column (b) - From Page 3 Line 26 (Col b)
1 Column (c) - From Page 3 Line 26 (Col c)
2 Column (b) - From Page 2 Line 26 (Col a)
2 Column (b) - From Page 2 Line 26 (Col b)
3 Line 2 + Line 1
4 (b) Line 3 Less Prior Year Line 4

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

Line No.				Fiscal Year 2013 (a)	Fiscal Year 2014 (b)
	Depreciable Net Capital Included in Rate Base				
1	Total Allowed Capital Included in Rate Base in Current Year			$57,184,191	$0
2	Retirements	Line 1 * Retirements Rate	1/	$2,498,949	$0
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 2; Column (b) = Prior Year Line 3		$54,685,242	$54,685,242
	Change in Net Capital Included in Rate Base				
4	Capital Included in Rate Base	Line 1		$57,184,191	$0
5	Depreciation Expense	As approved per Docket No. 3943, excluding general plant and 2009 CXT		$18,443,542	$0
6	Incremental Depreciable Amount	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6		$38,740,649	$38,740,649
7	Cost of Removal			$4,701,396	$4,701,396
8	**Net Plant Amount**	**Line 6 + Line 7**		**$43,442,046**	**$43,442,046**
	Deferred Tax Calculation:				
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943		3.38%	3.38%
10	Tax Depreciation	Page 4, Line 20		$43,137,661	$1,406,143
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$43,137,661	$44,543,804
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50%; Column (b) = Line 3 * Line 9		$924,181	$1,848,361
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12		$924,181	$2,772,542
14	Cumulative Book / Tax Timer	Line 11 - Line 13		$42,213,481	$41,771,262
15	Effective Tax Rate			35.00%	35.00%
16	Deferred Tax Reserve	Line 14 * Line 15		$14,774,718	$14,619,942
	Rate Base Calculation:				
17	Cumulative Incremental Capital Included in Rate Base	Line 8		$43,442,046	$43,442,046
18	Accumulated Depreciation	- Line 13		($924,181)	($2,772,542)
19	Deferred Tax Reserve	- Line 16		($14,774,718)	($14,619,942)
20	Year End Rate Base	Sum of Lines 17 through 19		$27,743,147	$26,049,562
	Revenue Requirement Calculation:				
21	Average Rate Base	Line 20÷2 for Year 1 then, (Prior Year Line 20 + Current Year Line 20)÷2		$13,871,573	$26,896,354
22	Pre-Tax ROR		2/	11.41%	11.41%
23	Return and Taxes	Line 21 * Line 22		$1,582,747	$3,068,874
24	Book Depreciation	Line 12		$924,181	$1,848,361
25	Property Taxes	$0 in Year 1, then Prior Year (Line 3 + Line 7 - Line 13) * Property Tax Rate	3/	$0	$1,718,796
26	**Annual Revenue Requirement**	**Sum of Lines 23 through 25**		**$2,506,927**	**$6,636,031**

1/ Assumes 4.37% based on 2010 retirements as a percent of capital spend; to be replaced with actual retirements

2/ Weighted Average Cost of Capital as approved in R.I.P.U.C. Docket No. 3943

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	40.63%	7.99%	3.25%		3.25%
Short Term Debt	11.66%	3.91%	0.46%		0.46%
Common Equity	47.71%	10.50%	5.01%	2.70%	7.71%
	100.00%		8.71%	2.70%	11.41%

3/ Property Tax Rate Calculation based on 2010 actual net plant in service and property tax expense applicable to distribution

Plant in Service	$613,322,109	
Completed Construction Not Classified	$41,756,384	
Total Plant in Service	$655,078,494	
Less: Intangible Plant	$28,697,923	
Distribution-Plant in Service	$626,380,570	$626,380,570
Accumulated Depreciation	$309,170,951	
Accumulated Depreciation -Intangible Plant	($18,669,589)	
Accumulated Depreciation Distribution-Plant in Service		$290,501,363
Distribution-Related Net Plant in Service	$335,879,208	$335,879,208
Distribution-Related Rate Year Property Tax Expense		$9,878,147
Distribution-Related Property Tax Rate		2.94%

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

Line No.				Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)
	Depreciable Net Capital Included in Rate Base					
1	Total Allowed Capital Included in Rate Base in Current Year			$47,660,716	$0	$0
2	Retirements	Line 1 * Retirements Rate	1/	$3,074,116	$0	$0
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 2; Columns (b) and (c) = Prior Year Line 3		$44,586,600	$44,586,600	$44,586,600
	Change in Net Capital Included in Rate Base					
4	Capital Included in Rate Base	Line 1		$47,660,716	$0	$0
5	Depreciation Expense	As approved per Docket No. 3943, excluding general plant and 2009 CXT		$18,443,542	$0	$0
6	Incremental Depreciable Amount	Column (a) = Line 4 - Line 5; Columns (b) and (c) = Prior Year Line 6		$29,217,174	$29,217,174	$29,217,174
7	Cost of Removal			$5,755,088	$5,755,088	$5,755,088
8	**Net Plant Amount**	**Line 6 + Line 7**		**$34,972,262**	**$34,972,262**	**$34,972,262**
	Deferred Tax Calculation:					
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943		3.38%	3.38%	3.38%
10	Tax Depreciation	Page 5, Line 20		$45,215,927	$615,012	$568,837
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$45,215,927	$45,830,939	$46,399,776
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50%; Columns (b) and (c) = Line 3 * Line 9		$753,514	$1,507,027	$1,507,027
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12		$753,514	$2,260,541	$3,767,568
14	Cumulative Book / Tax Timer	Line 11 - Line 13		$44,462,413	$43,570,398	$42,632,209
15	Effective Tax Rate			35.00%	35.00%	35.000%
16	Deferred Tax Reserve	Line 14 * Line 15		$15,561,845	$15,249,639	$14,921,273
	Rate Base Calculation:					
17	Cumulative Incremental Capital Included in Rate Base	Line 8		$34,972,262	$34,972,262	$34,972,262
18	Accumulated Depreciation	- Line 13		($753,514)	($2,260,541)	($3,767,568)
19	Deferred Tax Reserve	- Line 16		($15,561,845)	($15,249,639)	($14,921,273)
20	Year End Rate Base	Sum of Lines 17 through 19		$18,656,904	$17,462,082	$16,283,421
	Revenue Requirement Calculation:					
21	Average Rate Base	Line 20÷2 for Year 1 then, (Prior Year Line 20 + Current Year Line 20)÷2		$9,328,452	$18,059,493	$16,872,752
22	Pre-Tax ROR		2/	11.41%	11.41%	11.41%
23	Return and Taxes	Line 21 * Line 22		$1,064,376	$2,060,588	$1,925,181
24	Book Depreciation	Line 12		$753,514	$1,507,027	$1,507,027
25	Property Taxes	$0 in Year 1, then Prior Year (Line 3 + Line 7 - Line 13) * Property Tax Rate	3/	$0	$1,457,892	$1,413,586
26	**Annual Revenue Requirement**	**Sum of Lines 23 through 25**		**$1,817,890**	**$5,025,507**	**$4,845,794**

1/ Assumes 6.45% based on 2009 retirements as a percent of capital spend; to be replaced with actual retirements

2/ Weighted Average Cost of Capital as approved in R.I.P.U.C. Docket No. 3943

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	40.63%	7.99%	3.25%		3.25%
Short Term Debt	11.66%	3.91%	0.46%		0.46%
Common Equity	47.71%	10.50%	5.01%	2.70%	7.71%
	100.00%		8.71%	2.70%	11.41%

3/ Property Tax Rate Calculation based on 2010 actual net plant in service and property tax expense applicable to distribution

Plant in Service	$613,322,109	
Completed Construction Not Classified	$41,756,384	
Total Plant in Service	$655,078,494	
Less: Intangible Plant	$28,697,923	
Distribution-Plant in Service	$626,380,570	$626,380,570
Accumulated Depreciation	$309,170,951	
Accumulated Depreciation -Intangible Plant	($18,669,589)	
Accumulated Depreciation Distribution-Plant in Service		$290,501,363
Distribution-Related Net Plant in Service	$335,879,208	$335,879,208
Distribution-Related Rate Year Property Tax Expense		$9,878,147
Distribution-Related Property Tax Rate		2.94%

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

Line No.			Fiscal Year 2013 (a)	Fiscal Year 2014 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 2, Line 1	$57,184,191	
2	Capital Repairs Deduction Rate		50.00%	
3	Capital Repairs Deduction	Line 2 x Line 3	$28,592,096	
	Bonus Depreciation			
4	Plant Additions	Line 1	$57,184,191	
5	Less Capital Repairs Deduction	Line 3	$28,592,096	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$28,592,095	
7	Percent of Plant Eligible for Bonus Depreciation		85.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 x Line 7	$24,303,281	
9	Bonus Depreciation Rate (April 2012 - December 2012)	1 * 75% * 50%	37.50%	
10	Bonus Depreciation Rate (January 2013 - March 2013)		0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	37.50%	
12	Bonus Depreciation	Line 8 x Line 11	$9,113,730	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$57,184,191	
14	Less Capital Repairs Deduction	Line 3	$28,592,096	
15	Less Bonus Depreciation	Line 12	$9,113,730	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15	$19,478,365	$19,478,365
17	20 YR MACRS Tax Depreciation Rates		3.750%	7.219%
18	Remaining Tax Depreciation	Line 16 x Line 17	$730,439	$1,406,143
19	Cost of Removal		$4,701,396	
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19	$43,137,661	$1,406,143

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

Line No.			Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 3, Line 1	$47,660,716		
2	Capital Repairs Deduction Rate		48.00%		
3	Capital Repairs Deduction	Line 2 x Line 3	$22,877,144		
	Bonus Depreciation				
4	Plant Additions	Line 1	$47,660,716		
5	Less Capital Repairs Deduction	Line 3	$22,877,144		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$24,783,572		
7	Percent of Plant Eligible for Bonus Depreciation		75.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 x Line 7	$18,587,679		
9	Bonus Depreciation Rate (April 2011 - December 2011)	1 * 75% * 100%	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 x Line 11	$16,264,219		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$47,660,716		
14	Less Capital Repairs Deduction	Line 3	$22,877,144		
15	Less Bonus Depreciation	Line 12	$16,264,219		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15	$8,519,353	$8,519,353	$8,519,353
17	20 YR MACRS Tax Depreciation Rates		3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 16 x Line 17	$319,476	$615,012	$568,837
19	Cost of Removal		$5,755,088		
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19	$45,215,927	$615,012	$568,837

Testimony of
John F. Nestor, III

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
R.I.P.U.C. DOCKET NO. _____
RE: FY 2013 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN
WITNESS: JOHN F. NESTOR, III

PRE-FILED DIRECT TESTIMONY

OF

JOHN F. NESTOR, III

RATE DESIGN

December 29, 2011

Table of Contents

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is John F. Nestor, III. My business address is 40 Sylvan Road, Waltham, Massachusetts 02451-1120.

Q. PLEASE DESCRIBE YOUR POSITION AND RESPONSIBILITIES.

A. I am a Lead Analyst in the Gas Regulatory and Pricing organization for National Grid. My responsibilities include overseeing the design, implementation and administration of The Narragansett Electric Company d/b/a National Grid's ("National Grid" or the "Company") rates and tariffs for natural gas service in Rhode Island.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I have a Bachelor of Arts in American Studies from Merrimack College, a Masters in Business Administration from Northeastern University, and a Juris Doctorate from Suffolk University Law School. I have been employed by National Grid in my current position since November of 2008. Prior to joining National Grid, I was employed by Verizon Communications ("Verizon") and its predecessor companies for over twenty years as Vice President for Regulatory and State Government Relations, Director of Regulatory Affairs for Massachusetts and Director of Regulatory Planning and Support. I also have been

employed as an attorney in private practice and by the Massachusetts Department of Public Utilities ("MDPU") as a utility specialist, Director of Telecommunications and as regulatory counsel to the Commission. In addition, I served as a legislative assistant in the United States House of Representatives where I had responsibility for matters before the Federal Communications Commission and Federal Power Commission (now FERC).

Q. HAVE YOU PREVIOUSLY TESTIFIED OR APPEARED BEFORE THE RHODE ISLAND PUBLIC UTILITIES COMMISSION ("COMMISSION")?

A. Yes. I have testified in a number of proceedings before this Commission, including Docket No. 4219, the fiscal year ("FY") 2012 Gas Infrastructure, Safety and Reliability ("ISR") proceeding. I also have testified or appeared before this Commission and Commission staff ("Staff") in a number of proceedings and dockets during my time with Verizon and with the MDPU concerning rates, tariffs, rules and regulations, and telephone numbering issues.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is (1) to describe how the rate design was established for the ISR mechanism; (2) describe the calculation of the ISR rate factors; and (3) provide the customer bill impacts of the proposed ISR factor rates.

II. RATE DESIGN

Q. PLEASE DESCRIBE HOW THE COMPANY DEVELOPED THE RATE DESIGN FOR THE ISR MECHANISM AND RATES.

A. Since the ISR Plan is intended to provide for the timely recovery of capital investment for the safety and reliability of the Company's Rhode Island gas delivery system, the Company developed its design for the ISR mechanism and rates by beginning with the functional rate base that was approved in the compliance filing in Docket No. 3943. Similar to last years' gas ISR Plan, the Company utilized the rate base allocation factors developed for the system total for the distribution categories of Demand, Customer, and Commodity that were provided in Attachment NG-Compliance RD-4, page 2 of 4. These rate base allocation factors are set forth in Section 4, Attachment NG-JFN-3.

Next, the Company utilized the most recently available forecasted throughput for the period April 2012 through March 2013 that had been developed for the Company's 2011-2012 Gas Cost Recovery ("GCR") filing (Docket No. 4283). That data was compiled by rate class and summarized as set forth in Section 4, Attachment NG-JFN-2.

Finally, as shown in on Section 4, Attachment NG-JFN-1, the updated cumulative revenue requirement of $7,532,434 was then allocated to each rate class based upon the previously noted rate base percentage allocations and forecasted

throughput to develop separate rate class ISR factors on a per therm basis. Each rate class ISR factor was then adjusted to reflect the 2.46 percent uncollectible factor approved in Docket No. 3943.

III. ISR RATE FACTORS

Q. WHAT ARE THE ISR RATE FACTORS BEING PROPOSED BY THE COMPANY?

A. The ISR rate factors being proposed by the Company in support of its ISR filing are set forth in the table below and in Section 4, Attachment NG-JFN-1.

Rate Class	ISR Factor per therm
Res-NH	**$0.0703**
Res-H	**$0.0278**
Small	**$0.0256**
Medium	**$0.0184**
Large LL	**$0.0172**
Large HL	**$0.0123**
XL-LL	**$0.0073**
XL-HL	**$0.0049**

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, respectively. The final April 1, 2012 Distribution Adjustment Charge ("DAC")

rates, incorporating these ISR components can be found in Section 5, Attachment NG-JFN-1.

IV. BILL IMPACTS

Q. WHAT IS THE IMPACT OF THE PROPOSED ISR RATES ON CUSTOMER BILLS?

A. For the average residential heating customer using 922 therms, the ISR rate will result in an annual rate increase of $19.25, or 1.4 percent. The annual ISR rate impacts and the incremental rate increase for the period April 1, 2012 to March 31, 2012 for all rate classes are shown in Section 5, Attachment NG-JFN-2.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

JFN
Attachments

Rhode Island
DAC Rates
April 1, 2012 to March 31, 2013

Rate Class	November 1, 2011 DAC Rate Component	April 1, 2012 DAC Rate Component	April 1, 2012 DAC Rate (per therm)
Res-NH	$0.0062	$0.0703	$0.0765
Res-NH-LI	$0.0062	$0.0703	$0.0765
Res-H	$0.0062	$0.0278	$0.0340
Res-H-LI	$0.0062	$0.0278	$0.0340
Small	$0.0062	$0.0256	$0.0318
Medium	$0.0062	$0.0184	$0.0246
Large LL	$0.0062	$0.0172	$0.0234
Large HL	$0.0062	$0.0123	$0.0185
XL-LL	$0.0062	$0.0073	$0.0135
XL-HL	$0.0062	$0.0049	$0.0111

Bill Impact Analysis with Various Levels of Consumption:

ISR Rates

Residential Heating:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
600	**$966**	**$953**	$13	1.3%	$0	$0.00	$0.00	**$12.51**	$0.00
664	**$1,053**	**$1,039**	$14	1.3%	$0	$0.00	$0.00	**$13.87**	$0.00
730	**$1,143**	**$1,128**	$15	1.4%	$0	$0.00	$0.00	**$15.26**	$0.00
794	**$1,228**	**$1,212**	$17	1.4%	$0	$0.00	$0.00	**$16.57**	$0.00
857	**$1,311**	**$1,293**	$18	1.4%	$0	$0.00	$0.00	**$17.92**	$0.00
Average Customer **922**	**$1,395**	**$1,375**	**$19**	**1.4%**	**$0**	**$0.00**	**$0.00**	**$19.25**	**$0.00**
987	**$1,478**	**$1,458**	$21	1.4%	$0	$0.00	$0.00	**$20.62**	$0.00
1,051	**$1,561**	**$1,539**	$22	1.4%	$0	$0.00	$0.00	**$21.99**	$0.00
1,114	**$1,639**	**$1,616**	$23	1.4%	$0	$0.00	$0.00	**$23.27**	$0.00
1,180	**$1,722**	**$1,697**	$25	1.5%	$0	$0.00	$0.00	**$24.68**	$0.00
1,247	**$1,805**	**$1,779**	$26	1.5%	$0	$0.00	$0.00	**$26.06**	$0.00

Residential Heating Low Income:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
600	**$928**	**$916**	$13	1.4%	$0	$0.00	$0.00	**$12.51**	$0.00
664	**$1,013**	**$999**	$14	1.4%	$0	$0.00	$0.00	**$13.87**	$0.00
730	**$1,101**	**$1,085**	$15	1.4%	$0	$0.00	$0.00	**$15.26**	$0.00
794	**$1,184**	**$1,167**	$17	1.4%	$0	$0.00	$0.00	**$16.57**	$0.00
857	**$1,264**	**$1,246**	$18	1.4%	$0	$0.00	$0.00	**$17.92**	$0.00
Average Customer **922**	**$1,346**	**$1,327**	**$19**	**1.5%**	**$0**	**$0.00**	**$0.00**	**$19.25**	**$0.00**
987	**$1,428**	**$1,407**	$21	1.5%	$0	$0.00	$0.00	**$20.62**	$0.00
1,051	**$1,508**	**$1,486**	$22	1.5%	$0	$0.00	$0.00	**$21.99**	$0.00
1,114	**$1,585**	**$1,562**	$23	1.5%	$0	$0.00	$0.00	**$23.27**	$0.00
1,180	**$1,666**	**$1,641**	$25	1.5%	$0	$0.00	$0.00	**$24.68**	$0.00
1,247	**$1,748**	**$1,722**	$26	1.5%	$0	$0.00	$0.00	**$26.06**	$0.00

Bill Impact Analysis with Various Levels of Consumption:
ISR Rates

Residential Non-Heating:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
123	**$292**	**$285**	$7	2.4%	$0	$0.00	$0.00	**$6.94**	$0.00
137	**$312**	**$304**	$8	2.5%	$0	$0.00	$0.00	**$7.74**	$0.00
147	**$326**	**$318**	$8	2.6%	$0	$0.00	$0.00	**$8.31**	$0.00
161	**$345**	**$336**	$9	2.7%	$0	$0.00	$0.00	**$9.09**	$0.00
176	**$367**	**$357**	$10	2.8%	$0	$0.00	$0.00	**$9.99**	$0.00
Average Customer **189**	**$385**	**$374**	**$11**	**2.9%**	**$0**	**$0.00**	**$0.00**	**$10.73**	**$0.00**
202	**$403**	**$391**	$11	2.9%	$0	$0.00	$0.00	**$11.46**	$0.00
217	**$424**	**$412**	$12	3.0%	$0	$0.00	$0.00	**$12.32**	$0.00
231	**$444**	**$430**	$13	3.1%	$0	$0.00	$0.00	**$13.14**	$0.00
241	**$458**	**$444**	$14	3.1%	$0	$0.00	$0.00	**$13.70**	$0.00
256	**$479**	**$464**	$15	3.1%	$0	$0.00	$0.00	**$14.54**	$0.00

Residential Non-Heating Low Income:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
123	**$275**	**$268**	$7	2.6%	$0	$0.00	$0.00	**$6.94**	$0.00
137	**$294**	**$287**	$8	2.7%	$0	$0.00	$0.00	**$7.74**	$0.00
147	**$308**	**$300**	$8	2.8%	$0	$0.00	$0.00	**$8.31**	$0.00
161	**$327**	**$318**	$9	2.9%	$0	$0.00	$0.00	**$9.09**	$0.00
176	**$347**	**$337**	$10	3.0%	$0	$0.00	$0.00	**$9.99**	$0.00
Average Customer **189**	**$365**	**$354**	**$11**	**3.0%**	**$0**	**$0.00**	**$0.00**	**$10.73**	**$0.00**
202	**$383**	**$371**	$11	3.1%	$0	$0.00	$0.00	**$11.46**	$0.00
217	**$403**	**$391**	$12	3.2%	$0	$0.00	$0.00	**$12.32**	$0.00
231	**$422**	**$409**	$13	3.2%	$0	$0.00	$0.00	**$13.14**	$0.00
241	**$436**	**$422**	$14	3.2%	$0	$0.00	$0.00	**$13.70**	$0.00
256	**$456**	**$442**	$15	3.3%	$0	$0.00	$0.00	**$14.54**	$0.00

Bill Impact Analysis with Various Levels of Consumption:

ISR Rates

C & I Small:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
824	**$1,411**	**$1,397**	$15	1.0%	$0	$0.00	$0.00	**$14.50**	$0.00
916	**$1,532**	**$1,515**	$16	1.1%	$0	$0.00	$0.00	**$16.13**	$0.00
1,003	**$1,644**	**$1,626**	$18	1.1%	$0	$0.00	$0.00	**$17.65**	$0.00
1,092	**$1,756**	**$1,737**	$19	1.1%	$0	$0.00	$0.00	**$19.22**	$0.00
1,179	**$1,862**	**$1,841**	$21	1.1%	$0	$0.00	$0.00	**$20.77**	$0.00
Average Customer **1,269**	**$1,971**	**$1,949**	**$22**	**1.1%**	**$0**	**$0.00**	**$0.00**	**$22.35**	**$0.00**
1,359	**$2,080**	**$2,056**	$24	1.2%	$0	$0.00	$0.00	**$23.91**	$0.00
1,447	**$2,186**	**$2,160**	$25	1.2%	$0	$0.00	$0.00	**$25.45**	$0.00
1,535	**$2,292**	**$2,265**	$27	1.2%	$0	$0.00	$0.00	**$27.03**	$0.00
1,622	**$2,396**	**$2,367**	$29	1.2%	$0	$0.00	$0.00	**$28.56**	$0.00
1,715	**$2,507**	**$2,477**	$30	1.2%	$0	$0.00	$0.00	**$30.18**	$0.00

C & I Medium:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
7,117	**$9,305**	**$9,294**	$11	0.1%	$0	$0.00	$0.00	**$10.60**	$0.00
7,884	**$10,229**	**$10,218**	$12	0.1%	$0	$0.00	$0.00	**$11.75**	$0.00
8,649	**$11,153**	**$11,140**	$13	0.1%	$0	$0.00	$0.00	**$12.88**	$0.00
9,416	**$12,077**	**$12,063**	$14	0.1%	$0	$0.00	$0.00	**$14.03**	$0.00
10,185	**$13,005**	**$12,990**	$15	0.1%	$0	$0.00	$0.00	**$15.17**	$0.00
Average Customer **10,950**	**$13,928**	**$13,912**	**$16**	**0.1%**	**$0**	**$0.00**	**$0.00**	**$16.31**	**$0.00**
11,715	**$14,850**	**$14,833**	$17	0.1%	$0	$0.00	$0.00	**$17.46**	$0.00
12,484	**$15,778**	**$15,760**	$19	0.1%	$0	$0.00	$0.00	**$18.60**	$0.00
13,251	**$16,703**	**$16,683**	$20	0.1%	$0	$0.00	$0.00	**$19.75**	$0.00
14,016	**$17,626**	**$17,605**	$21	0.1%	$0	$0.00	$0.00	**$20.88**	$0.00
14,783	**$18,551**	**$18,529**	$22	0.1%	$0	$0.00	$0.00	**$22.03**	$0.00

Bill Impact Analysis with Various Levels of Consumption:

ISR Rates

C & I LLF Large:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
37,532	**$47,543**	**$47,117**	$426	0.9%	$0	$0.00	$0.00	**$425.74**	$0.00
41,573	**$52,506**	**$52,035**	$472	0.9%	$0	$0.00	$0.00	**$471.59**	$0.00
45,616	**$57,473**	**$56,955**	$517	0.9%	$0	$0.00	$0.00	**$517.46**	$0.00
49,660	**$62,440**	**$61,877**	$563	0.9%	$0	$0.00	$0.00	**$563.33**	$0.00
53,699	**$67,402**	**$66,792**	$609	0.9%	$0	$0.00	$0.00	**$609.15**	$0.00
Average Customer **57,742**	**$72,368**	**$71,713**	**$655**	**0.9%**	**$0**	**$0.00**	**$0.00**	**$655.00**	**$0.00**
61,785	**$77,334**	**$76,633**	$701	0.9%	$0	$0.00	$0.00	**$700.87**	$0.00
65,824	**$82,296**	**$81,549**	$747	0.9%	$0	$0.00	$0.00	**$746.71**	$0.00
69,868	**$87,263**	**$86,470**	$793	0.9%	$0	$0.00	$0.00	**$792.56**	$0.00
73,911	**$92,229**	**$91,391**	$838	0.9%	$0	$0.00	$0.00	**$838.41**	$0.00
77,952	**$97,193**	**$96,309**	$884	0.9%	$0	$0.00	$0.00	**$884.27**	$0.00

C & I HLF Large:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
37,970	**$43,320**	**$42,986**	$334	0.8%	$0	$0.00	$0.00	**$334.13**	$0.00
42,061	**$47,832**	**$47,462**	$370	0.8%	$0	$0.00	$0.00	**$370.13**	$0.00
46,151	**$52,343**	**$51,937**	$406	0.8%	$0	$0.00	$0.00	**$406.13**	$0.00
50,240	**$56,853**	**$56,411**	$442	0.8%	$0	$0.00	$0.00	**$442.11**	$0.00
54,329	**$61,363**	**$60,885**	$478	0.8%	$0	$0.00	$0.00	**$478.06**	$0.00
Average Customer **58,418**	**$65,873**	**$65,359**	**$514**	**0.8%**	**$0**	**$0.00**	**$0.00**	**$514.06**	**$0.00**
62,508	**$70,384**	**$69,834**	$550	0.8%	$0	$0.00	$0.00	**$550.08**	$0.00
66,596	**$74,893**	**$74,307**	$586	0.8%	$0	$0.00	$0.00	**$586.02**	$0.00
70,686	**$79,404**	**$78,782**	$622	0.8%	$0	$0.00	$0.00	**$622.07**	$0.00
74,775	**$83,914**	**$83,256**	$658	0.8%	$0	$0.00	$0.00	**$658.04**	$0.00
78,867	**$88,427**	**$87,733**	$694	0.8%	$0	$0.00	$0.00	**$694.02**	$0.00

Bill Impact Analysis with Various Levels of Consumption:

ISR Rates

C & I LLF Extra-Large:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
189,450	**$207,186**	**$207,105**	$81	0.0%	$0	$0.00	$0.00	**$80.65**	$0.00
209,855	**$229,113**	**$229,024**	$89	0.0%	$0	$0.00	$0.00	**$89.33**	$0.00
230,255	**$251,035**	**$250,937**	$98	0.0%	$0	$0.00	$0.00	**$98.01**	$0.00
250,655	**$272,958**	**$272,851**	$107	0.0%	$0	$0.00	$0.00	**$106.70**	$0.00
271,059	**$294,884**	**$294,769**	$115	0.0%	$0	$0.00	$0.00	**$115.39**	$0.00
Average Customer **291,462**	**$316,810**	**$316,685**	**$124**	**0.0%**	**$0**	**$0.00**	**$0.00**	**$124.07**	**$0.00**
311,865	**$338,735**	**$338,602**	$133	0.0%	$0	$0.00	$0.00	**$132.75**	$0.00
332,269	**$360,661**	**$360,520**	$141	0.0%	$0	$0.00	$0.00	**$141.44**	$0.00
352,669	**$382,584**	**$382,434**	$150	0.0%	$0	$0.00	$0.00	**$150.13**	$0.00
373,069	**$404,506**	**$404,347**	$159	0.0%	$0	$0.00	$0.00	**$158.81**	$0.00
393,474	**$426,433**	**$426,266**	$168	0.0%	$0	$0.00	$0.00	**$167.50**	$0.00

C & I HLF Extra-Large:

Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	Difference due to: GCR	DAC Base DAC	DAC ISR	EnergyEff
184,661	**$198,331**	**$197,666**	$665	0.3%	$0	$0.00	$0.00	**$664.80**	$0.00
204,549	**$219,304**	**$218,567**	$736	0.3%	$0	$0.00	$0.00	**$736.38**	$0.00
224,435	**$240,274**	**$239,466**	$808	0.3%	$0	$0.00	$0.00	**$807.97**	$0.00
244,321	**$261,244**	**$260,365**	$880	0.3%	$0	$0.00	$0.00	**$879.57**	$0.00
264,206	**$282,214**	**$281,263**	$951	0.3%	$0	$0.00	$0.00	**$951.14**	$0.00
Average Customer **284,094**	**$303,186**	**$302,164**	**$1,023**	**0.3%**	**$0**	**$0.00**	**$0.00**	**$1,022.74**	**$0.00**
303,982	**$324,159**	**$323,064**	$1,094	0.3%	$0	$0.00	$0.00	**$1,094.35**	$0.00
323,867	**$345,128**	**$343,962**	$1,166	0.3%	$0	$0.00	$0.00	**$1,165.92**	$0.00
343,753	**$366,099**	**$364,861**	$1,238	0.3%	$0	$0.00	$0.00	**$1,237.51**	$0.00
363,639	**$387,069**	**$385,760**	$1,309	0.3%	$0	$0.00	$0.00	**$1,309.09**	$0.00
383,527	**$408,041**	**$406,661**	$1,381	0.3%	$0	$0.00	$0.00	**$1,380.69**	$0.00

April 1, 2012

Revenue Requirement	Rate Class	Rate Base Allocator %	Allocation to Rate Class	Throughput dth	ISR Factor dth	ISR Factor therm	Uncollectible	ISR Factor therm
$7,532,434								
	Res-NH	5.07%	$381,933	556,875	$0.6859	0.0686	2.46%	$0.0703
	Res-H	62.89%	$4,737,481	17,489,866	$0.2709	0.0271	2.46%	$0.0278
	Small	8.20%	$617,660	2,471,503	$0.2499	0.0250	2.46%	$0.0256
	Medium	12.50%	$941,216	5,272,010	$0.1785	0.0179	2.46%	$0.0184
	Large LL	5.88%	$442,872	2,643,679	$0.1675	0.0168	2.46%	$0.0172
	Large HL	1.87%	$141,039	1,173,015	$0.1202	0.0120	2.46%	$0.0123
	XL-LL	0.84%	$63,376	890,996	$0.0711	0.0071	2.46%	$0.0073
	XL-HL	2.75%	$206,857	4,318,987	$0.0479	0.0048	2.46%	$0.0049

Firm and Transportation

Year		2,012	2,012	2,012	2,012	2,012	2,012	2,012	2,012	2,012	2,013	2,013	2,013	
Mon		**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	
1012		52,923	43,928	35,764	31,804	28,744	28,529	35,143	43,872	55,016	70,793	70,025	60,333	**556,875**
1247		1,705,118	1,081,596	473,491	422,847	362,367	345,116	409,966	1,048,113	2,257,226	3,484,287	3,376,822	2,522,916	**17,489,866**
2107		252,624	122,097	47,631	42,215	34,539	49,263	80,487	159,563	309,768	489,386	476,924	407,005	**2,471,503**
2237		221,483	139,756	36,185	79,349	38,735	74,952	106,391	230,515	405,412	673,489	679,448	514,566	**3,200,280**
22EN		71,408	36,080	29,613	21,096	17,126	24,884	46,772	76,592	120,261	146,470	128,106	100,861	**819,269**
2221		126,334	66,878	40,275	28,155	24,766	34,326	60,232	102,281	154,122	213,639	205,419	196,035	**1,252,461**
2367		25,423	20,938	17,489	17,110	15,420	15,741	20,602	23,109	27,283	32,170	28,897	30,365	**274,547**
23EN		45,806	39,741	40,916	32,135	37,197	28,359	51,562	52,931	47,832	88,742	70,169	70,479	**605,868**
2321		26,960	21,216	20,721	15,688	17,270	13,116	21,982	22,606	21,462	42,513	33,938	35,129	**292,601**
2496		15,311	13,959	13,868	14,111	12,049	11,516	15,605	14,920	15,832	17,311	19,880	16,528	**180,889**
24EN		333,466	263,359	298,321	264,001	247,551	262,574	330,188	334,658	360,785	472,292	378,725	394,159	**3,940,080**
2421		20,073	17,683	21,653	9,751	12,633	8,147	18,985	16,303	6,776	29,429	13,743	22,841	**198,017**
3367		86,548	34,767	13,067	6,089	6,033	12,504	24,255	52,733	84,144	120,574	125,122	116,023	**681,860**
33EN		89,135	37,078	22,600	13,962	12,200	20,776	53,992	101,546	159,988	180,721	161,286	149,449	**1,002,733**
3321		139,313	42,530	25,467	0	0	0	14,871	70,092	129,470	208,185	173,847	155,313	**959,087**
3496		2,551	1,202	0	435	0	151	77	2,796	5,519	10,150	9,737	7,269	**39,886**
34EN		69,932	27,373	20,518	11,695	8,024	16,349	36,914	72,590	114,736	132,559	120,164	106,656	**737,509**
3421		8,169	4,138	2,832	0	0	0	334	10,379	22,742	28,210	19,196	17,602	**113,601**
70EN		0	0	0	0	0	0	0	0	0	0	0	0	**0**
														34,816,931

Dth TOTALS		2011	2011	2011	2011	2011	2011	2011	2011	2011	2012	2012	2012	
		Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	
1,012	Res-NH	52,923	43,928	35,764	31,804	28,744	28,529	35,143	43,872	55,016	70,793	70,025	60,333	**556,875**
1,247	Res-H	1,705,118	1,081,596	473,491	422,847	362,367	345,116	409,966	1,048,113	2,257,226	3,484,287	3,376,822	2,522,916	**17,489,866**
2,107	Small	252,624	122,097	47,631	42,215	34,539	49,263	80,487	159,563	309,768	489,386	476,924	407,005	**2,471,503**
2,237	Medium	221,483	139,756	36,185	79,349	38,735	74,952	106,391	230,515	405,412	673,489	679,448	514,566	**3,200,280**
22EN	Medium-FT1	71,408	36,080	29,613	21,096	17,126	24,884	46,772	76,592	120,261	146,470	128,106	100,861	**819,269**
2,221	Medium-FT2	126,334	66,878	40,275	28,155	24,766	34,326	60,232	102,281	154,122	213,639	205,419	196,035	**1,252,461**
2,367	Large-HL	25,423	20,938	17,489	17,110	15,420	15,741	20,602	23,109	27,283	32,170	28,897	30,365	**274,547**
23EN	Large HL-FT1	45,806	39,741	40,916	32,135	37,197	28,359	51,562	52,931	47,832	88,742	70,169	70,479	**605,868**
2,321	Large HL-FT2	26,960	21,216	20,721	15,688	17,270	13,116	21,982	22,606	21,462	42,513	33,938	35,129	**292,601**
2,496	XL-HL	15,311	13,959	13,868	14,111	12,049	11,516	15,605	14,920	15,832	17,311	19,880	16,528	**180,889**
24EN	XL-HL-FT1	333,466	263,359	298,321	264,001	247,551	262,574	330,188	334,658	360,785	472,292	378,725	394,159	**3,940,080**
2,421	XL-HL-FT2	20,073	17,683	21,653	9,751	12,633	8,147	18,985	16,303	6,776	29,429	13,743	22,841	**198,017**
3,367	Large-LL	86,548	34,767	13,067	6,089	6,033	12,504	24,255	52,733	84,144	120,574	125,122	116,023	**681,860**
33EN	Large-LL-FT1	89,135	37,078	22,600	13,962	12,200	20,776	53,992	101,546	159,988	180,721	161,286	149,449	**1,002,733**
3,321	Large-LL-FT2	139,313	42,530	25,467	-	-	-	14,871	70,092	129,470	208,185	173,847	155,313	**959,087**
3,496	XL-LL	2,551	1,202	-	435	-	151	77	2,796	5,519	10,150	9,737	7,269	**39,886**
34EN	XL-LL FT1	69,932	27,373	20,518	11,695	8,024	16,349	36,914	72,590	114,736	132,559	120,164	106,656	**737,509**
3,421	XL-LL FT2	8,169	4,138	2,832	-	-	-	334	10,379	22,742	28,210	19,196	17,602	**113,601**
70EN	NGV	-	-	-	-	-	-	-	-	-	-	-	-	**-**
														34,816,931

Dth forecast		2012	2012	2012	2012	2012	2012	2012	2012	2012	2013	2013	2013		
Apr 12-Mar 13		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar		
	Res-NH	52,923	43,928	35,764	31,804	28,744	28,529	35,143	43,872	55,016	70,793	70,025	60,333	**556,875**	
	Res-H	1,705,118	1,081,596	473,491	422,847	362,367	345,116	409,966	1,048,113	2,257,226	3,484,287	3,376,822	2,522,916	**17,489,866**	
	Small	252,624	122,097	47,631	42,215	34,539	49,263	80,487	159,563	309,768	489,386	476,924	407,005	**2,471,503**	
	Medium	419,224	242,713	106,073	128,600	80,627	134,162	213,395	409,388	679,795	1,033,598	1,012,973	811,462	**5,272,010**	
	Large LL	314,997	114,375	61,134	20,052	18,233	33,280	93,118	224,371	373,602	509,479	460,255	420,784	**2,643,679**	
	Large HL	98,188	81,895	79,126	64,933	69,886	57,216	94,147	98,647	96,577	163,425	133,004	135,973	**1,173,015**	
	XL-LL	80,652	32,713	23,350	12,130	8,024	16,500	37,324	85,765	142,997	170,919	149,097	131,527	**890,996**	
	XL-HL	368,850	295,000	333,842	287,863	272,233	282,236	364,779	365,882	383,393	519,032	412,349	433,528	**4,318,987**	
														34,816,931	
		3,292,576	2,014,317	1,160,410	1,010,444	874,655	946,302	1,328,358	2,435,601	4,298,374	6,440,918	6,091,449	4,923,527		**34,816,931**

		System Total		Res-NH		Res-H		Small		Medium		Large LL		Large HL		XL-LL		XL-HL		
Distribution																				
Demand		$178,374,417		$2,768,983		$102,609,361		$13,862,322		$29,257,386		$15,362,579		$4,999,889		$2,162,329		$7,351,569		$178,374,418
Customer		$105,818,120		$11,669,558		$76,237,861		$9,454,916		$6,236,545		$1,334,485		$313,236		$208,314		$363,205		$105,818,120
Commodity		$817,961		$12,967		$408,499		$53,641		$119,583		$60,228		$23,460		$27,366		$112,217		$817,961
																				$285,010,499
Total Rate Base		$285,010,498		$14,451,508	5.07%	$179,255,721	62.89%	$23,370,879	8.20%	$35,613,514	12.50%	$16,757,292	5.88%	$5,336,585	1.87%	$2,398,009	0.84%	$7,826,991	2.75%	**$285,010,500**
					5.07%		62.89%		8.20%		12.50%		5.88%		1.87%		0.84%		2.75%	**100.00%**
																				100.00%

Res-NH	5.07%
Res-H	62.89%
Small	8.20%
Medium	12.50%
Large LL	5.88%
Large HL	1.87%
XL-LL	0.84%
XL-HL	2.75%
	100.00%