The Narragansett Electric Company
d/b/a National Grid

Gas Infrastructure, Safety and Reliability Plan FY 2019 Proposal

December 19, 2017

Submitted to:
Rhode Island Public Utilities Commission

RIPUC Docket No. 4781

nationalgrid

Filing Letter

Robert J. Humm
Senior Counsel

December 19, 2017

VIA HAND DELIVERY & ELECTRONIC MAIL

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

RE: National Grid's Proposed FY 2019 Gas Infrastructure, Safety, and Reliability Plan Docket No. 4781

Dear Ms. Massaro:

In compliance with R.I. Gen. Laws § 39-1-27.7.1, enclosed please find 10 copies of National Grid's[1] proposed Gas Infrastructure, Safety, and Reliability (ISR) Plan (Gas ISR Plan or Plan) for fiscal year (FY) 2019. The Gas ISR Plan is designed to enhance the safety and reliability of National Grid's natural gas distribution system. As required by law, National Grid submitted the proposed Plan to the Division of Public Utilities and Carriers (Division) for review. National Grid has consulted with the Division's representatives regarding the proposed Plan. The Division has indicated general concurrence with the proposed FY 2019 Gas ISR Plan, with the exception of the Company's proposal relative to the final site restoration at the liquefied natural gas (LNG) facility in Cumberland, as discovery requests issued on December 8, 2017 are pending. The Division has also reserved its right to further review the work in the Plan related to the Cumberland LNG facility and any other items set forth in the proposed Plan filed with the Public Utilities Commission, consistent with prior Gas ISR Plan filings.

The Gas ISR Plan is designed to protect and improve the gas delivery system through proactively replacing leak-prone gas mains and services, accelerating National Grid's replacement of leak-prone facilities, upgrading the system's pressure regulating systems, and addressing conflicts that arise out of municipal and water and sewer 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 National Grid proposes to perform in FY 2019, as well as the proposed targeted spending levels for each work category. This filing includes the pre-filed direct testimony of three witnesses: John B. Currie introduces the Plan document and describes the program components of the Plan; William R. Richer describes the

[1] The Narragansett Electric Company d/b/a National Grid.

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calculation of National Grid's revenue requirement; and Ann E. Leary describes the calculation of the Gas ISR factors proposed in this filing and provides the bill impacts from the proposed rate changes. For the average residential heating customer using 846 therms annually, implementation of the proposed ISR factors for the period of April 1, 2018 through March 31, 2019 will result in an annual increase of $30.34, or 2.5%.

The Gas ISR Plan presents an opportunity to facilitate and encourage investment in National Grid's gas utility infrastructure and enhance National Grid's ability to provide safe, reliable, and efficient gas service to customers.

Thank you for your attention to this matter. If you have any questions, please contact me at 401-784-7415.

Very truly yours,

Robert J. Humm

Enclosure

cc: Leo Wold, Esq.
Al Mancini
Steve Scialabba

Testimony of
John B. Currie

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 4781
RE: FY 2019 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN
WITNESS: JOHN B. CURRIE

DIRECT TESTIMONY

OF

JOHN B. CURRIE

December 19, 2017

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I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, business address, title and areas of responsibility.

A. My name is John B. Currie. My business address is 40 Sylvan Road, Waltham, MA 02451.

Q. By whom are you employed and in what role?

A. I am employed by National Grid Corporate Services LLC as Director of New England Gas Network Strategy. I am the Rhode Island jurisdictional lead for all gas issues for the gas division of The Narragansett Electric Company d/b/a National Grid (Company), including those related to the Company's capital investment strategy. In my role, I work closely with the Rhode Island Jurisdictional President, Timothy Horan, and jurisdictional staff on all local issues related to the Company's Rhode Island gas system. My responsibilities also include working with Rhode Island regulators on issues related to the gas system, development of strategies to support Company objectives regarding investment in the gas system, and to provide testimony regarding capital investments in National Grid's gas distribution system during state regulatory proceedings.

Q. Please describe your educational background and professional experience.

A. I graduated from Saint Michael's College in 1987 with a Bachelor of Science degree in

Accounting. In 2000, I graduated from Bentley University with a Master of Science degree in Taxation.

From 1987 to 1989, I worked as a staff accountant at Price Waterhouse (now PricewaterhouseCoopers). In 1989, I was employed by New England Electric System, a predecessor company to National Grid, in internal audit. From 1998 to 2016, I held roles of increasing responsibility related to Plant Accounting, Finance and Regulation. I assumed my current position at National Grid in October 2016.

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

A. Yes. I testified before the PUC in support of the Company's fiscal year (FY) 2017 Gas, Infrastructure, Safety, and Reliability (ISR) Plan in Docket No. 4678. I also represented the Company in negotiations with the Division of Public Utilities and Carriers (Division) regarding the FY 2017 Gas ISR Plan. In addition, in 2016 and 2017, I submitted testimony with the Massachusetts Department of Public Utilities in support of the leak-prone pipe replacement plan of the Boston Gas Company (Boston Gas) and Colonial Gas Company (Colonial Gas), each d/b/a National Grid, which was enacted by Massachusetts legislation and designed to implement a gas system enhancement plan focused on the replacement of proactive mains and services. I also testified in support of Boston Gas

and Colonial Gas regarding the calendar year 2017 Gas System Enhancement Plan filing in Docket No. D.P.U. 16-GESP-03 and the 2016 Gas System Enhancement Plan Reconciliation filing in Docket No. D.P.U. 17-GREC-03. Most recently, among other matters before the Massachusetts Department of Public Utilities, I sponsored testimony submitted in the base rate proceeding filed by Boston Gas and Colonial Gas in Docket No. D.P.U. 17-170. In that filing, my testimony supports the capital projects included in the Gas Safety and Reliability program for Boston Gas and Colonial Gas, and the costs of the capital additions included in the rate base for Boston Gas and Colonial Gas.

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 FY 2019 Gas ISR Plan (Gas ISR Plan or Plan).[1] Through my testimony, I present the Company's proposed Gas ISR Plan, which details the work the Company expects to complete under the proposed Gas ISR Plan and the anticipated capital investments associated with that work. Company Witness William R. Richer is providing testimony on the calculation of the revenue requirement associated with the Company's proposed Gas ISR Plan, and

[1] The Company is required by statute to annually file an infrastructure, safety, and reliability spending plan with the PUC for review and approval. See R.I. Gen. Laws § 39-1-27.7.1. In addition to budgeted spending, the annual Gas ISR Plan must contain a reconcilable allowance for the Company's anticipated capital investments and other spending for the upcoming fiscal year. See R.I. Gen. Laws § 39-1-27.7.1(c)(2). For FY 2019, the Company's fiscal year is for the period of April 1, 2018 through March 31, 2019, so the Plan would be effective April 1, 2018.

Company Witness Ann E. Leary is providing testimony relative to (1) how the rate design was calculated for the ISR mechanism; (2) the calculation of the ISR factors; and (3) the customer bill impacts of the proposed ISR factors.

III. OVERVIEW

Q. How was the Gas ISR Plan prepared?

A. The Company prepared the Gas ISR Plan and submitted it to the Division of Public Utilities and Carriers (Division) for review on September 15, 2017.[2] On October 17, 2017, the Company met with the Division regarding the Plan and subsequently responded to discovery requests from the Division about various components of the Plan. The Company and the Division continued to collaborate regarding the proposed Plan, including a subsequent meeting on December 7, 2017. On December 8, 2017, the Division issued additional discovery requests regarding the liquefied natural gas (LNG) facility in Cumberland. The Division has indicated general concurrence with the proposed Gas ISR Plan, with the exception of the Company's proposal relative to the final site restoration at the Cumberland LNG facility, as the discovery requests issued on December 8 are pending. The Division has also reserved its right to further review the work in the Plan related to the Cumberland LNG facility and any other items set forth in

[2] R.I. Gen. Laws § 39-1-27.7.1(d) requires that the Company and the Division work together over the course of 60 days in an attempt to reach an agreement on a proposed plan, which is then submitted to the PUC for review and approval within 90 days.

the proposed Plan filed with the PUC, consistent with prior Gas ISR Plan filings. Overall, the proposed Gas ISR Plan will allow the Company to meet state and federal safety and reliability requirements and maintain its gas distribution system in a safe and reliable condition. The Plan has been developed to 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 Gas ISR Plan designed to accomplish?

A. The Gas ISR Plan is designed to establish a spending plan, together with a reconcilable allowance for the anticipated capital investments and other spending needed to maintain and upgrade the Company's gas delivery system, such as proactively replacing leak-prone gas mains and services; upgrading the system's plant, pressure regulating systems, and piping; responding to emergency leak situations; and addressing conflicts that arise out of public works projects. The Plan attempts to attain the Company's 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 the Plan to the PUC for review and approval in accordance with Rhode Island law.[3]

[3] See R.I. Gen. Laws § 39-1-27.7.1(d).

Q. Are you sponsoring any exhibits through your testimony?

A. The proposed Gas ISR Plan is attached as Exhibit 1 to my testimony. The Plan 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 and Bill Impacts

My testimony focuses on Sections 1 and 2 of the Plan. As noted earlier, Mr. Richer is sponsoring the revenue requirement calculation included in Section 3, while Ms. Leary is sponsoring the rate design and bill impacts included in Section 4.

Q. What types of infrastructure, safety, and reliability work does the Gas ISR Plan include?

A. The Gas ISR Plan seeks not only to maintain the Company's distribution system, but also to proactively upgrade the system's condition to address 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 for maintaining a healthy economy and continuing to attract new residents and businesses to the state. The PUC embarked on a course of addressing Rhode Island's aging gas infrastructure in 2008, with the establishment of the Accelerated Replacement Plan. In addition to the type of infrastructure, safety, and

reliability work performed under the Accelerated Replacement Plan, the proposed Gas ISR Plan contains spending related to safety and reliability for public works, mandated programs, special projects, and reliability programs. Included in the Gas ISR Plan document is a description of the Company's proposed budget for capital investment for FY 2019 and a capital forecast for FY 2019 through FY 2023.

IV. CAPITAL INVESTMENT PLAN

Q. What levels of spending are proposed in the Gas ISR Plan?

A. For FY 2019, the Company proposes ISR spending totaling $107.58 million, including $40.90 million for Non-Discretionary capital expenditures (i.e., work required by legal, regulatory code and/or agreement or a result of damage or failure with limited exception) and $66.18 million for Discretionary capital expenditures. The Gas ISR Plan is broken down into categories of Non-Discretionary and Discretionary programs designed to maintain the safety and reliability of the Company's gas delivery infrastructure.

Q. What levels of spending is the Company proposing for Non-Discretionary programs?

A. For each Non-Discretionary program category in the Gas ISR Plan, the Company proposes the following levels of spending:

- $11.08 million net investment for Public Works programs, including $12.44 million in capital spend and $1.35 million in reimbursements;

- $19.93 million for Mandated Programs (i.e., corrosion, meter replacements, integrity management, cross bore remediation, reactive main - cast iron joint encapsulation, reactive service replacements - leaks, reactive service replacements - non-leaks/other, and reactive main replacement - maintenance);

- $0.25 million for Damage/Failure programs;

- $9.64 million for Special Projects, including $1.50 million for the Gas Expansion project, $4.74 million for the Allens Avenue 200 pounds per square inch gauge (psig) main replacement project, and $2.53 million for the Veterans Memorial 200 psig main replacement project; and

Q. What levels of spending is the Company proposing for Discretionary programs?

A. For each Discretionary program category in the Gas ISR Plan, the Company proposes the following levels of spending:

- $52.80 million for the Proactive Main Replacement program;

- $13.38 million for Gas System Reliability, including work relative to System Automation and Gas Control, Pressure Regulating Facilities, the Allens Avenue Multi Station Rebuild, Take Station Refurbishment, Heater Systems, Gas System Reliability Enhancement, LNG facilities, Valve Installation/Replacements, and Tools and Equipment; and

- $0.50 million for operation and maintenance (O&M) expense for the continued payment of 16 personnel hired to support the increase in leak-prone pipe replacement.

The Company will continue to file quarterly reports with the Division and PUC detailing the progress of its Gas ISR Plan programs for FY 2019.

Q. What does the Company's proposed Gas ISR Plan include for incremental O&M costs?

A. To support the increase in the Proactive Main Replacement program, in FY 2015 and FY 2016 the Company hired and trained 16 additional personnel to work on the Main Replacement Program ($0.4 million for the 11 FY 2015 hires and $0.16 for the FY 2016 new hires). In FY 2018, the Company included $0.57 million of O&M expense related to payment for such necessary resources to address leak-prone pipe replacement. In FY 2019, the Company is proposing to include $0.50 million to pay for these continued resources. The proposed level of funding for FY 2019 is based on FY 2017 actual spending, adjusted for inflation. As in prior fiscal years, this total amount of O&M expense will be tracked and reconciled to actual O&M in the FY 2019 Gas ISR reconciliation filing. The Company anticipates that FY 2019 will be the last year for inclusion of this O&M in the ISR. In the future these costs will be collected through base rates.

Q. Does the Company propose to include spending for any special projects for FY 2019?

Yes. As indicated in the proposed Gas ISR Plan at Section 2, Non-Discretionary Work Part D (Special Projects), the Company has identified four projects for a total of $9.64 million. The first project is the last portion of work related to the decommissioning of the LNG tank in Cumberland. As explained in the Company's FY 2018 Gas ISR Plan, approved by the PUC on February 17, 2017, the FY 2019 project relative to the Cumberland LNG site will address the final site restoration. The final site restoration work includes the installation of an underground infiltration system; the excavation of the existing site to subgrade; and the installation of filter fabric, bedding stone, rip rap, and bituminous concrete at the sliding gate. The Company proposes to spend $0.87 million for the final restoration of the Cumberland LNG site.

The second project is the Gas Expansion project, which is included to address the need to increase capacity in Southern and Northern Rhode Island. In the case of Southern Rhode Island, current projections suggest that by 2022-23 some customers could see below minimum pressures that could result in loss of service. A number of commercial customers are seeking to expand existing and new operations in the Southern Rhode Island region, such as in and around Quonset Point. All of these customers cannot receive gas service without this project. Northern Rhode Island is experiencing supply shortfalls as a result of the decommissioning of the Cumberland LNG facility. Current

shortfalls are being met by portable LNG staged at the site of the former Cumberland LNG peak shaving plant. While this approach is expected to be an effective short term solution, it is not considered a suitable long term solution, as it relies on supplemental truck deliveries during the course of the day to meet the supply requirement for duration of the design day. In addition, peak day customer requirements are expected to increase by an additional 15,000 dekatherms (Dth) per day over the next five years. As a result, continued growth of system demand needs to be restricted. For FY 2019, the Company proposes to spend a total of $1.50 million, $0.75 million each for Southern and Northern Rhode Island, to fund study and engineering costs to support the creation of specific project estimates to address the forecasted capacity constraints and associated reliability problems in Southern and Northern Rhode Island. The Company plans to continue to advance the design and permitting process to support the start of construction in Southern Rhode Island as early as FY 2020. Costs associated with the construction will be submitted for approval in the FY 2020 Gas ISR Plan. The timing of initiating construction for Northern Rhode Island is currently under review.

The third project is the Allens Avenue 200 psig main replacement project. This project is necessary to replace approximately 1,600-feet of existing 1940s vintage 12-inch and 16-inch steel main located on the Company property on Allens Avenue in Providence. The Company identified girth welds that did not meet acceptability standards for welding of pipelines and related facilities. Further review detected repair patches on the

pipe that are not allowed under current Company policy. X-rays of the repair patches indicated the existence of metal loss. In addition, this project will address corrosion that has been identified in the vault located at the Allens Avenue river crossing. For FY 2019, the Company plans to spend $4.74 million for this project. The expected completion date for this project is the summer of 2018.

The last project is the Veterans Memorial 200 psig main replacement project. This project is required to replace approximately 1,200-feet of existing 1950s vintage 12-inch and 16-inch steel main, which is part of the Company's existing 200 psig pipeline system. The section of pipeline at issue is located within an easement on property owned by Chevron Corp. (Chevron) on Veterans Memorial Parkway in East Providence. Under the terms of the easement, established in 1952, Chevron reserved the right to require the Company to relocate the 12-inch pipeline to another location within Chevron's property, at the Company's cost, if Chevron determined in its sole judgment that the 12-inch pipeline interferes with Chevron's use of its property. Chevron approached the Company about relocating the main to accommodate the condominium project under development on the property. Upon review, the Company confirmed the pipeline is in conflict with the site developer's planned construction and infrastructure. As a result, the Company's pipeline is at risk of significant safety and reliability issues from construction activities on the site and increased stresses to the existing main due to increased external loads caused by the site's development. This project will also

address corrosion that has been identified in the vault located at the Veterans Memorial river crossing. In FY 2019, the Company proposes to spend $2.53 million for this project, with an expected completion date of December 2018.

Q. You referenced the Cumberland LNG final site restoration project. What is the status of the decommissioning of the Cumberland LNG tank?

A. As I explained in my testimony in the FY 2018 Gas ISR Plan proceeding, Docket No. 4678, the plan for decommissioning the Cumberland LNG tank consisted of three phases. Phase 1 involved completing modifications to the facility to allow for utilization of portable LNG tankers. Phase 2 addressed emptying liquids and purging gaseous vapors from the tank. The Company completed the work for Phase 1 and Phase 2 in FY 2017, and included the actual costs for such for in its FY 2017 Gas ISR Reconciliation filing in Docket No. 4590, which the PUC approved on October 30, 2017 in relation to the hearing in Docket No. 4708 for the Company's 2017 Distribution Adjustment Charge proceeding. Phase 3 of the decommissioning involved the final demolition of the tank. The demolition work commenced in June 2017. The Company has completed all of the demolition work in FY 2018 and expects final costs will be below the amount approved in the FY 2018 ISR. This filing now addresses the final site restoration, which will be completed in FY 2019.

Q. In the FY 2019 Gas ISR Plan, is the Company including spending related to the actual demolition or decommissioning of the Cumberland LNG tank?

A. No. As the first three phases have already been addressed before the PUC and completed in prior fiscal years, the Company is seeking spending in FY 2019 relative to only the final site restoration. The Company informed the PUC and the Division in the FY 2018 Gas ISR Plan filing, Docket No. 4678, that final site restoration, including storm water management, is expected to occur in FY 2019.

Q. Does the Company propose to include any spending for the Proactive Service Replacement program in FY 2019?

A. No, the Company does not propose any spending for the Proactive Service Replacement program in FY 2019. The Company, with concurrence from the Division, has determined that the Proactive Service Replacement program overlapped with other programs and should be discontinued. Some of the information that contributed to this decision included the fact that service leak clusters are considered in the algorithm used to prioritize leak-prone pipe for replacement combined with the Service Replacement (Reactive) – Leaks program that is designed to address any service requiring immediate replacement. The Company had previously completed a program designed to address high pressure bare steel services with inside meter sets.

Q. Does the FY 2019 Gas ISR Plan fulfill the statutory requirements for the safety and reliability of the Company's gas distribution system in Rhode Island?

A. Yes. The Gas ISR Plan for FY 2019 establishes the capital investment in Rhode Island that is necessary to meet the needs of the Company's customers, together with a spending and work plan to maintain the overall safety and reliability of the Company's Rhode Island gas distribution system.

V. CONCLUSION

Q. Does this conclude your testimony?

A. Yes.

Exhibit 1 – JBC
Gas ISR Plan FY 2019

The Narragansett Electric Company
d/b/a National Grid

Gas Infrastructure, Safety, and Reliability Plan FY 2019 Proposal

December 19, 2017

Submitted to:
Rhode Island Public Utilities Commission

nationalgrid

Section 1
Introduction & Summary

Section 1

Introduction and Summary
FY 2019 Proposal

Introduction and Summary
FY 2019 Proposal

In consultation with the Rhode Island Division of Public Utilities and Carriers (Division), National Grid[1] has developed the following proposed fiscal year (FY) 2019[2] gas infrastructure, safety, and reliability (ISR) plan (Gas ISR Plan or Plan) in compliance with R.I. Gen. Laws § 39-1-27.7.1 (Revenue Decoupling Law), which provides for the filing of "[a]n 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."[3] The proposed Gas ISR Plan addresses capital spending on gas infrastructure and other costs related to maintaining the safety and reliability of the Company's gas distribution system. The Plan for the Company's gas distribution operations is the product of a collaborative effort with the Division. Through the Plan, the Company will maintain and upgrade its gas delivery system by proactively replacing leak-prone gas mains and services; upgrading the system's custody transfer stations, pressure regulating systems, and peak shaving plants; responding to emergency leak situations; and addressing infrastructure conflicts that arise out of state, municipal, and third-party construction projects. The Plan intends 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, promote efficiency in the management and operation of the gas distribution system, and directly benefit

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

2 FY 2019 is defined as the 12 months ending March 31, 2019.

3 R.I. Gen. Laws § 39-1-27.7.1(c)(2).

Rhode Island gas customers. The Company now submits the Plan to the Rhode Island Public Utilities Commission for review.[4]

This Introduction and Summary presents an overview of the proposed FY 2019 Plan for the statutory categories of costs, the resulting FY 2019 revenue requirement associated with the proposed Plan, the rate design based upon that revenue requirement, and the estimated typical bill impacts resulting from the rate design.

The Gas ISR Plan describes the Company's safety and reliability activities and the multi-year plan upon which the FY 2019 Plan is based. The Plan also addresses capital investment in utility infrastructure for the upcoming fiscal year. The Plan itemizes the recommended work activities by general category and provides budgets for capital investment and associated operation and maintenance (O&M) expenses.

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

[4] In accordance with R.I. Gen. Laws § 39-1-27.7.1(d), the Company and the Division must work together over the course of 60 days in an attempt to reach an agreement on a proposed Plan, which must then be submitted to the PUC for review and approval within 90 days.

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

The FY 2019 level of capital and related O&M spending provided in the Gas ISR Plan to maintain the safety and reliability of the Company's gas delivery infrastructure is $107.58 million. A description of the Company's proposed capital investment plan for FY 2019 is provided in Section 2. The revenue requirement description and calculations are contained in Section 3. A description of the rate design and bill impacts are provided in Section 4.

Gas Capital Investment Plan

The Company's proposed gas capital investment plan set forth in Section 2 summarizes the Company's planned capital investments in terms of the following key Discretionary[5] and Non-Discretionary[6] categories:

Non-Discretionary:

A. Public Works
B. Mandated Programs
C. Damage / Failure
D. Special Projects

Discretionary:

A. Proactive Main Replacement
B. Gas System Reliability

[5] Discretionary programs are not required by legal, regulatory code, and/or agreement, with limited exceptions.

[6] Non-Discretionary programs include those required by legal, regulatory code, and/or agreement, or as a result of damage or failure, with limited exceptions.

Section 2 itemizes the proposed activities by sub-categories and provides budgets for each sub-category. The Company has included its capital budget, identified the relevant projects that would be part of the FY 2019 Gas ISR Plan, and provided its rationale for the need for and benefit of performing such 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 2019 Plan would be incorporated into that longer-term planning approach.

The Company's FY 2019 Gas ISR Plan includes the elimination or rehabilitation of a total of 60 miles of leak-prone pipe (49.7 miles of proactive main replacement and rehabilitation work, 10 miles of public works replacement work, and 0.2 miles of reliability work). This rate is consistent with the weighted rate of installation and abandonment of leak-prone pipe authorized by the PUC in the FY 2018 Gas ISR Plan.

Revenue Requirement

Based upon the estimated amounts in the proposed Gas ISR Plan, the Company has provided a calculation of the proposed cumulative revenue requirement resulting from the proposed FY 2019 capital investment plan. Section 3 contains a description of the revenue requirement model for FY 2019 and an illustrative calculation for FY 2020. This calculation would form the basis for the Plan rate adjustment, which would become effective April 1, 2018, upon PUC approval. As provided in Section 3, in accordance with the Company's gas tariff, RIPUC NG-GAS No. 101, Section 3, Schedule A, Sheets 5-6, the Company will reconcile this rate adjustment as part of its annual Distribution Adjustment Charge filing. The pre-tax rate of return on rate base would be that rate of return approved by the PUC in the Amended Settlement

Agreement in the Company's most recent general rate case, Docket No. 4323, and in the future it would change to reflect changes to the rate of return approved by the PUC in future rate case proceedings. Any change in the rate of return would be applicable on a prospective basis, effective at the time of the change.

Rate Design

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

The estimated typical bill impacts associated with the rate design and bill impacts are provided in Section 4. The bill impact of the Gas ISR Plan for the average Residential Heating customer for the period April 1, 2018 through March 31, 2019 would be an annual increase of $30.34, or 2.5%.

Section 2
Gas Capital
Investment Plan

Section 2

Gas Capital Investment Plan
FY 2019 Proposal

Gas Capital Investment Plan
FY 2019 Proposal

Background

The Company developed its proposed capital investment and associated O&M expense plan to meet its obligation to provide safe, reliable, and efficient gas distribution service for customers at reasonable costs.[7] The Gas ISR Plan includes capital investment spending needed to meet state and federal regulatory requirements applicable to the Company's gas system and to maintain its distribution infrastructure in a safe and reliable condition. To address the replacement of leak-prone gas main and at-risk services, the Plan includes infrastructure, safety, and reliability work for cast-iron and non-cathodically protected steel mains and services. The Plan also contains capital spending related to safety and reliability for public works projects, mandated programs, gas reliability, and special projects.

Consistent with the goals of the Revenue Decoupling Law, in order to continue to provide safe and reliable gas delivery service to customers, it is critical that the Company remain vigilant with respect to investing in its infrastructure and have appropriate and timely cost recovery. To that end, the Company's proposed Plan identifies the capital spending investment that it expects to complete during FY 2019. At the end of this section, Table 1 contains a description of the proposed budget for the FY 2019 Plan; Table 2 contains a proposed five-year spending forecast for FY 2019 through FY 2023; and Table 3 contains actual spending based on the prior five-year period, FY 2013 through FY 2017. In FY 2019, the Company proposes to

[7] The Company delivers natural gas to approximately 267,000 Rhode Island residential and commercial and industrial customers in 33 cities and towns in Rhode Island. To provide this service, the Company owns and maintains approximately 3,200 miles of gas mains and approximately 196,000 gas services.

invest a total of $107.58 million of Plan investments, including $40.90 million for Non-Discretionary capital expenditures (i.e., work required by legal, regulatory code, and/or agreement, or as a result of damage or failure, with limited exceptions); $66.18 million for Discretionary capital expenditures; and $0.50 million in O&M expenditures, which would be included in the FY 2019 Gas ISR recovery mechanism.[8] The Plan is designed to maintain the safety and reliability of the Company's gas delivery infrastructure.

As set forth in Table 1 at the end of this section, the Company proposes the following levels of spending for each category of programs contained in the $107.58 million that the Company proposes for its Gas ISR Plan spending:

Non-Discretionary:

- $11.08 million net investment for Public Works programs, including $12.44 million in capital spend and $1.35 million in reimbursements;
- $19.93 million for Mandated Programs (i.e., corrosion, meter replacements, integrity management program (IMP), reactive main - cast iron joint encapsulation, reactive service replacements - leaks, reactive service replacements - non-leaks/other, and reactive main replacement - maintenance);
- $0.25 million for Damage/Failure programs; and
- $9.64 million for Special Projects, including final site restoration of the Cumberland liquefied natural gas (LNG) tank facility, a gas expansion project, the Allens Avenue Main Replacement project, and the Veterans Memorial Main Replacement project.

[8] For FY 2019, the Company plans to spend $136.14 million of total capital investment. Of that total amount, $29.06 million will be for projected growth and allocated spending, which is not included for recovery in the FY 2019 Gas ISR plan.

Discretionary:

- $52.80 million for the Proactive Main Replacement program;
- $13.38 million for Gas System Reliability, including work relative to System Automation, Pressure Regulating Facilities, Take Station Refurbishment, Heater Systems, Gas System Reliability Enhancement, LNG facilities, Valve Installation/Replacements, and Tools and Equipment; and
- $0.50 million for O&M expense for the continued payment of 16 personnel hired to support the increase in leak-prone pipe replacement.

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

Description of Large Programs and Projects

The proposed Gas ISR Plan includes a number of programs categorized under Non-Discretionary and Discretionary spending categories. Those programs are described in detail below.

Non-Discretionary Work:

A. Public Works

The purpose of the Public Works program is to address existing gas infrastructure conflicts, as appropriate, and to improve the safety and reliability of the Company's natural gas distribution system in conjunction with municipal reconstruction and water and sewer projects, which provide significant incremental benefits to customers and communities. Municipal and water and sewer work affords the Company an opportunity to replace additional leak-prone pipe and reduce paving costs by coordinating the Company's gas main replacement work with

planned third-party construction projects, while also benefitting customers and communities by improving service delivery and minimizing construction impacts and inconvenience. The Company has an ongoing plan to replace targeted gas mains on a risk-based approach. Coordinating the Company's Integrity programs with planned municipal and water and sewer projects has yielded increased system reliability, system integrity, and optimized capital spending. Although one of the primary purposes of Public Works spending is to address direct conflicts between planned third-party projects and existing gas infrastructure, Public Works spending provides the additional opportunity to coordinate other system improvement work, such as the replacement of leak-prone pipe, system reliability upgrades, elimination of redundant main, and regulator station upgrades.

The Company will manage multiple projects to address the dynamic nature of the Public Works process through effective liaison activity. While municipal schedules and plans change largely due to funding, it must be recognized that other factors also contribute to the scheduling of these projects (e.g., political, demand maintenance, etc.). Changes in municipal projects can and do create additional work in developing and coordinating the Company's planning and budgeting processes. Using the Company's five-year work planning process, the Company can provide some flexibility in scheduling, coordinating, and engineering projects in concert with municipal public works initiatives. For FY 2019, the Plan incorporates $12.44 million in spending under the Public Works category, of which $1.35 million is anticipated to be reimbursed under agreement with third parties. Overall, the Public Works budget provides for the replacement of approximately 10 miles of leak-prone gas main, consisting of cast iron and unprotected steel main.

B. Mandated Programs

Spending for Mandated Programs falls into the following seven categories: (1) Corrosion, (2) Purchase Meter Replacement, (3) Pipeline Integrity IMP Programs, (4) Main Replacement Reactive – Cast Iron Joint Encapsulation, (5) Reactive Service Replacement - Leaks, (6) Reactive Service Replacement - Non-leak/Other, and (7) Reactive Main Replacement - Maintenance.

1. **Corrosion** – Cathodic protection effectively extends the service life of buried steel facilities (as compared to unprotected buried steel facilities) and can prolong replacement by 20 years or more. In 1971, the Code of Federal Regulations, Part 192, was amended to require the cathodic protection of all new buried steel gas facilities. Protection is accomplished in part through ensuring proper coating by establishing proper conditions on pipe segments through installation of rectifiers, anodes, insulators, and test stations. In addition, the Corrosion program includes control line work at existing regulator stations and cathodic protection upgrades. For FY 2019, the Company proposes to spend $1.14 million on this program, which align costs to prior year experience.

2. **Purchase Meter Replacement** – Capital costs for the Purchase Meter Replacement program are required for the procurement of replacement meters. For FY 2019, the Company proposes to replace approximately 21,151 meters, which represents 7.7% of the existing meter population in Rhode Island, at a cost of $4.37 million.

3. **Pipeline Integrity - IMP** – This program is for the testing, modification, and/or replacement of the Company's higher pressure facilities and pipelines (i.e., >124 pounds per square inch gauge (psig)). For FY 2019, this will include engineering and design work for testing and/or replacement of sections of pipe under the program. For FY 2019, the Company proposes to spend a total of $0.25 million for these projects.

4. **Main Replacement Reactive - Cast Iron Joint Encapsulation** – This program provides funding for the leak sealing of cast iron bell joints that are discovered during proactive leak surveys, public odor calls, or other activities. For FY 2019, the Company proposes to spend $4.01 million on this work.

5. **Reactive Service Replacement - Leaks** – The service leak repair program addresses leaking gas services through insertion, replacement, and/or abandonment. For FY 2019, the Company proposes to spend $7.15 million for the service leak repair program.

6. **Reactive Service Replacement - Non-leak / Other** – The Non-leak/Other program contains the capital costs for service relocations, meter protection, service abandonments, and the installation of curb valves. The Company's agreement with the Division to expand curb valve installations to properties inaccessible for inside inspection will provide additional public safety benefits and complement efforts in place aimed at improving collection and meter reading opportunities in those situations where Company personnel have encountered difficulty gaining access to meters. For FY 2019, the Company proposes to spend $2.33 million on this program.

7. **Reactive Main Replacement - Maintenance** – This category of work consists of emergency main replacements or modifications because of leaks or other unplanned events where main conditions dictate immediate replacement and/or gas facilities are subject to water intrusion or exposure and require remedy. Over the past several years, the Company has received minimal requests in this category, primarily because the Company's increased Proactive Main Replacement program work has reduced the need for reactive work through construction of a more resilient system. The Company proposes to spend $0.67 million in this area.

In total, the Gas ISR Plan for FY 2019 contains $19.92 million for all categories of Mandated work.

C. Damage / Failure Program

The Company proposes to include funding for safety and reliability projects associated with remediation of damage or failure occurrences. Damage or failure projects are initiated in response to events outside the Company's control which require immediate action. The Company proposes a budget of $0.25 million for FY 2019 for such work.

D. Special Projects

Special Projects are unforeseen or unexpected projects that are necessary for the safety and reliability of the Company's gas distribution system. Such projects are generally considered one-time projects that are normally not indicative of ongoing program spending.

The Company has identified four essential projects under this category for FY 2019 for a total of $9.64 million.

1. **Cumberland LNG** – FY 2019 funding related to the decommissioning of the Cumberland LNG tank will address site restoration costs to be incurred subsequent to the completion of final tank demolition. All other work for the decommissioning of the Cumberland LNG tank has already been addressed in prior ISR filings and completed in prior fiscal years. In the FY 2018 Gas ISR Plan, the Company indicated that it expected the final site restoration, including storm water management, to occur in FY 2019. Accordingly, the scope of this work includes the installation of an underground infiltration system; the excavation of the existing site to subgrade; and the installation of filter fabric, bedding stone, rip rap, and bituminous concrete at the sliding gate. The Company proposes to spend $0.87 million for the final restoration of the Cumberland LNG site. This site will continue to be utilized for periodic pressure support using portable equipment.
2. **Gas Expansion Project** – The Company has identified a need to increase capacity in the Southern Rhode Island and Northern Rhode Island service territory. In the case of Southern Rhode Island, current projections suggest that by the winter of 2022-23, 3,750 customers could see below minimum pressures and would be at risk of losing service. In addition, several regulator station inlet pressures are predicted to fall below the minimum threshold, which would cause problems on the downstream pressure systems if the regulator stations cannot maintain their outlet set pressure. Furthermore,

customers in Southern Rhode Island are dependent on the Exeter LNG facility for pressure support in addition to supply, and should there be an outage of the Exeter plant, customers would be at risk of losing service even if an alternate supply could be made available. Increasing capacity in the region mitigates that risk. Moreover, many commercial customers seeking to expand existing and new operations in the Southern Rhode Island region, such as in and around Quonset Point, cannot be served without this project. Northern Rhode Island is experiencing supply shortfalls as a result of the decommissioning of the Cumberland LNG facility. Historically, the Cumberland LNG facility supplied 30,000 dekatherms (Dth) per day. Since the Company made the decision to take the facility out of service, the Company secured an incremental 24,000 Dth per day from the Tennessee Gas Pipeline Company, L.L.C., delivered to the Company's citygate in Lincoln to replace most of the lost supply. The remaining 6,000 Dth will be met by portable LNG staged at the site of the former Cumberland LNG peak shaving plant.[9] While this approach is expected to be an effective short term solution, it is not considered to be a suitable long term solution, as it relies on supplemental truck deliveries during the course of the day to meet the supply requirement for duration of the design day. In addition, peak day customer requirements are expected to increase by an additional 15,000 Dth per day over the next five years. As a result, continued growth of system demand needs to be restricted. For FY 2019, the Company proposes to spend a total of $1.50 million, $0.75 million each for Southern and Northern Rhode Island, to

[9] The Company submitted a proposal in its 2017-18 Gas Cost Recovery filing, Docket No. 4719, to lease third-party portable LNG equipment and services at the Cumberland LNG facility to replace gas supply lost from the decommissioning of the Cumberland LNG tank. That proposal is still under review.

fund study and engineering costs to support the creation of specific project estimates to address the forecasted capacity constraints and associated reliability problems in Southern and Northern Rhode Island. Under the current schedule, the Company anticipates developing a plan for Southern Rhode Island that would begin construction in FY 2020. The timing of initiating construction for Northern Rhode Island is currently under review.

3. **Allens Avenue Main Replacement** – The 200 psig pipeline that runs from the Providence River crossing to the Allens Avenue regulator station requires replacement due to integrity concerns. This project is necessary to replace approximately 1,600-feet of existing 1940s vintage 12-inch and 16-inch steel main located on the Company property on Allens Avenue in Providence. A girth weld on the existing pipeline was exposed during a gas pressure regulation engineering project. The appearance of the weld concerned the inspector on-site, who then requested that the weld be assessed by both visual and non-destructive examination testing methods, such as x-rays. The examination indicated that the weld did not meet current acceptability standards for welding of pipelines and related facilities, which raised concerns about the structural integrity of the girth welds. After review of available documentation and as-built conditions, it was determined that the weld at issue could be indicative of the weld quality over the entire 1,600 foot line segment. This type of weld defect increases the risk of the line failing at its girth welds. The Company exposed two additional girth welds and found similar defects. Further review detected repair patches on the pipe that are not allowed under current Company policy. X-rays of the repair patches indicated

the existence of metal loss. Due to these findings the Company determined that the line must be replaced with current day materials and construction practices. Thus, the Allens Avenue Main Replacement project will address the concern of the integrity of the pipeline by replacing both the pipe and welds constructed to current construction standards. This pipe is critical to the Company's gas distribution system because it helps move gas from the pipeline company at the Wampanoag Trail citygate in East Providence and gas regulator station on Allens Avenue. In addition, this project will address corrosion that has been identified in the vault located at the Allens Avenue river crossing. The project will include the replacement of 42 feet of existing 10-inch 200 psig vault piping with 42 feet of 12-inch coated steel pipe. Additional work includes the replacement of the three existing 10-inch 200 psig coated steel runs with 30 feet of 10-inch coated steel along with three 10-inch ball valves. For FY 2019, the Company plans spending of $4.74 million for this project. The expected completion date for this project is the summer of 2018.

4. **Veterans Memorial Main Replacement** – This project is required to replace approximately 1,200-feet of existing 1950s vintage 12-inch and 16-inch steel main, which is part of the Company's existing 200 psig pipeline system. The section of pipeline at issue is located within an easement on property owned by Chevron Corp. (Chevron) on Veterans Memorial Parkway in East Providence. Under the terms of the easement, established in 1952, Chevron reserved the right to require the Company to relocate the 12-inch pipeline to another location within Chevron's property, at the Company's cost, if Chevron determined in its sole judgment that the 12-inch pipeline

interferes with Chevron's use of its property. Chevron approached the Company about relocating the main to accommodate a condominium project under development on the property. Upon review, the Company confirmed the pipeline is in conflict with the site developer's planned construction and infrastructure. As a result, the Company's pipeline is at risk of significant safety and reliability issues from construction activities on the site and increased stresses to the existing main due to increased external loads caused by the site's development. Namely, the developer's plan has called for excavation that would come within one foot of the existing 200 psig main, and the developer's plan expects to add 10 to 12 feet of fill over the existing main. This main is critical to the Company's gas distribution system because it helps move gas from the pipeline company at the Wampanoag Trail citygate in East Providence and delivers it to the LNG tank and gas regulator station on Allens Avenue in Providence. This project will also address corrosion that has been identified in the vault located at the Veterans Memorial river crossing. It will include the replacement of 40 feet of existing 10-inch 200 psig vault piping with 40 feet of 16-inch coated steel pipe. Additional work includes the replacement of the three existing 10-inch 200 psig coated steel runs with 30 feet of 10-inch coated steel along with three 10-inch ball valves. In FY 2019, the Company proposes to spend $2.53 million for this project. The expected completion date for this project is December 2018.

In total, for FY 2019, the Gas ISR Plan contains $40.90 million for non-discretionary work.

Discretionary Work:

A. Proactive Main Replacement Program

The value of and need for targeted spending on the replacement of leak-prone gas main and services is well-documented and has been accepted by both the PUC and Division. For FY 2019, the Company forecasts spending $52.80 million on its Proactive Main Replacement and Rehabilitation programs, which will address approximately 49.7 miles of leak-prone gas main and 3,826 service relays, inserts, or tie-ins.

1. Proactive Main Replacement (<16-inch)

The Proactive Main Replacement program (<16-inch) consists of the installation of 42.8 miles and the abandonment of approximately 49.7 miles of cast iron and unprotected steel main with a diameter of less than 16 inches, and the renewal, abandonment, or tie-over of existing services. Proactive Main Replacement program costs have increased over the past several years, in part because the proportion of cast iron gas mains that the Company is replacing has increased. Moreover, the costs for replacement of cast iron main is typically greater than unprotected bare steel due to several key factors, including the following: (1) cast iron is predominant on low and intermediate pressure systems consisting of larger diameter mains; and (2) cast iron facilities are typically centralized in urban areas where costs are driven by higher customer density, greater underground congestion (e.g., excavation), and increased restoration and traffic control. The Company has analyzed historic costs and has developed budget projections based

on project specific main replacement candidates identified for completion in the program. For FY 2019, the Company proposes to spend $52.80 million on the Proactive Main Replacement (<16-inch) program.

2. Proactive Large Diameter Program (>=16-inch)

The Company does not have any planned work for this program in FY 2019, so that it can focus on more emergent projects over the next fiscal year. However, the Company plans to resume this program in FY 2020.

B. Proactive Service Replacement

The Company and the Division have consulted regarding the risk mitigation benefits of the Proactive Service Replacement program, and have determined that the Proactive Service Replacement program overlapped with other programs and should be discontinued. Information that contributed to this decision included the fact that service leak clusters are considered in the algorithm used to prioritize leak prone pipe for replacement combined with the Service Replacement (Reactive) – Leaks program that is designed to address any service requiring immediate replacement. The Company had previously completed a program designed to address high pressure bare steel services with inside meter sets.

C. Gas System Reliability

Reliability spending includes 13 programs to address gas control and system automation, valve installation/replacement, take stations, pressure regulation, heating, LNG facilities, gas network reliability and resiliency, replacement pipe on bridges, access protection remediation,

and capital tools and equipment. The FY 2019 Gas ISR Plan contains $13.38 million in spending for Gas System Reliability. A summary of each major program is provided below.

1. Gas System Control

Gas System Control funding of $0.50 million is necessary to address a telemetry upgrade and meter reading platform upgrades. Verizon has announced that it is eliminating its 3G network by 2021 to free up space for new networks. If left as-is, the Company's current telemetry devices will be unable to communicate with the gas system. Under the telemetry upgrade project, the Company's Instrumentation and Regulation personnel will replace the 3G telemetry devices with new 4G devices. Moreover, Rhode Island is the only region of National Grid that utilizes the MV90 gas metering platform, which is approximately 30 years old and has been rendered obsolete. Under this project, the Company will convert approximately 700 meters from MV90 to Metretek, which will result in single platform for all of Rhode Island and National Grid gas metering.

2. Valve Installation / Replacement

Valves are used to sectionalize portions of the gas network to support both planned and unplanned field activities. Replacement of inoperable valves is necessary to ensure the Company's continued ability to effectively isolate portions of the distribution system. New valve

installations are also occasionally needed to provide the capability to reduce the size of an isolation area where existing valves would result in broader shutdown than desired. For FY 2019, the Company has budgeted $0.16 million for valve replacements.

3. System Automation

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

The Company'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, the Company has approximately 195 gas pressure regulator stations disbursed throughout its Rhode Island gas service territory. Although a limited number of these regulator stations have full system telemetry and control capability, most do not. In addition to monitoring and controlling the regulator stations, the Company must also monitor system end points to ensure

that adequate system pressures are being maintained in remote areas under a variety of operating conditions. For FY 2019, the Company is proposing spending of $1.03 million for its System Automation and Control program. The Company's FY 2019 work will provide alternating current (AC) power, telemetry, and/or remote control to approximately 40 locations.

4. Heater Program

The Heater installation program provides for the installation and replacement of gas system heaters, which are operated to ensure proper conditioning and control of gas temperatures at key Company facilities. Work for this program began in FY 2018, and the Company plans to continue to engineer and construct heaters at the Company's Cranston gate station during FY 2019. The Company will spend $0.80 million for the construction phase of this work during FY 2019.

5. Pressure Regulating Facilities

The Company's pressure regulating facilities have been designed to reliably control gas distribution system pressures and maintain continuity of supply during normal and critical gas demand periods. Each regulator station has specific requirements for flows and pressures based on the anticipated needs of the station. A facility includes both pressure-regulating piping and equipment as well as control lines, but it may also include a heater or a scrubber. The Company has instituted a program that provides for condition-based assessments of all regulator stations. Accepted engineering guidelines provide for design, planning, and

operation of these gas distribution facilities. Applicable state and federal codes are followed to help ensure safe and continuous supply of natural gas to the Company's customers and the communities it serves. The FY 2019 Plan includes enhancements in response to regulator station work prioritized through condition-based assessments, which include, in part, station accessibility, pipe condition (i.e., corrosion), water intrusion, redundancy, station isolation, and common mode failure. In FY 2019, two regulator station replacements are planned in East Providence and a third at a location in Johnston. The Company will spend $2.67 million during FY 2019 for this category.

6. Allens Avenue Multi Station Rebuild Project

The Allens Avenue Multi Station Rebuild project is a multi-year project designed to replace or retire seven existing pressure regulating facilities at the major gas interchange. The work includes the abandonment and/or removal of obsolete pipe and equipment in support of the safety and reliability of the Company's distribution system at this location. For FY 2019, the Company proposes to spend $2.97 million for this work.

7. Take Station Refurbishments

The Take Station Refurbishment program will address required modifications to the Company's custody transfer stations. Projects include installation of remote operated valves a three stations, design costs for future station construction and

pre-work on a station abandonment. The Company will spend $1.00 million during FY 2019 for this program.

8. Gas System Reliability – Gas Planning Program

The Gas Planning program identifies projects that support system reliability through standardization and simplification of system operations (e.g., system up-ratings and de-ratings and regulator elimination), integration of systems (e.g., tie-ins), and new supply sources (e.g., take stations). For FY 2019, the Company proposes to spend approximately $1.47 million for four projects in its Gas Planning program. Two of the projects will assist in eliminating single-feed systems and two will address the relocation of flood-prone regulator stations. The program also provides funding for final restoration costs for two carryover single feed elimination projects. One of the single feed elimination projects includes the added benefit of replacing approximately 0.2 miles of leak-prone pipe.

9. Instrumentation and Regulation (I&R) Reactive Program

The I&R Reactive program is established to address capital project requirements over and above the Pressure Regulation capital budget. Projects range from instrumentation replacement due to failure; replacement of obsolete/unreliable equipment, such as regulators, pilots, boilers, heat exchangers, odorant equipment, and station valves; and replacement of building roofs or doors due to deterioration. For FY 2019, the Company proposes to spend $1.20 million for this program.

10. LNG

The LNG program is established to address specific and blanket capital project requirements at the Company's Exeter LNG plant. Specific projects include $0.50 million for the replacement of a boil-off compressor. This will allow for the retirement of two obsolete units at the Exeter LNG facility and will leave the facility with two new compressors. The remaining funding is associated with the blanket program for the Exeter LNG plant, which is aligned with recent historical experience for this facility.

11. Replace Pipe on Bridges

In FY 2019, the Company expects to spend $0.10 million for the identification of projects and related engineering costs for replacement of main on bridges, which spending is not currently addressed in other programs. For example, the Proactive Main Replacement program does not include replacement over bridges and structures. The Corrosion program is limited to remediation of condition issues on structures (e.g., re-coating), but does not address full replacements. Thus, this safety and reliability program falls into its own category.

12. Access Protection Remediation

The Access Protection Remediation program is designed to reduce the risk of public injury by restricting and/or deterring public access to the Company's elevated gas facilities. In FY 2019, the Company expects to spend $0.10 for the identification of projects and related engineering for this program.

13. Capital Tools and Equipment

This category includes tools and equipment required to support the performance of work contained in the Gas ISR Plan and to provide for the safety and reliability of the gas distribution system. The Company will spend $0.43 on capital tools and equipment during FY 2019.

In total, for FY 2019, the proposed Gas ISR Plan contains $66.180 million for Discretionary work.

O&M Spending

To support the increase in the Proactive Main Replacement program, in FY 2015 and FY 2016 the Company hired and trained 16 additional personnel to work on the Main Replacement Program. For FY 2019, the Company proposes to include $0.50 million of O&M expenses to pay for these necessary resources to address leak-prone pipe replacement. Funding for FY 2019 is based on FY 2017 actual spending, adjusted for inflation. As in prior years, the total amount of O&M expenses will be tracked and reconciled in the Company's next annual Gas ISR reconciliation filing.

Five-Year Gas ISR Investment Plan

As of December 31, 2016, approximately 1,186 miles, or 37%, of the 3,193 miles in the Company's gas distribution system in Rhode Island is made up of leak-prone pipe. The 1,186 miles of leak-prone pipe are comprised of 416 miles of unprotected steel and 770 miles of cast iron and wrought iron gas main. At the current pace of proposed replacement, the Company will

eliminate or rehabilitate all cast iron, wrought-iron, and unprotected steel main and services within the next 18 years.

The Company's proposed five-year Gas ISR investment plan is provided in Table 2, below. Table 2 contains the approved FY 2019 Plan spending along with spending projected within each of the primary categories for the period FY 2020 through FY 2023.

The Company's prior five-year Gas ISR investment plan actual spend is provided in Table 3, below.

Table 1
Narragansett Gas FY 2019
($000)

NON-DISCRETIONARY **Public Works**	**Budget**	**Total**
CSC/Public Works - Non-Reimbursable	$11,084	
CSC/Public Works - Reimbursable	$1,354	
CSC/Public Works - Reimbursements	-$1,354	
Public Works Total		**$11,084**
Mandated Programs		
Corrosion	$1,144	
Purchase Meters (Replacements)	$4,371	
Main Replacement (Reactive) - Maintenance (incl Water Intrusion)	$670	
Main Replacement (Reactive) - CI Joint Encapsulation	$4,012	
Service Replacement (Reactive) - Leaks	$7,146	
Service Replacements (Reactive) - Non-Leaks/Other	$2,331	
Pipeline Integrity IVP (Integrity Verification Program)	$252	
Mandated Total		**$19,925**
Damage / Failure (Reactive)		
Damage / Failure Total	$250	**$250**
Special Project		
Cumberland LNG Decommission	$867	
Gas Expansion Plan	$1,500	
Pipeline Integrity IVP - Allens Ave 200 psig main replacement due to weld issue	$4,735	
Pipeline Integrity IVP - Veterans Memorial Drive 200 psig main replacement	$2,533	
Special Project Total		**$9,635**
NON-DISCRETIONARY TOTAL		**$40,895**
DISCRETIONARY		
Proactive Main Replacement		
Main Replacement (Proactive) - Leak Prone Pipe	$52,802	
Proactive Main Replacement Total		**$52,802**
Reliability		
Gas System Control	$550	
Valve Installation/Replacement	$159	
System Automation	$1,033	
Heater Program	$800	
Pressure Regulating Facilities	$2,666	
Allens Ave Multi Station Rebuild	$2,970	
Take Stations	$1,000	
Gas System Reliability - Gas Planning	$1,472	
I&R - Reactive	$1,202	
LNG	$903	
Replace Pipe on Bridges	$100	
Access Protection Remediation	$100	
Tools & Equipment	$427	
Reliability Total		**$13,382**
DISCRETIONARY TOTAL		**$66,184**
Capital Spending Total		**$107,079**
O&M		**$502**
Gas ISR Plan Total		**$107,581**

Table 2

RI Gas ISR Spending Forecast
($000)

Investment Categories	FY19	FY20	FY21	FY22	FY23	FY19 to FY23 TOTAL
NON-DISCRETIONARY						
Public Works	$ 11,084	$ 11,367	$ 11,656	$ 11,954	$ 12,259	$ 58,319
Mandated Programs	$ 19,925	$ 21,039	$ 21,434	$ 21,838	$ 21,998	$ 106,235
Damage / Failure (Reactive)	$ 250	$ 250	$ 250	$ 250	$ 250	$ 1,250
Special Projects	$ 9,635	$ -	$ -	$ -	$ -	$ 9,635
NON-DISCRETIONARY TOTAL	$ 40,895	$ 32,655	$ 33,341	$ 34,042	$ 34,507	$ 175,439
DISCRETIONARY						
Proactive Main Replacement	$ 52,802	$ 67,201	$ 71,912	$ 73,350	$ 74,816	$ 340,081
Reliability	$ 13,382	$ 18,033	$ 24,305	$ 20,625	$ 18,775	$ 69,492
DISCRETIONARY TOTAL	$ 66,184	$ 85,234	$ 96,217	$ 93,975	$ 93,591	$ 409,573
Capital Total (Excluding Growth)	$ 107,079	$ 117,889	$ 129,558	$ 128,017	$ 128,098	$ 585,012
O&M Total	$ 502					$ 502
GAS ISR TOTAL	**$ 107,581**	**$ 117,889**	**$ 129,558**	**$ 128,017**	**$ 128,098**	**$ 585,514**

Table 3

RI Gas ISR Spend Historical

($000)

Investment Categories	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
NON-DISCRETIONARY					
Public Works	$ 1,910	$ 3,190	$ 7,207	$ 7,732	$ 8,597
Mandated Programs*	$ 12,390	$ 15,980	$ 15,415	$ 16,861	$ 16,370
Damage / Failure	$ -	$ -	$ -	$ -	$ -
Remediation Projects	$ -	$ -	$ -	$ -	$ 5,020
NON-DISCRETIONARY TOTAL	$ 14,300	$ 19,170	$ 22,622	$ 24,593	$ 29,987
DISCRETIONARY					
Proactive Main Replacement	$ 34,590	$ 41,790	$ 40,904	$ 58,386	$ 48,872
Proactive Service Replacement	$ 3,890	$ 2,550	$ 1,121	$ 1,789	$ -
Reliability	$ 7,100	$ 8,720	$ 8,968	$ 7,914	$ 8,403
Special Projects	$ -	$ 880	$ 3,728	$ 1,188	$ -
DISCRETIONARY TOTAL	$ 45,580	$ 53,940	$ 54,721	$ 69,276	$ 57,275
Capital Total	$ 59,880	$ 73,110	$ 77,343	$ 93,869	$ 87,262
O&M	$ -	$ -	$ 503	$ 464	$ 488
GAS ISR TOTAL	**$ 59,880**	**$ 73,110**	**$ 77,846**	**$ 94,333**	**$ 87,750**

Section 3
Revenue Requirement

Section 3

Revenue Requirement
FY 2019 Proposal

Revenue Requirement
FY 2019 Proposal

The attached proposed revenue requirement calculation reflects the revenue requirement related to the Company's proposed investment in its Gas ISR Plan for the fiscal year ended March 31, 2019.

As shown on Attachment 1, Page 1, Column (b), the Company's Gas ISR Plan cumulative revenue requirement totals $45,776,892, which is an incremental $9,225,940 over the amount currently being billed for the Gas ISR Plan. The revenue requirement consists of the following elements: (1) O&M expenses of $502,000 associated with hiring, training, and supervision of additional personnel to support the increase in leak-prone pipe replacement for FY 2019, as described in Section 2 of the Plan; (2) the revenue requirement of $4,159,401 on FY 2019 proposed non-growth ISR capital investment of $107,079,000, as calculated on Attachment 1, Page 2, plus the FY 2019 revenue requirement on incremental non-growth ISR capital investment for FY 2012 through FY 2018 totaling $31,569,228; and (3) property tax expenses of $9,546,263, as shown on Attachment 1, Page 21, in accordance with the property tax recovery mechanism included in the Amended Settlement Agreement in Docket No. 4323. Importantly, the incremental capital investment for the FY 2019 ISR revenue requirement excludes capital investment embedded in base rates in Docket No. 4323 for FY 2012 through FY 2014. Incremental non-growth capital investment for this purpose is intended to represent the net change in net plant for non-growth infrastructure investments during the relevant 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, which is not eligible for inclusion in the Gas ISR Plan).

For illustration purposes only, Attachment 1, Page 1, Column (c) provides the FY 2020 revenue requirement for the respective vintage year capital investments. Notably, these amounts will be trued up to actual investment activity after the conclusion of the fiscal year, with rate adjustments for the revenue requirement differences incorporated in future ISR filings.

Gas Infrastructure Investment

Incremental Capital Investment

As noted above, Attachment 1, Page 2 calculates the revenue requirement of incremental capital investment associated with the Company's FY 2019 Gas ISR Plan, that is, gas infrastructure investment (net of general plant) incremental to the amounts embedded in the Company's base distribution rates. The proposed capital investment, including cost of removal, is obtained from Table 1 in Section 2 of the Plan. The FY 2019 revenue requirement also includes the incremental capital investment associated with the Company's FY 2012 through FY 2018 Gas ISR Plans, excluding investments reflected in rate base in Docket No. 4323 for FY 2012 through FY 2014.

Attachment 1, Page 18 calculates the incremental FY 2012 through FY 2014 ISR capital investment and the related incremental cost of removal and incremental retirements for the FY 2019 ISR revenue requirement. The calculations on Page 18 compare ISR-eligible capital investment, cost of removal, and retirements for FY 2012 through FY 2014 to the corresponding amounts reflected in rate base in Docket No. 4323.

Gas Infrastructure Revenue Requirement

The revenue requirement calculation on incremental gas infrastructure investment for vintage year FY 2019 is shown on Attachment 1, Page 2. The revenue requirement calculation incorporates the incremental Gas ISR Plan capital investment, cost of removal, and retirements, which are the basis for determining the three components of the revenue requirement: (1) the return on investment (i.e., average Plan rate base at the weighted average cost of capital); (2) depreciation expense; and (3) property taxes. The calculation on Page 2 begins with the determination of the depreciable net incremental capital that will be included in the Plan rate base. Because depreciation expense is affected by plant retirements, retirements have been deducted from the total allowed capital included in the Plan rate base in determining depreciation expense. Retirements, however, do not affect rate base, as both plant-in-service and the depreciation reserve are reduced by the installed value of the plant being retired and, therefore, have no impact on net plant. For purposes of calculating the revenue requirement, plant retirements have been estimated based on the percentage of actual retirements to additions during FY 2017 of 9.97% 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% composite depreciation rate, as approved in Docket No. 3943,[10] and as shown on Line 9. The Company has assumed a half-year convention for the year of installation. Unlike retirements, cost of removal affects rate base, but not depreciation expense. Consequently, the cost of removal, as shown on Line 7, is combined

[10] The Company did not change depreciation rates in its most recent rate case, Docket No. 4323, so the applicable depreciation rate was approved in the Company's prior rate case, Docket No. 3943.

with the incremental depreciable amount from Line 6 (vintage year ISR Plan allowable capital additions, less non-general plant depreciation expense included in base distribution rates) to arrive at the incremental investment on Line 8 to be included in the rate base upon which the return component of the annual revenue requirement is calculated.

The rate base calculation incorporates net plant from Line 8 and accumulated depreciation and accumulated deferred tax reserves as shown on Lines 13 and 19, respectively. The deferred tax amount arising from the capital investment, as calculated on Lines 14 through 19, equals the difference between book depreciation and tax depreciation on the capital investment, multiplied by the effective tax rate, net of any tax net operating losses (NOL) and deferred tax proration. The calculation of tax depreciation is described below. The average rate base is shown on Line 24. This amount is multiplied by the pre-tax rate of return approved by the PUC in Docket No. 4323, as shown on Line 25, to compute the return and tax portion of the incremental revenue requirement, as shown on Line 26. Incremental depreciation expense is added to this amount on Line 27. The sum of these amounts reflects the annual revenue requirement associated with the capital investment portion of the Plan on Line 29, which is carried forward to Page 1 as part of the total Plan revenue requirement. Similar revenue requirement calculations for the vintage FY 2018, FY 2017, FY 2016, FY 2015, FY 2014, FY 2013, and FY 2012 incremental Plan capital investment are shown on Pages 4, 6, 8, 10, 12, 14, and 16, respectively. These capital investment revenue requirement amounts are added to the total O&M expense on Page 1, Line 1, and the total property tax recovery on Page 1, Line 11, to derive the total FY 2019 Gas ISR Plan revenue requirement of $45,776,892, as shown on Page 1,

Line 13. This represents a $9,225,940 increase from the FY 2018 Gas ISR Plan revenue requirement, as shown on Line 14.

Tax Depreciation Calculation

The tax depreciation calculation for FY 2019 is provided on Attachment 1, Page 3. The tax depreciation amount assumes that a portion of the capital investment, as shown on Line 1, will be eligible for immediate deduction on the Company's fiscal year federal income tax return. This immediate deductibility is referred to as the capital repairs deduction.[11] In addition, plant additions not subject to the capital repairs deduction may be subject to bonus depreciation, as shown on Page 3, Lines 4 through 12 for FY 2019. During 2010, Congress passed the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (Tax Act), which provided for an extension of bonus depreciation. Specifically, the Tax Act provided for the application of 100% bonus depreciation for investment constructed and placed into service after September 8, 2010 through December 31, 2011, and then 50% bonus depreciation for similar capital investment placed into service after December 31, 2011 through December 31, 2012. The 50% bonus depreciation rate was later extended through December 31, 2013, and then extended further through December 31, 2017 via the Protecting Americans From Tax Hikes

[11] In 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 fiscal year tax returns. This has formed the basis for the capital repairs deduction assumed in the Company's revenue requirement. This tax deduction has the effect of increasing deferred taxes and lowering the revenue requirement that customers will pay under the capital investment reconciliation mechanism. The Company's federal income tax returns are subject to audit by the IRS. If it is determined in the future that the Company's position on its tax returns on this matter was incorrect, the Company will reflect any related IRS disallowances, plus any associated interest assessed by the IRS, in a subsequent reconciliation filing under the Gas ISR Plan.

(PATH) Act. The PATH Act also extended bonus depreciation through 2019, with the rate phasing down to 40% in 2018 and 30% in 2019. In accordance with the PATH Act, capital investments made from April 2018 through December 2018 are eligible for 40% bonus depreciation and capital investments made from January 2019 through March 2019 are eligible for 30% depreciation, as shown on Page 3, Lines 9 and 10 for FY 2019. Finally, the remaining plant additions not deducted as bonus depreciation are then subject to the IRS Modified Accelerated Cost-Recovery System, or MACRS, tax depreciation rate. The amount of depreciation deducted for MACRS is added to the amount of capital repairs deduction plus the bonus depreciation deduction, tax loss on retirements, and cost of removal to arrive at total tax depreciation. These annual total tax depreciation amounts are carried forward to Line 10 of Page 2 and incorporated in the deferred tax calculation. Similar tax depreciation calculations are provided for FY 2018 through FY 2012 on Pages 5, 7, 9, 11, 13, 15, and 17, respectively.

Federal Net Operating Loss

Tax NOLs are generated when the Company has tax deductions on its income tax returns that exceed its taxable income. The tax NOLs do not mean that the Company is suffering losses in its financial statements. Instead, the Company's tax NOLs are the result of the significant tax deductions that have been generated in recent years by the bonus depreciation and capital repairs tax deductions. In addition to first-year bonus tax depreciation, the Internal Revenue Code allows the Company to classify certain costs as repairs expense, which the Company takes as an immediate deduction on its income tax return. However, such costs are recorded as plant investment on the Company's books. These significant bonus depreciation and capital repairs

tax deductions have exceeded the amount of taxable income reported in tax returns filed for FY 2009 to FY 2016, with the exception of FY 2011. NOLs are recorded as non-cash assets on the Company's balance sheet and represent a benefit that the Company and customers will receive when the Company is able to realize actual cash savings and applies the NOLs against taxable income in the future. If the Company is able to utilize any of its currently accumulated NOLs in future tax years, that benefit will flow to customers in the particular fiscal year the benefit is reflected in the Company's federal income tax return.

NOLs are an offset to the Company's accumulated deferred income taxes. Accumulated deferred income taxes, which equal the difference between book depreciation and tax depreciation on ISR capital investment, multiplied by the effective tax rate, are included as a credit or reduction in the calculation of rate base. However, because the Company was not able to fully utilize all of its tax deductions, tax NOLs were recorded to offset a portion of the rate base reduction for accumulated deferred income taxes.

As indicated above, the Company has generated NOLs on its fiscal year tax returns from FY 2009 to FY 2016, with the exception of FY 2011. In addition, the Company will be filing its FY 2017 federal income tax return in December 2017. At this time, the Company estimates that deductions will not exceed taxable income in FY 2017, meaning that the Company will earn taxable income in FY 2017. Therefore, no NOL offset to accumulated deferred income taxes has been included in the FY 2017 rate base calculation. The Company currently estimates that it will also earn taxable income in FY 2018 and FY 2019. If the Company is able to utilize any of its currently accumulated NOLs in future tax years, that benefit will be flowed through to customers.

Accumulated Deferred Income Tax Proration Adjustment

The Gas ISR Plan includes a proration calculation with respect to the accumulated deferred income tax (ADIT) balance included in rate base. The calculation fulfills requirements set out under IRS Regulation 26 C.F.R. §1.167(l)-1(h)(6). This regulation sets forth normalization requirements for regulated entities so that the benefits of accelerated depreciation are not passed back to customers too quickly. The penalty of a normalization violation is the loss of all federal income tax deductions for accelerated depreciation, including bonus depreciation. Any regulatory filing which includes capital expenditures, book depreciation expense, and ADIT related to those capital expenditures must follow the normalization requirements. When the regulatory filing is based on a future period, the deferred tax must be prorated to reflect the period of time that the ADIT balances are in rate base. This filing includes FY 2018, FY 2019, and FY 2020 proration calculations at Page 25, Page 26, and Page 27, respectively, the effects of which are included in each year's respective revenue requirement.

Property Tax Recovery Adjustment

The Property Tax Recovery Adjustment is set forth on Attachment 1, Pages 19 through 22. The method used to recover property tax expense under the Gas ISR Plan has been modified by the Amended Settlement Agreement in Docket No. 4323. In determining the base on which property tax expense is calculated for purposes of the Plan revenue requirement, the Company includes an amount equal to the base-rate allowance for depreciation expense and depreciation expense on incremental Plan plant additions in the accumulated reserve for depreciation that is deducted from plant-in-service. The Property Tax Recovery Adjustment also includes the

impact of any changes in the Company's effective property tax rates on base rate embedded property, plus cumulative Plan net additions. Property tax impacts associated with non-Plan plant additions are excluded from the property tax recovery formula. This provision of the Amended Settlement Agreement in Docket No. 4323 took effect for Plan property tax recovery periods subsequent to the end of the rate year for that docket, or January 31, 2014. The FY 2019 revenue requirement includes $9,546,263 for the Net Property Tax Recovery Adjustment.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Annual Revenue Requirement Summary

Line No.		As Approved Fiscal Year 2018 (a)	Fiscal Year 2019 (b)	Fiscal Year 2020 (c)
	Operation and Maintenance Expenses			
1	Forecasted Gas Infrastructure, Safety, and Reliability O&M Expenses	$571,000	$502,000	
	Capital Investment:			
2	Actual Revenue Requirement on Incremental FY 2012 Capital included in ISR Rate Base	$1,059,435	$1,030,794	$1,015,515
3	Actual Revenue Requirement on Incremental FY 2013 Capital included in ISR Rate Base	$259,032	$270,420	$285,284
4	Actual Revenue Requirement on Incremental FY 2014 Capital included in ISR Rate Base	$3,303,452	$3,216,492	$3,167,933
5	Actual Annual Revenue Requirement on FY 2015 Capital Included in ISR Rate Base	$6,555,992	$6,348,760	$6,169,183
6	Actual Annual Revenue Requirement on FY 2016 Capital Included in ISR Rate Base	$7,715,333	$7,382,700	$7,167,174
7	Actual Annual Revenue Requirement on FY 2017 Capital Included in ISR Rate Base	$6,015,643	$5,724,724	$5,552,126
8	Forecasted Annual Revenue Requirement on FY 2018 Capital Included in ISR Rate Base	$3,928,534	$7,595,339	$7,235,033
9	Forecasted Annual Revenue Requirement on FY 2019 Capital Included in ISR Rate Base		$4,159,401	$8,078,076
10	Total Capital Investment Revenue Requirement	$28,837,421	$35,728,629	$38,670,323
11	Forecasted Annual Property Tax Recovery Mechanism	$7,699,824	$9,546,263	
11a	True-Up for FY 2013 through FY 2016 Work Order Write Off: Capital Investment Related	($532,674)	$0	
11b	True-Up for FY 2013 through FY 2016 Work Order Write Off: Property Tax Related	($24,620)	$0	
12	**Total Capital Investment Component of the Revenue Requirement**	**$35,979,952**	**$45,274,892**	
13	Total Fiscal Year Revenue Requirement	**$36,550,952**	**$45,776,892**	
14	**Total Incremental Fiscal Year Rate Adjustment**		**$9,225,940**	

Column Notes

(a) As approved in Docket No. RIPUC 4678

Line Notes

1	From Exhibit JBC-1, Section 2, Table 1.
2(b)-(c)	From Page 16 of 29, Line 33
3(b -(c)	From Page 14 of 29, Line 33
4(b)-(c)	From Page 12 of 29, Line 35
5(b)-(c)	From Page 10 of 29, Line 29
6(b)-(c)	From Page 8 of 29, Line 29
7(b)-(c)	From Page 6 of 29, Line 29
8(b)-(c)	From Page 4 of 29, Line 29
9	Sum of Lines 2 through 8
10	From Page 20 of 29, Line 96(g)
10a	From do not print , Line 12(d)
10b	From Page 19 of 29 , Line 62b
11	Line 9 + Line 10 + Line 10a
12	Line 1 + Line 11
13	Line 12(b) - Line 12(a)

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Computation of Revenue Requirement on FY 2019 Forecasted Gas Capital Investment

Line No.				Fiscal Year 2019 (a)	Fiscal Year 2020 (b)
	Depreciable Net Capital Included in ISR Rate Base				
1	Total Allowed Capital Included in ISR Rate Base in Current Year	Per Company's books		$100,772,000	$0
2	Retirements	Line 1 * Retirement rate	1/	$10,046,968	$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) = Prior Year Line 3		$90,725,032	$90,725,032
	Change in Net Capital Included in ISR Rate Base				
4	Capital Included in ISR Rate Base	Line 1		$100,772,000	$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant		$24,356,183	$0
6	Incremental Capital Amount	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6		$76,415,817	$76,415,817
7	Cost of Removal	Per Company's books		$6,307,000	$6,307,000
8	**Net Plant Amount**	**Line 6 + Line 7**		**$82,722,817**	**$82,722,817**
	Deferred Tax Calculation:				
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323		3.38%	3.38%
10	Tax Depreciation	Page 5 of 29, Line 21		$90,034,679	$1,296,266
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$90,034,679	$91,330,945
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Column (b) = Line 3 * Line 9		$1,533,253	$3,066,506
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12		$1,533,253	$4,599,759
14	Cumulative Book / Tax Timer	Line 11 - Line 13		$88,501,426	$86,731,186
15	Effective Tax Rate			35.00%	35.00%
16	Deferred Tax Reserve	Line 14 * Line 15		$30,975,499	$30,355,915
17	Less: FY 2018 Federal NOL	Estimated NOL, per Tax Department		$0	$0
18	Proration Adjustment	Col (a) = Page 25 of 29, Line 40; Col (b) = Page 26 of 29, Line 40		($2,047,577)	$296,045
19	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18		$28,927,922	$30,651,960
	ISR Rate Base Calculation:				
20	Cumulative Incremental Capital Included in ISR Rate Base	Line 8		$82,722,817	$82,722,817
21	Accumulated Depreciation	- Line 13		($1,533,253)	($4,599,759)
22	Deferred Tax Reserve	- Line 19		($28,927,922)	($30,651,960)
23	Year End Rate Base before Deferred Tax Proration	Sum of Lines 20 through 22		$52,261,642	$47,471,098
	Revenue Requirement Calculation:				
24	Average ISR Rate Base	Column (a) = Current Year Line 23 ÷ 2; Column (b) = (Prior Year Line 23 + Current Year Line 22) ÷ 2		$26,130,821	$49,866,370
25	Pre-Tax ROR		2/	10.05%	10.05%
26	Return and Taxes	Line 24 * Line 25		$2,626,148	$5,011,570
27	Book Depreciation	Line 12		$1,533,253	$3,066,506
28	Property Taxes		3/	$0	$0
29	**Annual Revenue Requirement**	**Sum of Lines 26 through 28**		**$4,159,401**	**$8,078,076**

1/ Assumes 9.97% retirement rate based on FY 2017 actual retirements (Per Page 6 of 25, Line 2(a) ÷ Line 1(a))

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

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

3/ Property taxes calculated on Pages 19 through 22 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Tax Depreciation and Repairs Deduction on FY 2019 Capital Investments

Line No.			Fiscal Year 2019 (a)	Fiscal Year 2020 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 2 of 29, Line 1	$100,772,000	
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 71.49%	
3	Capital Repairs Deduction	Line 2 * Line 3	$72,041,903	
	Bonus Depreciation			
4	Plant Additions	Line 1	$100,772,000	
5	Less Capital Repairs Deduction	Line 3	$72,041,903	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$28,730,097	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$28,730,097	
9	Bonus Depreciation Rate (April 2018 - December 2018)	1 * 75% * 40%	30.00%	
10	Bonus Depreciation Rate (January 2019 - March 2019)	1 * 25% * 30%	7.50%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	37.50%	
12	Bonus Depreciation	Line 8 * Line 11	$10,773,786	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$100,772,000	
14	Less Capital Repairs Deduction	Line 3	$72,041,903	
15	Less Bonus Depreciation	Line 12	$10,773,786	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 4 - 5	$17,956,311	$17,956,311
17	20 YR MACRS Tax Depreciation Rates	IRS Publication 946	3.750%	7.219%
18	Remaining Tax Depreciation	Line 6 * Line 7	$673,362	$1,296,266
19	FY19 tax (gain)/loss on retirements	Per Tax Department	$238,628	
20	Cost of Removal	Page 2 of 29, Line 7	$6,307,000	
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19 & 20	$90,034,679	$1,296,266

1/ Capital Repairs percentage is based on a three-year average of FYs 2014, 2015 and 2016 capital repairs rates.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Computation of Revenue Requirement on FY 2018 Forecasted Gas Capital Investment

Line No.				Fiscal Year 2018 (a)	Fiscal Year 2019 (b)	Fiscal Year 2020 (c)
	Depreciable Net Capital Included in ISR Rate Base					
1	Total Allowed Capital Included in ISR Rate Base in Current Year	Per Company's books		$93,177,000	$0	$0
2	Retirements	Line 1 * Retirement rate	1/	$3,289,148	$0	$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) = Prior Year Line 3		$89,887,852	$89,887,852	$89,887,852
	Change in Net Capital Included in ISR Rate Base					
4	Capital Included in ISR Rate Base	Line 1		$93,177,000	$0	$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant		$24,356,183	$0	$0
6	Incremental Capital Amount	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6		$68,820,817	$68,820,817	$68,820,817
7	Cost of Removal	Per Company's books		$8,008,000	$8,008,000	$8,008,000
8	**Net Plant Amount**	**Line 6 + Line 7**		**$76,828,817**	**$76,828,817**	**$76,828,817**
	Deferred Tax Calculation:					
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323		3.38%	3.38%	3.38%
10	Tax Depreciation	Page 5 of 29, Line 21		$86,780,655	$1,098,261	$1,015,804
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$86,780,655	$87,878,916	$88,894,720
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Column (b) = Line 3 * Line 9		$1,519,105	$3,038,209	$3,038,209
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12		$1,519,105	$4,557,314	$7,595,524
14	Cumulative Book / Tax Timer	Line 11 - Line 13		$85,261,550	$83,321,602	$81,299,196
15	Effective Tax Rate			35.00%	35.00%	35.000%
16	Deferred Tax Reserve	Line 14 * Line 15		$29,841,543	$29,162,561	$28,454,719
17	Less: FY 2018 Federal NOL	Estimated NOL, per Tax Department		$0	$0	$0
18	Proration Adjustment	Col (a) = Page 25 of 29, Line 40; Col (b) = Page 26 of 29, Line 40		($2,480,673)	$368,634	$384,303
19	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18		$27,360,870	$29,531,195	$28,454,719
	ISR Rate Base Calculation:					
20	Cumulative Incremental Capital Included in ISR Rate Base	Line 8		$76,828,817	$76,828,817	$76,828,817
21	Accumulated Depreciation	- Line 13		($1,519,105)	($4,557,314)	($7,595,524)
22	Deferred Tax Reserve	- Line 19		($27,360,870)	($29,531,195)	($28,454,719)
23	Year End Rate Base before Deferred Tax Proration	Sum of Lines 20 through 22		$47,948,842	$42,740,308	$40,778,575
	Revenue Requirement Calculation:					
24	Average ISR Rate Base	Column (a) = Current Year Line 23 ÷ 2; Column (b) = (Prior Year Line 23 + Current Year Line 22) ÷ 2		$23,974,421	$45,344,575	$41,759,441
25	Pre-Tax ROR		2/	10.05%	10.05%	10.05%
26	Return and Taxes	Line 24 * Line 25		$2,409,429	$4,557,130	$4,196,824
27	Book Depreciation	Line 12		$1,519,105	$3,038,209	$3,038,209
28	Property Taxes		3/	$0	$0	$0
29	**Annual Revenue Requirement**	**Sum of Lines 26 through 28**		**$3,928,534**	**$7,595,339**	**$7,235,033**

1/ Assumes 3.53% retirement rate based on FY 2016 actual retirements (Per Page 8 of 29, Line 2(a) ÷ Line 1(a))

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

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

3/ Property taxes calculated on Pages 19 through 22 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Tax Depreciation and Repairs Deduction on FY 2018 Capital Investments

Line No.				Fiscal Year 2018 (a)	Fiscal Year 2019 (b)	Fiscal Year 2020 (d)
	Capital Repairs Deduction					
1	Plant Additions	Page 4 of 29, Line 1		$93,177,000		
2	Capital Repairs Deduction Rate	Per Tax Department	1/	68.90%		
3	Capital Repairs Deduction	Line 2 * Line 3		$64,198,946		
	Bonus Depreciation					
4	Plant Additions	Line 1		$93,177,000		
5	Less Capital Repairs Deduction	Line 3		$64,198,946		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5		$28,978,054		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department		100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7		$28,978,054		
9	Bonus Depreciation Rate (April 2017 - December 2017)	1 * 75% * 50%		37.50%		
10	Bonus Depreciation Rate (January 2018 - March 2018)	1 * 25% * 40%		10.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10		47.50%		
12	Bonus Depreciation	Line 8 * Line 11		$13,764,576		
	Remaining Tax Depreciation					
13	Plant Additions	Line 1		$93,177,000		
14	Less Capital Repairs Deduction	Line 3		$64,198,946		
15	Less Bonus Depreciation	Line 12		$13,764,576		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 4 - 5		$15,213,478	$15,213,478	$15,213,478
17	20 YR MACRS Tax Depreciation Rates	IRS Publication 946		3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 6 * Line 7		$570,505	$1,098,261	$1,015,804
19	FY18 tax (gain)/loss on retirements	Per Tax Department		$238,628		
20	Cost of Removal	Page 4 of 29, Line 7		$8,008,000		
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19 & 20		$86,780,655	$1,098,261	$1,015,804

1/ Capital Repairs percentage is based on a three-year average of FYs 2013, 2014 and 2015 capital repairs rates.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Computation of Revenue Requirement on FY 2017 Forecasted Gas Capital Investment

Line No.				Fiscal Year 2017 (a)	Fiscal Year 2018 (b)	Fiscal Year 2019 (c)	Fiscal Year 2020 (d)
	Depreciable Net Capital Included in ISR Rate Base						
1	Total Allowed Capital Included in ISR Rate Base in Current Year	Per RIPUC Docket No. 4590		$81,160,614	$0	$0	$0
2	Retirements	Per Company books		$8,094,426	$0	$0	$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) through (c) = Prior Year Line 3		$73,066,188	$73,066,188	$73,066,188	$73,066,188
	Change in Net Capital Included in ISR Rate Base						
4	Capital Included in ISR Rate Base	Line 1		$81,160,614	$0	$0	$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant		$24,356,183	$0	$0	$0
6	Incremental Capital Amount	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6		$56,804,431	$56,804,431	$56,804,431	$56,804,431
7	Cost of Removal	Per Company's books		$6,100,390	$6,100,390	$6,100,390	$6,100,390
8	**Net Plant Amount**	**Line 6 + Line 7**		**$62,904,821**	**$62,904,821**	**$62,904,821**	**$62,904,821**
	Deferred Tax Calculation:						
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323		3.38%	3.38%	3.38%	3.38%
10	Tax Depreciation	Page 7 of 29, Line 21		$75,825,033	$875,625	$809,884	$749,236
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$75,825,033	$76,700,658	$77,510,542	$78,259,778
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Column (b) = Line 3 * Line 9		$1,234,819	$2,469,637	$2,469,637	$2,469,637
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12		$1,234,819	$3,704,456	$6,174,093	$8,643,730
14	Cumulative Book / Tax Timer	Line 11 - Line 13		$74,590,214	$72,996,202	$71,336,448	$69,616,048
15	Effective Tax Rate			35.00%	35.00%	35.000%	35.000%
16	Deferred Tax Reserve	Line 14 * Line 15		$26,106,575	$25,548,671	$24,967,757	$24,365,617
17	Less: FY 2017 Federal NOL	Estimated NOL, per Tax Department		$0	$0	$0	$0
18	Proration Adjustment	Col (b) = Page 25 of 29, Line 40; Col (c) = Page 26 of 29, Line 40		$0	$321,433	$315,391	$326,915
19	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18		$26,106,575	$25,870,103	$25,283,148	$24,692,532
	ISR Rate Base Calculation:						
20	Cumulative Incremental Capital Included in ISR Rate Base	Line 8		$62,904,821	$62,904,821	$62,904,821	$62,904,821
21	Accumulated Depreciation	- Line 13		($1,234,819)	($3,704,456)	($6,174,093)	($8,643,730)
22	Deferred Tax Reserve	- Line 19		($26,106,575)	($25,870,103)	($25,283,148)	($24,365,617)
23	Year End Rate Base	Sum of Lines 20 through 22		$35,563,427	$33,330,262	$31,447,580	$29,895,474
	Revenue Requirement Calculation:						
24	Average ISR Rate Base	Column (a) = Current Year Line 23 ÷ 2; Column (b) = (Prior Year Line 23 + Current Year Line 22) ÷ 2		$17,781,714	$34,446,844	$32,388,921	$30,671,527
25	Pre-Tax ROR		1/	10.05%	10.05%	10.05%	10.05%
26	Return and Taxes	Line 24 * 25		$1,787,062	$3,461,908	$3,255,087	$3,082,488
27	Book Depreciation	Line 12		$1,234,819	$2,469,637	$2,469,637	$2,469,637
28	Property Taxes		2/	$0	$0	$0	$0
29	**Annual Revenue Requirement**	**Sum of Lines 26 through 28**		**$3,021,881**	**$5,931,545**	**$5,724,724**	**$5,552,126**

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

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

2/ Property taxes calculated on Pages 19 through 22 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Tax Depreciation and Repairs Deduction on FY 2017 Capital Investments

Line No.				Fiscal Year 2017 (a)	Fiscal Year 2018 (b)	Fiscal Year 2019 (c)	Fiscal Year 2020 (d)
	Capital Repairs Deduction						
1	Plant Additions	Page 6 of 29, Line 1		$81,160,614			
2	Capital Repairs Deduction Rate	Per Tax Department	1/	70.11%			
3	Capital Repairs Deduction	Line 2 * Line 3		$56,901,706			
	Bonus Depreciation						
4	Plant Additions	Line 1		$81,160,614			
5	Less Capital Repairs Deduction	Line 3		$56,901,706			
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5		$24,258,908			
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department		100.00%			
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7		$24,258,908			
9	Bonus Depreciation Rate (April 2016 - December 2016)	1 * 75% * 50%		37.50%			
10	Bonus Depreciation Rate (January 2017 - March 2017)	1 * 25% * 50%		12.50%			
11	Total Bonus Depreciation Rate	Line 9 + Line 10		50.00%			
12	Bonus Depreciation	Line 8 * Line 11		$12,129,454			
	Remaining Tax Depreciation						
13	Plant Additions	Line 1		$81,160,614			
14	Less Capital Repairs Deduction	Line 3		$56,901,706			
15	Less Bonus Depreciation	Line 12		$12,129,454			
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15		$12,129,454	$12,129,454	$12,129,454	$12,129,454
17	20 YR MACRS Tax Depreciation Rates	IRS Publication 946		3.750%	7.219%	6.677%	6.177%
18	Remaining Tax Depreciation	Line 6 * Line 7		$454,855	$875,625	$809,884	$749,236
19	FY17 tax (gain)/loss on retirements	Per Tax Department		$238,628			
20	Cost of Removal	Page 6 of 29, Line 7		$6,100,390			
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19 & 20		$75,825,033	$875,625	$809,884	$749,236

1/ Agrees to the FY 2017 Gas Plan Proposal in RIPUC Docket 4590. Capital repairs percentage is based on a three-year average of FYs 2012, 2013 and 2014 capital repairs rates.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Computation of Revenue Requirement on FY 2016 Actual Incremental Gas Capital Investment

Line No.				Fiscal Year 2016 (a)	Fiscal Year 2017 (b)	Fiscal Year 2018 (c)	Fiscal Year 2019 (d)	Fiscal Year 2020 (e)
	Depreciable Net Capital Included in ISR Rate Base							
1	Total Allowed Capital Included in ISR Rate Base in Current Year	Per RIPUC Docket No. 4540		$90,072,473	$0	$0	$0	$0
1a	Work Order Write Off Adjustment	Per Company's books		$597,976	$0	$0	$0	$0
1b	New Service Installation and Service Relocations, Growth (per Informal Request Division 1-2)	Per Company's books		$151,092	$0	$0	$0	$0
2	Retirements	Per Company's books (actual)		$3,177,067	$0	$0	$0	$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 1a - Line 1b - Line 2; Column (b) through (d) = Prior Year Line 3		$86,146,338	$86,146,338	$86,146,338	$86,146,338	$86,146,338
	Change in Net Capital Included in ISR Rate Base							
4	Capital Included in ISR Rate Base	Line 1 - Line 1a - Line 1b		$89,323,405	$0	$0	$0	$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant		$24,356,183	$0	$0	$0	$0
6	Incremental Capital Amount	Line 4 - Line 5		$64,967,222	$64,967,222	$64,967,222	$64,967,222	$64,967,222
7	Cost of Removal	Per Company's books (actual)		$3,796,440	$0	$0	$0	$0
7a	Work Order Write Off Adjustment	Per Company's books		$94,829	$0	$0	$0	$0
7b	New Service Installation and Service Relocations, Growth (per Informal Request Division 1-2)	Per Company's books		$17,740	$0	$0	$0	$0
8	**Net Plant Amount**	**Line 6 + Line 7 - Line 7a - Line 7b**		**$68,651,094**	**$68,651,094**	**$68,651,094**	**$68,651,094**	**$68,651,094**
	Deferred Tax Calculation:							
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323		3.38%	3.38%	3.38%	3.38%	3.38%
10	Tax Depreciation	Per Page 9 of 29, Line 21		$82,938,193	$786,495	$727,445	$672,971	$622,419
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$82,938,193	$83,724,688	$84,452,133	$85,125,105	$85,747,524
12	Book Depreciation	Line 3 * Line 9 * 50%		$1,455,873	$2,911,746	$2,911,746	$2,911,746	$2,911,746
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12		$1,455,873	$4,367,619	$7,279,366	$10,191,112	$13,102,858
14	Cumulative Book / Tax Timer	Line 11 - Line 13		$81,482,320	$79,357,069	$77,172,768	$74,933,993	$72,644,666
15	Effective Tax Rate			35.00%	35.00%	35.000%	35.000%	35.000%
16	Deferred Tax Reserve	Line 14 * Line 15		$28,518,812	$27,774,974	$27,010,469	$26,226,897	$25,425,633
17	Less: FY 2016 Federal NOL	Per Page 23 of 29, Line 13		($11,594,940)	($11,594,940)	($11,594,940)	($11,594,940)	($11,594,940)
18	Proration Adjustment	Col (c) = Page 25 of 29, Line 40; Col (d) = Page 26 of 29, Line 40		$0	$0	$384,608	$425,418	$435,024
19	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18		$16,923,872	$16,180,034	$15,800,136	$15,057,376	$14,265,717
	ISR Rate Base Calculation:							
20	Cumulative Incremental Capital Included in ISR Rate Base	Line 8		$68,651,094	$68,651,094	$68,651,094	$68,651,094	$68,651,094
21	Accumulated Depreciation	- Line 13		($1,455,873)	($4,367,619)	($7,279,366)	($10,191,112)	($13,102,858)
22	Deferred Tax Reserve	- Line 19		($16,923,872)	($16,180,034)	($15,800,136)	($15,057,376)	($14,265,717)
23	Year End Rate Base	Sum of Lines 20 through 22		$50,271,349	$48,103,440	$45,571,592	$43,402,606	$41,282,518
	Revenue Requirement Calculation:							
24	Average ISR Rate Base	Column (a) = Current Year Line 23 ÷ 2; Column (b) through (d) = (Prior Year Line 23 + Current Year Line 23 ÷ 2)		$25,135,674	$49,187,394	$46,837,516	$44,487,099	$42,342,562
25	Pre-Tax ROR		1/	10.05%	10.05%	10.05%	10.05%	10.05%
26	Return and Taxes	Line 24 * 25		$2,526,135	$4,943,333	$4,707,170	$4,470,953	$4,255,427
27	Book Depreciation	Line 12		$1,455,873	$2,911,746	$2,911,746	$2,911,746	$2,911,746
28	Property Taxes		2/	$0	$0	$0	$0	$0
29	**Annual Revenue Requirement**	**Sum of Lines 26 through 28**		**$3,982,008**	**$7,855,079**	**$7,618,917**	**$7,382,700**	**$7,167,174**

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

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

2/ Property taxes calculated on Pages 19 through 22 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Tax Depreciation and Repairs Deduction on FY 2016 Capital Investments

Line No.				Fiscal Year 2016 (a)	Fiscal Year 2017 (b)	Fiscal Year 2018 (c)	Fiscal Year 2019 (d)	Fiscal Year 2020 (e)
	Capital Repairs Deduction							
1	Plant Additions	Page 8 of 29, Line 1 minus Line 1a		$89,474,497				
2	Capital Repairs Deduction Rate	Per Tax Department	1/	75.72%				
3	Capital Repairs Deduction	Line 2 * Line 3		$67,750,089				
	Bonus Depreciation							
4	Plant Additions	Line 1		$89,474,497				
5	Less Capital Repairs Deduction	Line 3		$67,750,089				
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5		$21,724,408				
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department		99.70%				
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7		$21,659,235				
9	Bonus Depreciation Rate (April 2015- December 2015)	1 * 75% * 50%		37.50%				
10	Bonus Depreciation Rate (January 2016 - March 2016)	1 * 25% * 50%		12.50%				
11	Total Bonus Depreciation Rate	Line 9 + Line 10		50.00%				
12	Bonus Depreciation	Line 8 * Line 11		$10,829,617				
	Remaining Tax Depreciation							
13	Plant Additions	Line 1		$89,474,497				
14	Less Capital Repairs Deduction	Line 3		$67,750,089				
15	Less Bonus Depreciation	Line 12		$10,829,617				
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15		$10,894,791	$10,894,791	$10,894,791	$10,894,791	$10,894,791
17	20 YR MACRS Tax Depreciation Rates	IRS Publication 946		3.750%	7.219%	6.677%	6.177%	5.713%
18	Remaining Tax Depreciation	Line 16 * Line 17		$408,555	$786,495	$727,445	$672,971	$622,419
19	FY16 tax (gain)/loss on retirements	Per Tax Department		$248,321				
20	Cost of Removal	Page 8 of 29, Line 7 minus Line 7a		$3,701,611				
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19 & 20		$82,938,193	$786,495	$727,445	$672,971	$622,419

1/ Capital Repairs percentage is based on the actual results of the FY 2016 tax return. Since growth is not included in the ISR, the percentage was derived by taking property qualifying for the repairs deduction as a percentage of the total annual plant addtions in those categories that are considered as potentially qualifying for Capital Repairs deduction.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Computation of Revenue Requirement on FY 2015 Actual Incremental Gas Capital Investment

Line No.			Fiscal Year 2015 (a)	Fiscal Year 2016 (b)	Fiscal Year 2017 (c)	Fiscal Year 2018 (d)	Fiscal Year 2019 (e)	Fiscal Year 2020 (f)
	Depreciable Net Capital Included in ISR Rate Base							
1	Total Allowed Capital Included in ISR Rate Base in Current Year	Per RIPUC Docket No. 4474	$74,915,000	$0	$0	$0	$0	$0
1a	Work Order Write Off Adjustment	Per Company's books	$323,217	$0	$0	$0	$0	$0
1b	New Service Installation and Service Relocations, Growth (per Informal Request Division 1-2)	Per Company's books	$87,115					
2	Retirements	Per Company's books (actual)	$5,566,546	$0	$0	$0	$0	$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) through (e) = Prior Year Line 3	$68,938,122	$68,938,122	$68,938,122	$68,938,122	$68,938,122	$68,938,122
	Change in Net Capital Included in ISR Rate Base							
4	Capital Included in ISR Rate Base	Line 1 - Line 1a - Line 1b	$74,504,668	$0	$0	$0	$0	$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant	$24,356,183	$0	$0	$0	$0	$0
6	Incremental Capital Amount	Line 4 - Line 5	$50,148,485	$50,148,485	$50,148,485	$50,148,485	$50,148,485	$50,148,485
7	Cost of Removal	Per Company's books (actual)	$2,425,000	$2,425,000	$2,425,000	$2,425,000	$2,425,000	$2,425,000
7a	Work Order Write Off Adjustment	Per Company's books	$253,782	$0	$0	$0	$0	$0
7b	New Service Installation and Service Relocations, Growth (per Informal Request Division 1-2)	Per Company's books	$6,782					
8	**Net Plant Amount**	**Line 6 + Line 7 - Line 7a - Line 7b**	**$52,312,921**	**$52,312,921**	**$52,312,921**	**$52,312,921**	**$52,312,921**	**$52,312,921**
	Deferred Tax Calculation:							
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323	3.38%	3.38%	3.38%	3.38%	3.38%	3.38%
10	Tax Depreciation	Per Page 11 of 29, Line 22	$68,843,570	$979,151	$905,637	$837,819	$774,884	$716,832
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	$68,843,570	$69,822,721	$70,728,358	$71,566,177	$72,341,061	$73,057,893
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Column (b) = Line 3 * Line 9	$1,165,054	$2,330,109	$2,330,109	$2,330,109	$2,330,109	$2,330,109
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12	$1,165,054	$3,495,163	$5,825,271	$8,155,380	$10,485,488	$12,815,597
14	Cumulative Book / Tax Timer	Line 11 - Line 13	$67,678,516	$66,327,558	$64,903,087	$63,410,797	$61,855,573	$60,242,296
15	Effective Tax Rate		35.00%	35.00%	35.000%	35.000%	35.000%	35.000%
16	Deferred Tax Reserve	Line 14 * Line 15	$23,687,481	$23,214,645	$22,716,080	$22,193,779	$21,649,450	$21,084,804
17	Less: FY 2015 NOL	Per Page 23 of 29, Line 13	($19,205,538)	($19,205,538)	($19,205,538)	($19,205,538)	($19,205,538)	($19,205,538)
18	Proration Adjustment	Col (d) = Page 25 of 29, Line 40; Col (e) = Page 26 of 29, Line 40	$0	$0	$0	$284,129	$295,528	$306,559
19	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18	$4,481,943	$4,009,108	$3,510,543	$3,272,370	$2,739,441	$2,185,825
	ISR Rate Base Calculation:							
20	Cumulative Incremental Capital Included in ISR Rate Base	Line 8	$52,312,921	$52,312,921	$52,312,921	$52,312,921	$52,312,921	$52,312,921
21	Accumulated Depreciation	- Line 13	($1,165,054)	($3,495,163)	($5,825,271)	($8,155,380)	($10,485,488)	($12,815,597)
22	Deferred Tax Reserve	- Line 19	($4,481,943)	($4,009,108)	($3,510,543)	($3,272,370)	($2,739,441)	($2,185,825)
23	Year End Rate Base	Sum of Lines 20 through 22	$46,665,924	$44,808,651	$42,977,107	$40,885,172	$39,087,992	$37,311,499
	Revenue Requirement Calculation:							
24	Average ISR Rate	Column (a) = Current Year Line 23 ÷ 2; Column (b) through (d) = (Prior Year Line 23 + Current Year Line 23 ÷ 2)	$23,332,962	$45,737,288	$43,892,879	$41,931,140	$39,986,582	$38,199,746
25	Pre-Tax ROR	1/	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%
26	Return and Taxes	Line 24 * 25	$2,344,963	$4,596,597	$4,411,234	$4,214,080	$4,018,651	$3,839,074
27	Book Depreciation	Line 12	$1,165,054	$2,330,109	$2,330,109	$2,330,109	$2,330,109	$2,330,109
28	Property taxes	2/	$0	$0	$0	$0	$0	$0
29	**Annual Revenue Requirement**	**Sum of Lines 26 through 28**	**$3,510,017**	**$6,926,706**	**$6,741,343**	**$6,544,188**	**$6,348,760**	**$6,169,183**

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

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

2/ Property taxes calculated on Pages 19 through 22 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Tax Depreciation and Repairs Deduction on FY 2015 Capital Investments

Line No.				Fiscal Year 2015 (a)	Fiscal Year 2016 (b)	Fiscal Year 2017 (c)	Fiscal Year 2018 (d)	Fiscal Year 2019 (e)	Fiscal Year 2020 (f)
	Capital Repairs Deduction								
1	Plant Additions	Per Page 10 of 29, Line 1 minus Line 1a		$74,591,783					
2	Capital Repairs Deduction Rate	Per Tax Department	1/	63.81%					
3	Capital Repairs Deduction	Line 1 * Line 2		$47,597,001					
	Bonus Depreciation								
4	Plant Additions	Line 1		$74,591,783					
5	Less Capital Repairs Deduction	Line 3		$47,597,001					
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5		$26,994,782					
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department		99.51%					
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7		$26,862,508					
9	Bonus Depreciation Rate (April 2014 - December 2014)	1 * 75% * 50%		37.50%					
10	Bonus Depreciation Rate (January 2015 - March 2015)	1 * 25% * 50%		12.50%					
11	Total Bonus Depreciation Rate	Line 9 + Line 10		50.00%					
12	Bonus Depreciation	Line 8 * Line 11		$13,431,254					
	Remaining Tax Depreciation								
13	Plant Additions	Line 1		$74,591,783					
14	Less Capital Repairs Deduction	Line 3		$47,597,001					
15	Less Bonus Depreciation	Line 12		$13,431,254					
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15		$13,563,528	$13,563,528	$13,563,528	$13,563,528	$13,563,528	$13,563,528
17	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946		3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
18	Remaining Tax Depreciation	Line 16 * Line 17		$508,632	$979,151	$905,637	$837,819	$774,884	$716,832
19	§481(a) FY09- FY14 adjustment for tax (gain)/loss on retirements	Per Tax Department		$4,311,849					
20	FY15 tax (gain)/loss on retirements	Per Tax Department		$823,616					
21	Cost of Removal	Per Page 10 of 29, Line 7 minus Line 7a		$2,171,218					
22	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, 20 & 21		$68,843,570	$979,151	$905,637	$837,819	$774,884	$716,832

1/ Capital Repairs percentage is based on the actual results of the FY 2015 tax return. Since growth is not included in the ISR, the percentage was derived by taking property qualifying for the repairs deduction as a percentage of the total annual plant addtions in those categories that are considered as potentially qualifying for Capital Repairs deduction.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Computation of Revenue Requirement on FY 2014 Actual Incremental Gas Capital Investment

Line No.				Fiscal Year 2014 (a)	Fiscal Year 2015 (b)	Fiscal Year 2016 (c)	Fiscal Year 2017 (d)	Fiscal Year 2018 (e)	Fiscal Year 2019 (f)	Fiscal Year 2020 (g)
	Depreciable Net Capital Included in Rate Base									
1	Total Allowed Capital Included in Rate Base in Current Year	Page 18 of 29, Line 3, Column (c); (Includes Work Order Write Off Adjustment)		$21,360,998	$0	$0	$0	$0	$0	$0
2	Retirements	Page 18 of 29, Line 9, Column (c)	1/	1,615,155	$0	$0	$0	$0	$0	$0
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) through (f) = Prior Year Line 3		$19,745,842	$19,745,842	$19,745,842	$19,745,842	$19,745,842	$19,745,842	$19,745,842
	Change in Net Capital Included in Rate Base									
4	Capital Included in Rate Base	Line 1		$21,360,998	$0	$0	$0	$0	$0	$0
5	Depreciation expense	Per Compliance filing Docket No. 4323, excluding General Plant	2/	$4,060,176	$0	$0	$0	$0	$0	$0
6	Incremental Capital Amount	Line 4 - Line 5		$17,300,822	$17,300,822	$17,300,822	$17,300,822	$17,300,822	$17,300,822	$17,300,822
7	Cost of Removal	Page 18 of 29, Line 6, Column (c); (Includes Work Order Write Off Adjustment)	3/	($1,319,752)	($1,319,752)	($1,319,752)	($1,319,752)	($1,319,752)	($1,319,752)	($1,319,752)
8	**Net Plant Amount**	**Line 6 + Line 7**		**$15,981,069**	**$15,981,069**	**$15,981,069**	**$15,981,069**	**$15,981,069**	**$15,981,069**	**$15,981,069**
	Deferred Tax Calculation:									
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 4323 and 3943		3.38%	3.38%	3.38%	3.38%	3.38%	3.38%	3.38%
10	Tax Depreciation	Page 13 of 29, Line 20		$17,439,322	$195,151	$180,499	$166,983	$154,439	$142,869	$132,137
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$17,439,322	$17,634,473	$17,814,972	$17,981,955	$18,136,394	$18,279,263	$18,411,400
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Columns (b)-(f) = Line 3 * Line		$333,705	$667,409	$667,409	$667,409	$667,409	$667,409	$667,409
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12		$333,705	$1,001,114	$1,668,524	$2,335,933	$3,003,343	$3,670,752	$4,338,162
14	Cumulative Book / Tax Timer	Line 11 - Line 13		$17,105,617	$16,633,358	$16,146,448	$15,646,021	$15,133,051	$14,608,511	$14,073,239
15	Effective Tax Rate			35.00%	35.00%	35.000%	35.000%	35.000%	35.000%	35.000%
16	Deferred Tax Reserve	Line 14 * Line 15		$5,986,966	$5,821,675	$5,651,257	$5,476,107	$5,296,568	$5,112,979	$4,925,634
17	Less: FY 2014 Federal NOL	Lessor of Line 16 or Page 23 of 29, Line 12		($5,986,966)	($5,821,675)	($5,651,257)	($5,476,107)	($5,296,568)	($5,112,979)	($4,925,634)
18	Proration Adjustment	Col (e) = Page 25 of 29, Line 40; Col (f) = Page 26 of 29, Line 40		$0	$0	$0	$0	$99,249	$99,675	$101,714
19	Net Deferred Tax Reserve	Sum of Lines 16 through Line 18		$0	$0	$0	$0	$99,249	$99,675	$101,714
	Rate Base Calculation:									
20	Cumulative Incremental Capital Included in Rate Base	Line 8		$15,981,069	$15,981,069	$15,981,069	$15,981,069	$15,981,069	$15,981,069	$15,981,069
21	Accumulated Depreciation	- Line 13		($333,705)	($1,001,114)	($1,668,524)	($2,335,933)	($3,003,343)	($3,670,752)	($4,338,162)
22	Deferred Tax Reserve	- Line 19		$0	$0	$0	$0	($99,249)	($99,675)	($101,714)
23	Year End Rate Base	Sum of Lines 20 through 22		$15,647,365	$14,979,955	$14,312,546	$13,645,136	$12,878,478	$12,210,643	$11,541,194
	Revenue Requirement Calculation:									
24	Average ISR Rate Base	Column (a) = Current Year Line 23 * 31.41%; Column (b) through (f) = (Prior Year Line 23 + Current Year Line 23 ÷ 2)	4/	$4,914,753	$15,313,660	$14,646,250	$13,978,841	$13,261,807	$12,544,560	$11,875,918
25	Pre-Tax ROR		5/	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%
26	Return and Taxes	Line 24 * Line 25		$493,933	$1,539,023	$1,471,948	$1,404,874	$1,332,812	$1,260,728	$1,193,530
27	Book Depreciation	Line 12		$333,705	$667,409	$667,409	$667,409	$667,409	$667,409	$667,409
28	Property Taxes		6/	$0	$0	$0	$0	$0	$0	$0
29	**Annual Revenue Requirement on Incremental FY14 Investment**	**Sum of Lines 26 through 28**		**$827,637**	**$2,206,432**	**$2,139,358**	**$2,072,283**	**$2,000,221**	**$1,928,138**	**$1,860,939**
30	Remaining FY14 NOL attributable to embedded rate base in RIPUC Docket 4323	Per Page 23 of 29, Line 13 less Line 17		$12,037,252	$12,202,543	$12,372,961	$12,548,111	$12,727,650	$12,911,239	$13,098,585
31	Average Rate Base	Col (a) = Current Year Line 30 * 58.33%; Col (b) through (f) = (Prior Year Line 30 + Current Year Line 30) ÷ 2	7/	$7,021,730	$12,119,897	$12,287,752	$12,460,536	$12,637,880	$12,819,445	$13,004,912
32	Pre-Tax ROR		5/	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%
33	Return and Taxes	Line 31 * Line 32		$705,684	$1,218,050	$1,234,919	$1,252,284	$1,270,107	$1,288,354	$1,306,994
34	**Annual Revenue Requirement adjustment to base rates relat**	**Line 33**		**$705,684**	**$1,218,050**	**$1,234,919**	**$1,252,284**	**$1,270,107**	**$1,288,354**	**$1,306,994**
35	**Total Annual Revenue Requirement**	**Line 29 + Line 34**		**$1,533,321**	**$3,424,482**	**$3,374,277**	**$3,324,567**	**$3,270,328**	**$3,216,492**	**$3,167,933**

1/ Actual Incremental Retirements
2/ Depreciation expense has been prorated for two months (February - March 2014).
3/ Actual Incremental Cost of Removal
4/ 31.41% per Page 28 of 29

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

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

6/ Property taxes calculated on Pages 19 through 22 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.
7/ 58.33% per Docket No. 4474

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Tax Depreciation and Repairs Deduction on FY 2014 Capital Investments

Line No.				Fiscal Year 2014 (a)	Fiscal Year 2015 (b)	Fiscal Year 2016 (c)	Fiscal Year 2017 (d)	Fiscal Year 2018 (e)	Fiscal Year 2019 (f)	Fiscal Year 2020 (g)
	Capital Repairs Deduction									
1	Plant Additions	Per Page 12 of 29, Line 1		$21,360,998						
2	Capital Repairs Deduction Rate	Per Tax Department	1/	74.94%						
3	Capital Repairs Deduction	Line 1 * Line 2		$16,007,932						
	Bonus Depreciation									
4	Plant Additions	Line 1		$21,360,998						
5	Less Capital Repairs Deduction	Line 3		$16,007,932						
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5		$5,353,066						
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department		99.00%						
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7		$5,299,535						
9	Bonus Depreciation Rate (April 2013 - December 2013)	1 * 75% * 50%		37.50%						
10	Bonus Depreciation Rate (January 2014 - March 2014)	1 * 25% * 50%		12.50%						
11	Total Bonus Depreciation Rate	Line 9 + Line 10		50.00%						
12	Bonus Depreciation	Line 8 * Line 11		$2,649,768						
	Remaining Tax Depreciation									
13	Plant Additions	Line 1		$21,360,998						
14	Less Capital Repairs Deduction	Line 3		$16,007,932						
15	Less Bonus Depreciation	Line 12		$2,649,768						
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15		$2,703,298	$2,703,298	$2,703,298	$2,703,298	$2,703,298	$2,703,298	$2,703,298
17	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946		3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
18	Remaining Tax Depreciation	Line 16 * Line 17		$101,374	$195,151	$180,499	$166,983	$154,439	$142,869	$132,137
19	Cost of Removal	Per Page 12 of 29, Line 7		($1,319,752)						
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19		$17,439,322	$195,151	$180,499	$166,983	$154,439	$142,869	$132,137

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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Computation of Revenue Requirement on FY2013 Actual Incremental Capital Investment

Line No.				Fiscal Year 2013 (a)	Fiscal Year 2014 (b)	Fiscal Year 2015 (c)	Fiscal Year 2016 (d)	Fiscal Year 2017 (e)	Fiscal Year 2018 (f)	Fiscal Year 2019 (g)	Fiscal Year 2020 (g)
	Depreciable Net Capital Included in Rate Base										
1	Total Allowed Capital Included in Rate Base in Current Year	Page 18 of 29, Line 3, Column (b);		($1,197,129)	($1,197,129)	($1,197,129)	($1,197,129)	($1,197,129)	($1,197,129)	($1,197,129)	($1,197,129)
2	Retirements	Page 18 of 29, Line 9, Column (b)	1/	3,276,842	3,276,842	3,276,842	3,276,842	3,276,842	3,276,842	3,276,842	3,276,842
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 2; Column (b) through (g) = Prior Year Line 3		($4,473,971)	($4,473,971)	($4,473,971)	($4,473,971)	($4,473,971)	($4,473,971)	($4,473,971)	($4,473,971)
	Change in Net Capital Included in Rate Base										
4	Capital Included in Rate Base	Line 1		($1,197,129)							
5	Cost of Removal	Page 18 of 29, Line 6, Column (b); (Includes Work Order Write Off Adjustment)	2/	($1,701,046)							
6	**Net Plant Amount**	**Line 4 + Line 5**		**($2,898,175)**	**($2,898,175)**	**($2,898,175)**	**($2,898,175)**	**($2,898,175)**	**($2,898,175)**	**($2,898,175)**	**($2,898,175)**
	Deferred Tax Calculation:										
7	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 4323 and 3943		3.38%	3.38%	3.38%	3.38%	3.38%	3.38%	3.38%	3.38%
8	Tax Depreciation	Page 15 of 29, Line 26		($2,724,002)	($13,063)	($12,083)	($11,178)	($10,338)	($9,564)	($8,845)	($8,183)
9	Cumulative Tax Depreciation	Col (a)= Current Yr Line 8; Col (b)-(d)= Prior Yr Line 9 + Current Yr Line 8		($2,724,002)	($2,737,065)	($2,749,148)	($2,760,326)	($2,770,664)	($2,780,228)	($2,789,073)	($2,797,256)
10	Book Depreciation	Column (a) = Line 3 * Line 7 * 50%; Column (b)-(d) = Line 3 * Line 7		($75,610)	($151,220)	($151,220)	($151,220)	($151,220)	($151,220)	($151,220)	($151,220)
11	Cumulative Book Depreciation	Col (a) =Current Yr Line 10; Col (b)-(d) = Prior Yr Line 9 + Current Yr Line 10		($75,610)	($226,830)	($378,051)	($529,271)	($680,491)	($831,711)	($982,931)	($1,134,152)
12	Cumulative Book / Tax Timer	Line 9 - Line 11		($2,648,392)	($2,510,235)	($2,371,097)	($2,231,055)	($2,090,173)	($1,948,516)	($1,806,141)	($1,663,104)
13	Effective Tax Rate			35.00%	35.00%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%
14	Deferred Tax Reserve	Line 12 * Line 13		($926,937)	($878,582)	($829,884)	($780,869)	($731,561)	($681,981)	($632,150)	($582,086)
15	Less: FY 2013 Federal NOL	Per Page 23 of 29, Line 13		$0	$0	$0	$0	$0	$0	$0	$0
16	Proration Adjustment	Col (f) = Page 25 of 29, Line 40; Col (g) = Page 26 of 29, Line 40		$0	$0	$0	$0	$0	($26,743)	($27,054)	($27,180)
17	Net Deferred Tax Reserve	Sum of Lines 14 through 16		($926,937)	($878,582)	($829,884)	($780,869)	($731,561)	($708,723)	($659,204)	($609,267)
	Rate Base Calculation:										
18	Cumulative Incremental Capital Included in Rate Base	Line 6		($2,898,175)	($2,898,175)	($2,898,175)	($2,898,175)	($2,898,175)	($2,898,175)	($2,898,175)	($2,898,175)
19	Accumulated Depreciation	- Line 11		$75,610	$226,830	$378,051	$529,271	$680,491	$831,711	$982,931	$1,134,152
20	Deferred Tax Reserve	- Line 17		$926,937	$878,582	$829,884	$780,869	$731,561	$708,723	$659,204	$609,267
21	Year End Rate Base	Sum of Lines 18 through 20		($1,895,627)	($1,792,762)	($1,690,240)	($1,588,035)	($1,486,123)	($1,357,740)	($1,256,039)	($1,154,756)
	Revenue Requirement Calculation:										
22	Average ISR Rate Base	Col (a) = Current Yr Line 21 ÷ 2; Col (b) through (g) = (Prior Yr Line 21 + Current Yr Line 21) ÷ 2		($947,814)	($1,844,195)	($1,741,501)	($1,639,137)	($1,537,079)	($1,421,932)	($1,306,890)	($1,205,398)
23	Pre-Tax ROR		3/	11.18%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%
24	Return and Taxes	Line 22 * Line 23		($105,966)	($185,342)	($175,021)	($164,733)	($154,476)	($142,904)	($131,342)	($121,142)
25	Book Depreciation	Line 10		($75,610)	($151,220)	($151,220)	($151,220)	($151,220)	($151,220)	($151,220)	($151,220)
26	Property Taxes	$0 in Year 1, then Prior Year (Line 6 - Line 11) * Property Tax Rate	4/	$0	($94,556)	($80,942)	($78,257)	($73,067)	($68,865)	($63,738)	($59,074)
27	**Annual Revenue Requirement on Incremental FY 2013 Investment**	**Sum of Lines 24 through 26**		**($181,576)**	**($431,118)**	**($407,183)**	**($394,210)**	**($378,763)**	**($362,990)**	**($346,301)**	**($331,437)**
28	Remaining FY13 NOL attributable to embedded rate base in RIPUC Docket 4323	Per Page 23 of 29, Line 13 less Line 15		$6,136,520	$6,136,520	$6,136,520	$6,136,520	$6,136,520	$6,136,520	$6,136,520	$6,136,520
29	Average Rate Base	Col (a) = Line 28 * 50%; Col (b) through (g) = (Prior Year Line 28 + Current Year Line 28) ÷ 2		$3,068,260	$6,136,520	$6,136,520	$6,136,520	$6,136,520	$6,136,520	$6,136,520	$6,136,520
30	Pre-Tax ROR		5/	11.18%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%
31	Return and Taxes	Line 29 * Line 30		$343,031	$616,720	$616,720	$616,720	$616,720	$616,720	$616,720	$616,720
32	**Annual Revenue Requirement adjustment to base rates related to NOL**	**Line 31**		**$343,031**	**$616,720**	**$616,720**	**$616,720**	**$616,720**	**$616,720**	**$616,720**	**$616,720**
33	**Total Annual Revenue Requirement**	**Line 27 + Line 32**		**$161,456**	**$185,603**	**$209,537**	**$222,510**	**$237,957**	**$253,731**	**$270,420**	**$285,284**

1/ Actual Incremental Retirements
2/ Actual Incremental Cost of Removal
3/ Weighted Average Cost of Capital as approved in R.I.P.U.C. Docket No. 4323

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

4/ FY 2018 effective property tax rate of 3.11% per Page 20 of 29 at Line 72(h).
5/ Col (a) - Per Page 24 of 29, Line 1; Cols (b)-(d) - Per Note 3 above

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Tax Depreciation and Repairs Deduction on FY 2013 Capital Investments

Line No.				Fiscal Year 2013 (a)	Fiscal Year 2014 (b)	Fiscal Year 2015 (c)	Fiscal Year 2016 (d)	Fiscal Year 2017 (e)	Fiscal Year 2018 (f)	Fiscal Year 2019 (g)	Fiscal Year 2020 (h)
	Capital Repairs Deduction										
1	Plant Additions	Per Page 14 of 29, Line 1		($1,197,129)							
2	Capital Repairs Deduction Rate	Per Tax Department	1/	67.95%							
3	Capital Repairs Deduction	Line 1 * Line 2		($813,449)							
	Bonus Depreciation										
4	Plant Additions	Line 1		($1,197,129)							
5	Less Capital Repairs Deduction	Line 3		($813,449)							
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5		($383,680)							
7	Percent of Plant Eligible for 100% Bonus Depreciation	Per Tax Department	2/	5.67%							
8	Plant Eligible for 100% Bonus Depreciation	Line 6 * Line 7		($21,763)							
9	Bonus Depreciation Rate (April 2012 - December 2012)	1 * 75% * 100%		75.00%							
10	Bonus Depreciation Rate (January 2013 - March 2013)	1 * 25% * 100%		25.00%							
11	Total Bonus Depreciation Rate	Line 9 + Line 10		100.00%							
12	100% Bonus Depreciation	Line 8 * Line 11		($21,763)							
13	Plant Additions Net of Capital Repairs Deduction and 100% Bonus Depreciation	Line 6 - Line 12		($361,917)							
14	Plant Eligible for 50% Bonus Depreciation	Per Tax Department		100.00%							
15	Bonus Depreciation Rate (April 2012 - December 2012)	1 * 75% * 50%		37.50%							
16	Bonus Depreciation Rate (January 2013 - March 2013)	1 * 25% * 50%		12.50%							
17	Total Bonus Depreciation Rate	Line 9 + Line 10		50.00%							
18	50% Bonus Depreciation	Line 13 * Line 17		($180,958)							
	Remaining Tax Depreciation										
19	Plant Additions	Line 1		($1,197,129)							
20	Less Capital Repairs Deduction	Line 3		($813,449)							
21	Less Bonus Depreciation	Line 12 + Line 18		($202,721)							
22	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 19 - 20 - 21		($180,958)	($180,958)	($180,958)	($180,958)	($180,958)	($180,958)	($180,958)	($180,958)
23	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946		3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%	4.522%
24	Remaining Tax Depreciation	Line 22 * Line 23		($6,786)	($13,063)	($12,083)	($11,178)	($10,338)	($9,564)	($8,845)	($8,183)
25	Cost of Removal	Per Page 14 of 29, Line 5		($1,701,046)							
26	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 24, & 25		($2,724,002)	($13,063)	($12,083)	($11,178)	($10,338)	($9,564)	($8,845)	($8,183)

1/ Capital Repairs percentage is based on the actual results of the FY 2013 tax return.
2/ Long period production assets qualifying for 100% bonus depreciation in FY 2013 totaled $3.2 million, taken over total FY13 ISR-eligible capital investment of $56.4 million equals 5.67%.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Computation of Revenue Requirement on FY 2012 Actual Incremental Gas Capital Investment

Line No.				Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)	Fiscal Year 2015 (d)	Fiscal Year 2016 (e)	Fiscal Year 2017 (f)	Fiscal Year 2018 (g)	Fiscal Year 2019 (h)	Fiscal Year 2020 (i)
	Depreciable Net Capital Included in Rate Base											
1	Total Allowed Capital Included in Rate Base in Current Year	Page 18 of 29, Line 3, Column (a)		$6,721,626	$0	$0	$0	$0	$0	$0	$0	$0
2	Retirements	Page 18 of 29, Line 9, Column (a)	1/	2,292,446	$0	$0	$0	$0	$0	$0	$0	$0
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) through (h) = Prior Year Line 3		$4,429,180	$4,429,180	$4,429,180	$4,429,180	$4,429,180	$4,429,180	$4,429,180	$4,429,180	$4,429,180
	Change in Net Capital Included in Rate Base											
4	Capital Included in Rate Base	Line 1		$6,721,626	$6,721,626	$6,721,626	$6,721,626	$6,721,626	$6,721,626	$6,721,626	$6,721,626	$6,721,626
5	Cost of Removal	Page 18 of 29, Line 6, Column (a)	2/	($3,180,470)	($3,180,470)	($3,180,470)	($3,180,470)	($3,180,470)	($3,180,470)	($3,180,470)	($3,180,470)	($3,180,470)
6	**Net Plant Amount**	**Line 4 + Line 5**		**$3,541,156**	**$3,541,156**	**$3,541,156**	**$3,541,156**	**$3,541,156**	**$3,541,156**	**$3,541,156**	**$3,541,156**	**$3,541,156**
	Deferred Tax Calculation:											
7	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943		3.38%	3.38%	3.38%	3.38%	3.38%	3.38%	3.38%	3.38%	3.38%
8	Tax Depreciation	Page 17 of 29, Line 20		$3,001,202	$40,498	$37,457	$34,652	$32,049	$29,648	$27,421	$25,368	$25,031
9	Cumulative Tax Depreciation	Prior Year Line 9 + Current Year Line 8		$3,001,202	$3,041,700	$3,079,157	$3,113,810	$3,145,859	$3,175,507	$3,202,929	$3,228,297	$3,253,328
10	Book Depreciation	Column (a) = Line 3 * Line 7 * 50%; Columns (b)-(e) = Line 3 * Line 7		$74,853	$149,706	$149,706	$149,706	$149,706	$149,706	$149,706	$149,706	$149,706
11	Cumulative Book Depreciation	Prior Year Line 11 + Current Year Line 10		$74,853	$224,559	$374,266	$523,972	$673,678	$823,385	$973,091	$1,122,797	$1,272,503
12	Cumulative Book / Tax Timer	Line 9 - Line 11		$2,926,349	$2,817,141	$2,704,892	$2,589,838	$2,472,181	$2,352,123	$2,229,838	$2,105,500	$1,980,825
13	Effective Tax Rate			35.00%	35.00%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%
14	Deferred Tax Reserve	Line 12 * Line 13		$1,024,222	$985,999	$946,712	$906,443	$865,263	$823,243	$780,443	$736,925	$693,289
15	Less: FY 2012 Federal NOL	Lessor of Line 14 or Page 23 of 29, Line 12		($1,024,222)	($985,999)	($946,712)	($906,443)	($865,263)	($823,243)	($780,443)	($736,925)	($693,289)
16	Proration Adjustment	Col (g) = Page 25 of 29, Line 40; Col (h) = Page 26 of 29, Line 40								$23,774	$23,627	$23,691
17	Net Deferred Tax Reserve	Sum of Lines 14 through 16		$0	$0	$0	$0	$0	$0	$23,774	$23,627	$23,691
	Rate Base Calculation:											
18	Cumulative Incremental Capital Included in Rate Base	Line 6		$3,541,156	$3,541,156	$3,541,156	$3,541,156	$3,541,156	$3,541,156	$3,541,156	$3,541,156	$3,541,156
19	Accumulated Depreciation	- Line 11		($74,853)	($224,559)	($374,266)	($523,972)	($673,678)	($823,385)	($973,091)	($1,122,797)	($1,272,503)
20	Deferred Tax Reserve	- Line 17		$0	$0	$0	$0	$0	$0	($23,774)	($23,627)	($23,691)
21	Year End Rate Base	Sum of Lines 18 through 20		$3,466,303	$3,316,596	$3,166,890	$3,017,184	$2,867,477	$2,717,771	$2,544,291	$2,394,731	$2,244,961
	Revenue Requirement Calculation:											
22	Average ISR Rate Base	Column (a) = Current Yr Line 21 ÷ 2; Columns (b)-(e) = (Prior Yr Line 21 + Current Yr Line 21) ÷ 2		$1,733,151	$3,391,449	$3,241,743	$3,092,037	$2,942,331	$2,792,624	$2,631,031	$2,469,511	$2,319,846
23	Pre-Tax ROR		3/	11.41%	11.18%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%
24	Return and Taxes	Line 22 * Line 23		$197,753	$379,164	$325,795	$310,750	$295,704	$280,659	$264,419	$248,186	$233,145
25	Book Depreciation	Line 10		$74,853	$149,706	$149,706	$149,706	$149,706	$149,706	$149,706	$149,706	$149,706
26	Property Taxes	$0 in Year 1, then Prior Year (Line 6 - Line 11) * Property Tax Rate	4/	$0	$48,144	$111,106	$95,957	$93,692	$88,445	$84,394	$79,209	$74,592
27	**Annual Revenue Requirement**	**Sum of Lines 24 through 26**		**$272,606**	**$577,014**	**$586,607**	**$556,413**	**$539,103**	**$518,810**	**$498,519**	**$477,102**	**$457,443**
28	Remaining FY12 NOL attributable to embedded rate base in RIPUC Docket 4323	Per Page 23 of 29, Line 13 less Line 15		$5,243,839	$5,282,062	$5,321,349	$5,361,618	$5,402,798	$5,444,818	$5,487,618	$5,531,137	$5,574,773
29	Average Rate Base	Col (a) = Line 28 * 50%; Col (b) through (g) = (Prior Year Line 28 + Current Year Line 28) ÷ 2		$2,621,920	$5,262,951	$5,301,706	$5,341,484	$5,382,208	$5,423,808	$5,466,218	$5,509,377	$5,552,955
30	Pre-Tax ROR		5/	11.41%	11.18%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%
31	Return and Taxes	Line 29 * Line 30		$299,161	$588,398	$532,821	$536,819	$540,912	$545,093	$549,355	$553,692	$558,072
32	**Annual Revenue Requirement adjustment to base rates related to NOL**	**Line 31**		**$299,161**	**$588,398**	**$532,821**	**$536,819**	**$540,912**	**$545,093**	**$549,355**	**$553,692**	**$558,072**
33	**Total Annual Revenue Requirement**	**Line 27 + Line 32**		**$571,767**	**$1,165,412**	**$1,119,429**	**$1,093,232**	**$1,080,014**	**$1,063,902**	**$1,047,874**	**$1,030,794**	**$1,015,515**

1/ Actual Incremental Retirements

2/ Actual Incremental Cost of Removal

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

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

4/ FY 2018 effective property tax rate of 3.11% per Page 20 of 29 at Line 72(h).

5/ Cols (a) & (b) - Per Page 24 of 29, Line 1; Cols (c) & (d) - Per Note 3 above

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Tax Depreciation and Repairs Deduction on FY 2012 Capital Investments

Line No.				Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)	Fiscal Year 2015 (d)	Fiscal Year 2016 (e)	Fiscal Year 2017 (f)	Fiscal Year 2018 (g)	Fiscal Year 2019 (h)	Fiscal Year 2020 (i)
	Capital Repairs Deduction											
1	Plant Additions	Per Page 16 of 29, Line 1		$6,721,626								
2	Capital Repairs Deduction Rate	Per Tax Department	1/	67.43%								
3	Capital Repairs Deduction	Line 1 * Line 2		$4,532,392								
	Bonus Depreciation											
4	Plant Additions	Line 1		$6,721,626								
5	Less Capital Repairs Deduction	Line 3		$4,532,392								
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5		$2,189,234								
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	2/	85.00%								
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7		$1,860,849								
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 * Line 11		$1,628,243								
	Remaining Tax Depreciation											
13	Plant Additions	Line 1		$6,721,626								
14	Less Capital Repairs Deduction	Line 3		$4,532,392								
15	Less Bonus Depreciation	Line 12		$1,628,243								
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15		$560,991	$560,991	$560,991	$560,991	$560,991	$560,991	$560,991	$560,991	$560,991
17	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946		3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%	4.522%	4.462%
18	Remaining Tax Depreciation	Line 16 * Line 17		$21,037	$40,498	$37,457	$34,652	$32,049	$29,648	$27,421	$25,368	$25,031
19	Cost of Removal	Per Page 16 of 29, Line 5		($3,180,470)								
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19		$3,001,202	$40,498	$37,457	$34,652	$32,049	$29,648	$27,421	$25,368	$25,031

1/ Capital Repairs percentage is based on the actual results of the FY 2012 tax return. Since growth is not included in the ISR, the percentage was derived by taking property qualifying for the repairs deduction as a percentage of the total annual plant additions in those categories that are considered as potentially qualifying for Capital Repairs deduction.

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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
FY 2012 - FY 2014 Incremental Capital Investment Summary

Line No.				Actual Fiscal Year 2012 (a)	Actual Fiscal Year 2013 (b)	Actual Fiscal Year 2014 (c)
	Capital Investment					
1	ISR-eligible Capital Investment	Col (a) Docket No. 4219 FY 2012 ISR Reconciliation Filing less audit adjustment of $203,902; Col (b) Docket No. 4306 FY 2013 ISR Reconciliation Filing less audit adjustment of $44,855; Col (c) Docket No. 4380 FY 2014 ISR Reconciliation Filing less audit adjustment of $266,685	$	54,477,445	$56,416,101	$70,137,361
1a	Work Order Write Off Adjustment	Per Company's books		$0	$393,288	$771,673
1b	New Service Installation and Service Relocations, Growth (per Informal Request Division 1-2)	Per Company's books		$95,103	$35,750	$351,197
2	ISR-eligible Capital Additions included in Rate Base per R.I.P.U.C. Docket No. 4323	Docket No. 4323 Schedule MDL-3-Gas Page 51, Line Notes 1(a), 2(b) and 3(e)		$47,660,716	$57,184,191	$47,653,493
3	Incremental ISR Capital Investment	Line 1 - Line 1a - Line 1b - Line 2		$6,721,626	($1,197,129)	$21,360,998
	Cost of Removal					
4	ISR-eligible Cost of Removal	Col (a) Docket No. 4219 FY 2012 ISR Reconciliation Filing; Col (b) Docket No. 4306 FY 2013 ISR Reconciliation Filing; Col (c) Actual FY 2014 ISR Gas Cost of Removal per Company's Books		$2,583,612	$3,152,565	$2,707,824
4a	Work Order Write Off Adjustment	Per Company's books		$0	$141,414	105,654.38
4b	Growth (per Informal Request Division 1-2)	Per Company's books		$8,994	$10,801	4,092.00
5	ISR-eligible Cost of Removal in Rate Base per R.I.P.U.C. Docket No. 4323	Docket No. 4323, Workpaper MDL-19-GAS, Page 3		$5,755,088	$4,701,396	$3,917,830
6	Incremental Cost of Removal	Line 4 - Line 4a - Line 4b - Line 5		($3,180,470)	($1,701,046)	($1,319,752)
	Retirements					
7	ISR-eligible Retirements	Col (a) Docket No. 4219 FY 2012 ISR Reconciliation filing; Col (b) Docket No. 4306 FY 2013 ISR Reconciliation filing; Col (c) Actual FY 2014 ISR Gas Retirements		$5,366,562	5,775,791	$5,274,944
8	ISR-eligible Retirements per R.I.P.U.C. Docket No. 4323	Col (a) Docket No. 4219 Supplemental Testimony 2-17-2011; Col (b) Docket No. 4306 FY 2013 ISR Proposal Filing; Col (c)= Line 2(c) * 7.68% Retirement rate per Docket No. 4323 (Workpaper MDL-19-GAS p 4)		$3,074,116	$2,498,949	$3,659,788
9	Incremental Retirements	Line 7 - Line 8		$2,292,446	$3,276,842	$1,615,155

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Forecasted FY 2019 Property Tax Recovery Adjustment
($000s)

Line	Effective Tax Rate Calculation	(a) RY End	(b) ISR Additions	(c) Non-ISR Add's	(d) Total Add's	(e) Bk Depr	(f) Retirements	(g) COR	(h) End of FY14
									As filed
1	Plant In Service	$805,721	$11,502	$1,052	$12,555		($879)		$817,396
2									
3	Accumulated Depr	$347,664				$4,691	($879)	($433)	$351,043
4									
5	Net Plant	$458,057							$466,353
6									
7	Property Tax Expense	$13,995							$15,624
8									
9	Effective Prop tax Rate	3.06%							3.35%
10									

11		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
12		End of FY14	ISR Additions	Non-ISR Add's	Total Add's	Bk Depr	Retirements	COR	End of FY15
13									
14	Plant In Service	$817,569	$74,505	$22,014	$96,519		($7,969)		$906,119
15									
16	Accumulated Depr	$351,043				$30,021	($7,969)	($2,164)	$370,930
17									
18	Net Plant	$466,526							$535,189
19									
20	Property Tax Expense	$15,624							$16,221
21									
22	Effective Prop tax Rate	3.35%							3.03%
23									

24		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
25		End of FY15	ISR Additions	Non-ISR Add's	Total Add's	Bk Depr	Retirements	COR	End of FY16
26									
27	Plant In Service	$906,119	$89,323	$27,286	$116,610		($3,178)		$1,019,550
28									
29	Accumulated Depr	$370,930				$33,435	($3,178)	($3,684)	$397,503
30									
31	Net Plant	$535,189							$622,048
32									
33	Property Tax Expense	$16,221							$19,316
34									
35	Effective Prop tax Rate	3.03%							3.11%
36									

37												
38	**Property Tax Recovery Calculation**	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
39		Cumulative Incremental ISR Property Tax for FY14				Cumulative Incremental ISR Property Tax for FY15				Cumulative Incremental ISR Property Tax for FY16		
40												
41	ISR Additions		$11,502				$74,505				$89,323	
42	Book Depreciation: base allowance on ISR eligible plant		($4,060)				($24,356)				($24,356)	
43	Book Depreciation: current year ISR additions		($631)				($1,165)				($1,456)	
44	COR		$433				$2,164				$3,684	
45												
46	Net Plant Additions		$7,244				$51,148				$67,195	
47												
48	Rate Year Effective Tax Rate		3.06%				3.06%				3.06%	
49	Property Tax Recovery on 2 mos FY14 vintage investment			$221				$229				$218
50	Property Tax Recovery on FY15 vintage investment							$1,563				$1,494
51	Property Tax Recovery on FY16 vintage investment											$2,053
52												
53	ISR Year Effective Tax Rate	3.35%				3.03%				3.11%		
54	RY Effective Tax Rate & differential	3.06%	0.29%			3.06%	-0.03%			3.06%	0.05%	
55	RY Effective Tax Rate differential for 2 months FY 2014		0.05%									
56	RY Net Plant times Tax Rate differential	$458,057	* 0.05%	$225		$458,057	* -0.03%	($116)		$458,057	* 0.05%	$229
57	2 mos FY14 Net Adds times ISR Year Effective Tax rate	$7,244	* 0.29%	$21		$7,486	* -0.03%	($2)		$7,127	* 0.05%	$4
58	FY15 Net Adds times ISR Year Effective Tax rate					$51,148	* -0.03%	($13)		$48,899	* 0.05%	$24
59	FY16 Net Adds times ISR Year Effective Tax rate									$67,195	* 0.05%	$34
60	Total Property Tax related to rate differential			$246				($131)				$291
61												
62	Total ISR Property Tax Recovery			$468				$1,661				$4,055

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Forecasted FY 2019 Property Tax Recovery Adjustment (continued)
($000s)

		(a) End of FY16	(b) ISR Additions	(c) Non-ISR Add's	(d) Total Add's	(e) Bk Depr	(f) Retirements	(g) COR	(h) End of FY17
63	Plant In Service	$1,019,550	$81,161	$ 22,407	$103,568		$ 20,507		$1,143,625
64	Accumulated Depr	$397,503				$37,448	$20,507	($6,100)	$449,358
65	Net Plant	$622,048							$694,267
66	Property Tax Expense	$19,316							$21,414
67	Effective Prop tax Rate	3.11%							3.08%

		(a) End of FY17	(b) ISR Additions	(c) Non-ISR Add's	(d) Total Add's	(e) Bk Depr	(f) Retirements	(g) COR	(h) End of FY18
68	Plant In Service	$1,143,625	$93,177	$25,518	$118,695		($3,289)		$1,259,031
69	Accumulated Depr	$449,358				$41,496	($3,289)	($8,008)	$479,556
70	Net Plant	$694,267							$779,475
71	Property Tax Expense	$21,414							$24,205
72	Effective Prop tax Rate	3.08%							3.11%

	Property Tax Recovery Calculation	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Cumulative Incremental ISR Property Tax for FY17				Cumulative Incremental ISR Property Tax for FY18		
73	ISR Additions		$81,161				$93,177	
74	Book Depreciation: base allowance on ISR eligible plant		($24,356)				($24,356)	
75	Book Depreciation: current year ISR additions		($1,235)				($1,519)	
76	COR		$6,100				$8,008	
77								
78	Net Plant Additions		$61,671				$75,310	
79								
80	Rate Year Effective Tax Rate		3.08%				3.06%	
81	Property Tax Recovery on 2 mos FY14 vintage investment			$208				$194
82	Property Tax Recovery on FY15 vintage investment			$1,416				$1,311
83	Property Tax Recovery on FY16 investment			$1,954				$1,819
84	Property Tax Recovery on FY17 investment			$1,902				$1,756
85	Property Tax Recovery on FY18 investment							$2,301
86	ISR Year Effective Tax Rate	3.08%				3.11%		
87	RY Effective Tax Rate & differential	3.06%	0.02%			3.06%	0.05%	
88	RY Net Plant times Tax Rate differential	$458,057	* 0.02%	$92		$458,057	* 0.05%	$229
89	2 mos FY14 Net Adds times ISR Year Effective Tax rate	$6,733	* 0.02%	$1		$6,338	* 0.05%	$3
90	FY15 Net Adds times ISR Year Effective Tax rate	$45,906	* 0.02%	$9		$42,913	* 0.05%	$21
91	FY16 Net Adds times ISR Year Effective Tax rate	$63,361	* 0.02%	$13		$59,527	* 0.05%	$30
92	FY17 Net Adds times ISR Year Effective Tax rate	$61,671	* 0.02%	$12		$57,477	* 0.05%	$29
93	FY18 Net Adds times ISR Year Effective Tax rate					$75,310	* 0.05%	$38
94	Total Property Tax related to rate differential			$127				$350
95								
96	Total ISR Property Tax Recovery			$5,607				$7,730

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Forecasted FY 2019 Property Tax Recovery Adjustment (continued)
($000s)

		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
		End of FY18	ISR Additions	Non-ISR Add's	Total Add's	Bk Depr	Retirements	COR	End of FY19
97	Plant In Service	$1,259,031	$100,772	$2,800	$103,572		($10,047)		$1,352,556
98	Accumulated Depr	$479,556				$45,027	($10,047)	($6,307)	$508,229
99	Net Plant	$779,475							$844,327
100	Property Tax Expense	$24,205							$26,042
101	Effective Prop tax Rate	3.11%							3.08%

	Property Tax Recovery Calculation	(a)	(b)	(c)
			Cumulative Incremental ISR Property Tax for FY19	
102	ISR Additions		$100,772	
103	Book Depreciation: base allowance on ISR eligible plant		($24,356)	
104	Book Depreciation: current year ISR additions		($1,533)	
105	COR		$6,307	
106				
107	Net Plant Additions		$81,190	
108				
109	Rate Year Effective Tax Rate		3.06%	
110	Property Tax Recovery on 2 mos FY14 vintage investment			$182
111	Property Tax Recovery on FY15 vintage investment			$1,220
112	Property Tax Recovery on FY16 investment			$1,702
113	Property Tax Recovery on FY17 investment			$1,628
114	Property Tax Recovery on FY18 investment			$2,182
115	Property Tax Recovery on FY19 investment			$2,481
116	ISR Year Effective Tax Rate	3.08%		
117	RY Effective Tax Rate & differential	3.06%	0.02%	
118	RY Net Plant times Tax Rate differential	$458,057	* 0.02%	$92
119	2 mos FY14 Net Adds times ISR Year Effective Tax rate	$5,943	* 0.02%	$1
120	FY15 Net Adds times ISR Year Effective Tax rate	$39,920	* 0.02%	$8
121	FY16 Net Adds times ISR Year Effective Tax rate	$55,693	* 0.02%	$11
122	FY17 Net Adds times ISR Year Effective Tax rate	$53,284	* 0.02%	$11
123	FY18 Net Adds times ISR Year Effective Tax rate	$71,409	* 0.02%	$14
124	FY19 Net Adds times ISR Year Effective Tax rate	$81,190	* 0.02%	$16
125	Total Property Tax related to rate differential			$153
126				
127	Total ISR Property Tax Recovery			$9,546

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Forecasted FY 2019 Property Tax Recovery Adjustment (continued)
($000s)

Line	Notes
1(a) - 9(a)	Per Rate Year cost of service per Compliance filing Attachment 6 at Docket No. 4323.
1(b) - 9(h)	Per Docket 4380 FY 2014 Gas ISR Plan Reconciliation filing at Page 10 of 13
14(a)-22(h)	Per Docket 4474 FY 2015 Gas ISR Plan Reconciliation filing at Page 12 of 18
27(a)-35(h)	Per Docket 4540 FY 2016 Gas ISR Plan Reconciliation filing at Page 14 of 19
41(a) - 62(c)	Per Docket 4380 FY 2014 Gas ISR Plan Reconciliation filing at Page 10 of 13
41(e)-62(g)	Per Docket 4474 FY 2015 Gas ISR Plan Reconciliation filing at Page 12 of 17
41(i)-62(k)	Per Docket 4540 FY 2016 Gas ISR Plan Reconciliation filing at Page 14 of 19
63(a) - 67(h)	Per Docket 4590 FY 2017 Gas ISR Plan Proposal Compliance filing at Page 16 of 20
68(a)	Per Line 63(h)
68(b)	Per Page 4 of 29, Line 1
68(c)	FY 2018 forecasted Growth investment of $24,218k and General Plant of $1,300k.
68(d)	Line 68(b) + Line 68(c)
68(f)	Per Page 4 of 29, Line 2
68(h)	Line 68(a) + Line 68(d) +Line 68(f)
69(a)	Per Line 64(h)
69(e)	Rate Year depn allowance of $28,130k + (Line 1(d)+Line 1(f)* composite depn rate of 3.38%) + (Line 14(d)+Line 14(f)*3.38%) +(Line 27(d)+Line 27(f)* 3.38%)+(Line 63(d)+Line 63(f)*3.38%) +(Line 68(d)+Line 68(f)*3.38%*50%)
69(f)	Line 68(f)
69(g)	Per Page 4 of 29, Line 7
69(h)	Line 69(a) + Line 69(e) + Line 69(f) + Line 69(g)
71(a)	Line 66(h)
71(h)	Line 70(h) * Line 72(h)
72(a)	Line 67(h)
72(h)	Line 35(h); effective tax rate per FY 2016 Gas ISR reconciliation filing
73(a) - 96(c)	Per Docket 4590 FY 2017 Gas ISR Plan Proposal Compliance filing at Page 16 of 20
73(f)	Line 68(b)
74(f)	Per Page 4 of 29, Line 5
75(f)	Per Page 4 of 29, Line 12
76(f)	Per Line 69(g)
78(f)	Sum of Lines 73 through 76
80(f)	Line 9(a)
81(g)	Line 80(f) * Line 89(e)
82(g)	Line 80(f) * Line 90(e)
83(g)	Line 80(f) * Line 91(e)
84(g)	Line 80(f) * Line 92(e)
85	Line 78 * Line 80
86(e)	Line 72(h)
87(e)	Line 9(a)
87(f)	Line 86(e) - Line 87(e)
88(e)	Line 5(a)
89(e)	Line 89(a) - ((Line 1(d)+Line 1(f))*3.38%)
90(e)	Line 90(a) - ((Line 14(d)+Line 14(f))*3.38%)
91(e)	Line 91(a) - ((Line 27(d)+Line 27(f))*3.38%)
92(e)	Line 92(a) - ((Line 63(d)+Line 63(f))*3.38%)
93(e)	Line 78(f)
88(f)-93(f)	Line 87(f)
88(g)-93(g)	Lines 88(e) through 93(e), Col (e) * Col (f)
94(g)	Sum of Lines 88(g) through 93(g)
96(g)	Sum of Lines 81(g) through 85(g) + Line 94(g)

Line	Notes
97(a)	Per Line 68(h)
97(b)	Per Page 2 of 29, Line 1
97(c)	FY 2019 forecasted Growth investment of $500k and General Plant of $1,300k.
97(d)	Line 97(b) + Line 97(c)
97(f)	Per Page 2 of 29, Line 2
97(h)	Line 97(a) + Line 97(d) +Line 97(f)
98(a)	Per Line 69(h)
98(e)	Rate Year depn allowance of $28,130k + (Line 1(d)+Line 1(f)* composite depn rate of 3.38%) + (Line 14(d)+Line 14(f)*3.38%) +(Line 27(d)+Line 27(f)* 3.38%)+(Line 63(d)+Line 63(f)*3.38%) +(Line 68(d)+Line 68(f)*3.38%)+(Line 97(d)+Line 97(f)*3.38%*50%)
98(f)	Line 97(f)
98(g)	Per Page 3 of 29, Line 20
98(h)	Line 98(a) + Line 98(e) + Line 98(f) + Line 98(g)
100(a)	Line 71(h)
100(h)	Line 99(h) * Line 101(h)
101(a)	Line 72(h)
101(h)	Line 67(h)
102(b)	Line 97(b)
103(b)	Per Page 2 of 29, Line 5
104(b)	Per Page 2 of 29, Line 12
105(b)	Per Line 98(g)
107(b)	Sum of Lines 102(b) through 105(b)
109(b)	Line 9(a)
110(c)	Line 109(b) * Line 119(a)
111(c)	Line 109(b) * Line 120(a)
112(c)	Line 109(b) * Line 121(a)
113(c)	Line 109(b) * Line 122(a)
114(c)	Line 109(b) * Line 123(a)
115(c)	Line 109(b) * Line 107(b)
116(a)	Line 101(h)
117(a)	Line 9(a)
118(a)	Line 5(a)
119(a)	Line 89(e) - ((Line 1(d)+Line 1(f))*3.38%)
120(a)	Line 90(e) - ((Line 14(d)+Line 14(f))*3.38%)
121(a)	Line 91(e) - ((Line 27(d)+Line 27(f))*3.38%)
122(a)	Line 92(e) - ((Line 63(d)+Line 63(f))*3.38%)
123(a)	Line 93(e) - ((Line 68(d)+Line 68(f))*3.38%)
124(a)	Line 107(b)
117(b)-124(b)	Line 116(a) - Line 117(a)
118(c)-124(c)	Colum (a) * Column (b)
125(c)	Sum of Lines 118(c) through 124(c)
127(c)	Line 125(c) plus sum of lines 110(c) through 115(c)

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Deferred Income Tax ("DIT") Provisions and Net Operating Losses ("NOL")

		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
									CY 2011	CY 2012	Jan-2013	Feb 13 - Jan 14				
1	Total Base Rate Plant DIT Provision								$16,572,023	$19,058,494	$ 1,700,343	$13,893,167				
		FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
2	Total Base Rate Plant DIT Provision								$17,193,641	$18,309,741	$11,577,639	$0	$0	$0	$0	$0
3	Incremental FY 12	$1,121,846	$1,080,717	$1,038,476	$906,443	$865,263	$823,243	$780,443	$1,121,846	($41,129)	($42,241)	($132,033)	($41,180)	($42,020)	($42,800)	($780,443)
4	Incremental FY 13	$0	($734,732)	($690,174)	($829,884)	($780,869)	($731,561)	($681,981)	$0	($734,732)	$44,558	($139,710)	$49,015	$49,309	$49,580	$681,981
5	Incremental FY 14	$0	$0	$6,444,262	$5,821,675	$5,651,257	$5,476,107	$5,296,568	$0	$0	$6,444,262	($622,587)	($170,419)	($175,149)	($179,540)	($5,296,568)
6	FY 2015	$0	$0	$0	$23,687,481	$23,214,645	$22,716,080	$22,193,779	$0	$0	$0	$23,687,481	($472,835)	($498,565)	($522,301)	($22,193,779)
7	FY 2016	$0	$0	$0	$0	$28,518,812	$27,774,974	$27,010,469	$0	$0	$0	$0	$28,518,812	($743,838)	($764,505)	($27,010,469)
8	FY 2017	$0	$0	$0	$0	$0	$26,106,575	$25,548,671	$0	$0	$0	$0	$0	$26,106,575	($557,904)	($25,548,671)
9	FY 2018	$0	$0	$0	$0	$0	$0	$29,841,543	$0	$0	$0	$0	$0	$0	$29,841,543	($29,841,543)
10	FY 2019	$0	$0	$0	$0	$0	$0	($28,927,922)	$0	$0	$0	$0	$0	$0	($28,927,922)	$28,927,922
11	TOTAL Plant DIT Provision	$ 1,121,846	$ 345,985	$ 6,792,564	$29,585,715	$57,469,108	$82,165,419	$ 81,061,569	$18,315,487	$17,533,880	$18,024,218	$22,793,151	$27,883,393	$24,696,311	$ (1,103,850)	##########
12	NOL								$ 6,268,061	$ 6,136,520	$23,775,494	$19,205,538	$11,594,940	$ -	$ -	$ -
13	Lesser of NOL or DIT Provision								$ 6,268,061	$ 6,136,520	$18,024,218	$19,205,538	$11,594,940	$ -	$ -	$ -

Line Notes:

1(h) Per Dkt 4323 Compliance filing Attachment 6, Page 59 of 65, Line 18(e) less Line 18(a)
1(i)-1(k) Per Dkt 4323 Compliance filing Attachment 6, Page 64 of 65, Lines 32, 38, and 44
2 **Col (h)** = Line 1(f) * 75% + Line 1(g) * 25% ; **Col (i)** = Line 1(g) * 75% + Line 1(h) + Line 1(i) * 2/12ths; **Col (j)** = Line 1(i) * 10/12ths
3(a)-7(g) Cumulative DIT per vintage year ISR revenue requirement calculations (Page 10, Line 14; Page 8, Line 14; Page 6, Line 16; Page 4, Line 16 ; Page 2, Line 16)
3(h) -7(n) Year over year change in cumulative DIT shown in Cols (a) through (g)
11 Sum of Lines 2 through 9
12 Per Tax dept
13 Lesser of Line 10 or Line 11

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
True-Up for FY 2012 through FY 2016 Net Operating Losses ("NOL")

		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
				Revenue Requirement Year					
		FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
1	Return on Rate Base	11.41%	11.18%	10.05%	10.05%	10.05%	10.05%	10.05%	10.05%
				Vintage Capital Investment Year					
		FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
2	Lesser of NOL or DIT Provision	$ 6,268,061	$ 6,136,520	$ 18,024,218	$ 19,205,538	$ 11,594,940	$ -	$ -	$ -

Revenue Requirement Increase due to NOL

				Revenue Requirement Year					
	Vintage Capital Investment Year	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
3	FY 2012	$ 357,593	$ 700,769	$ 629,940	$ 629,940	$ 629,940	$ 629,940	$ 629,940	$ 629,940
4	FY 2013	$ -	$ 343,031	$ 616,720	$ 616,720	$ 616,720	$ 616,720	$ 616,720	$ 616,720
5	FY 2014	$ -	$ -	$ 882,298	$ 1,811,434	$ 1,811,434	$ 1,811,434	$ 1,811,434	$ 1,811,434
6	FY 2015	$ -	$ -	$ -	$ 965,078	$ 1,930,157	$ 1,930,157	$ 1,930,157	$ 1,930,157
7	FY 2016	$ -	$ -	$ -	$ -	$ 582,646	$ 1,165,291	$ 1,165,291	$ 1,165,291
8	FY 2017	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	FY 2018	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	FY 2019	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	TOTAL	**$ 357,593**	**$ 1,043,801**	**$ 2,128,958**	**$ 4,023,173**	**$ 5,570,897**	**$ 6,153,542**	**$ 6,153,542**	**$ 6,153,542**

Line Notes:

1 **Col (a)** - per Docket 4219, Attachment WRR-1 at Page 2; **Col (b)** - per Docket 4306, Attachment WRR-1 at Page 2;
Col (c) through (g) - Weighted Average Cost of Capital per Settlement Agreement RIPUC Docket No. 4323

2 Per Page 23 of 29, Line 13

3 **Col (a)** = Line 2(a) * Line 1(a) * 50%; **Col (b)** = Line 2(a) * Line 1(b); **Col (c)** = Line 2(a) * Line 1(c); **Col (d)** = Line 2(a) * Line 1(d); **Col (e)** = Line 2(a) * Line 1(e); Col (f) = Line 1(f) * Line 2(c); Col (g) = Line 1(g) * 2(c)

4 **Col (a)** = Line 2(b) * Line 1(b) * 50%; **Col (b)** = Line 2(b) * Line 1(c); **Col (c)** = Line 2(b) * Line 1(d); **Col (d)** = Line 2(b) * Line 1(e); Col (f) = Line 1(f) * Line 2(b); Col (g) = Line 1(g) * Line 2(b)

5 **Col (c) =**

a) NOL applied to FY 2014 ISR DIT	$ 6,444,262	Page 23 of 29 Line 2(j)
b) FY 2014 ISR weighted average additions rate	31.41%	Page 28 of 29 Line 16
c) FY 2014 ISR weighted average NOL	$ 2,024,108	Line (a) * Line (b)
d) FY 2014 Rate of Return	10.05%	Line 1(c) above
e) FY 2014 Return on weighted average ISR NOL	$ 203,423	Line (c) * Line (d)
f) NOL applied to base rate deferred tax provision	$ 11,579,956	Page 23 of 29 Line 11(j) less Line (a) above
g) FY 2014 weighted average base rate DIT rate	58.33%	Per Line 15
h) FY 2014 base rate weighted average NOL	$ 6,754,974	Line (f) * Line (g)
i) FY 2014 Rate of Return	10.05%	Line 1
j) FY 2014 Return on weighted average base rate NOL	$ 678,875	Line (h) * Line (i)
k) Total FY 2014 NOL impact on vintage FY 2014 investment	$ 882,298	Line (e) + Line (j)

5 cont. **Col (d)** = Line 2(c) * Line 1(d); **Col (e)** = Line 2(c) * Line 1(e) ; **Col (f)** = Line 1(f) * Line 2(c); **Col (g)** = Line 1(g) * 2(c)

6 **Col (d)** = Line 1(d) * Line 2(d) * 50%; **Col (e)** = Line 1(d) * Line 2(d); **Col (f)** = Line 1(f) * Line 2(d); **Col (g)** = Line 1(g) * 2(d)

7 **Col (e)** = Line 1(e) * Line 2(e) * 50%; **Col (f)** = Line 1(f) * Line 2(e); **Col (g)** = Line 1(g) * Line 2(e)

8 **Col (f)** = Line 1(f) * Line 2(f) * 50%; **Col (g)** = Line 1(g) * Line 2(f)

9 **Col (g)** = Line 1(g) * Line 2(g) * 50%

11 Sum of Lines 3 through 9

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of FY 2018 Net Deferred Tax Reserve Proration

Line No.			(a)=Sum of (b) through (h) Total	(b) Vintage Year 2018	(c) Vintage Year 2017	(d) Vintage Year 2016	(e) Vintage Year 2015	(f) Vintage Year 2014	(g) Vintage Year 2013	(h) Vintage Year 2012
	Deferred Tax Subject to Proration									
1	Book Depreciation	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 1	$10,032,984	$1,519,105	$2,581,784	$2,916,853	$2,333,053	$679,280	($150,012)	$152,921
2	Bonus Depreciation	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 2	($13,764,576)	($13,764,576)	$0	$0	$0	$0	$0	$0
3	Remaining MACRS Tax Depreciation	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 3	($3,366,917)	($570,505)	($890,237)	($892,846)	($837,819)	($156,979)	$9,278	($27,809)
4	FY18 tax (gain)/loss on retirements	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 4	($238,628)	($238,628)	$0	$0	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($7,337,137)	($13,054,604)	$1,691,547	$2,024,007	$1,495,234	$522,301	($140,734)	$125,112
6	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($2,567,998)	($4,569,111)	$592,041	$708,402	$523,332	$182,805	($49,257)	$43,789
	Deferred Tax Not Subject to Proration									
8	Capital Repairs Deduction	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 8	($64,198,946)	($64,198,946)						
9	Cost of Removal	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 9	($8,008,000)	($8,008,000)						
10	Book/Tax Depreciation Timing Difference at 3/31/2017		$0	$0						
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	($72,206,946)	($72,206,946)						
12	Effective Tax Rate		35.00%	35.00%						
13	Deferred Tax Reserve	Line 11 * Line 12	($25,272,431)	($25,272,431)						
14	Total Deferred Tax Reserve	Line 7 + Line 13	($27,840,429)	($29,841,543)	$592,041	$708,402	$523,332	$182,805	($49,257)	$43,789
15	Net Operating Loss	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 15	$0	$0						
16	Net Deferred Tax Reserve	Line 14 + Line 15	($27,840,429)	($29,841,543)	$592,041	$708,402	$523,332	$182,805	($49,257)	$43,789
	Allocation of FY 2018 Estimated Federal NOL									
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($13,054,604)	($13,054,604)						
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	($72,206,946)	($72,206,946)						
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($85,261,550)	($85,261,550)						
20	Total FY 2018 Federal NOL	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 20	$0	$0						
21	Allocated FY 2018 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0						
22	Allocated FY 2018 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0						
23	Effective Tax Rate		35.00%	35.00%						
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0						
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($2,567,998)	($4,569,111)	$592,041	$708,402	$523,332	$182,805	($49,257)	$43,789

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (r)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
	Proration Calculation										
26	April 2017	30	91.78%	($196,411)	($349,464)	$45,282	$54,181	$40,027	$13,982	($3,767)	$3,349
27	May 2017	31	83.29%	($178,235)	($317,126)	$41,091	$49,168	$36,323	$12,688	($3,419)	$3,039
28	June 2017	30	75.07%	($160,646)	($285,830)	$37,036	$44,316	$32,738	$11,436	($3,081)	$2,739
29	July 2017	31	66.58%	($142,471)	($253,492)	$32,846	$39,302	$29,034	$10,142	($2,733)	$2,429
30	August 2017	31	58.08%	($124,296)	($221,153)	$28,656	$34,288	$25,330	$8,848	($2,384)	$2,119
31	September 2017	30	49.86%	($106,707)	($189,858)	$24,601	$29,436	$21,746	$7,596	($2,047)	$1,820
32	October 2017	31	41.37%	($88,531)	($157,520)	$20,411	$24,422	$18,042	$6,302	($1,698)	$1,510
33	November 2017	30	33.15%	($70,942)	($126,224)	$16,355	$19,570	$14,457	$5,050	($1,361)	$1,210
34	December 2017	31	24.66%	($52,767)	($93,886)	$12,165	$14,556	$10,753	$3,756	($1,012)	$900
35	January 2018	31	16.16%	($34,592)	($61,547)	$7,975	$9,542	$7,049	$2,462	($664)	$590
36	February 2018	28	8.49%	($18,175)	($32,338)	$4,190	$5,014	$3,704	$1,294	($349)	$310
37	March 2018	31	0.00%	$0	$0	$0	$0	$0	$0	$0	$0
38	Total	365		($1,173,774)	($2,088,439)	$270,609	$323,795	$239,203	$83,556	($22,514)	$20,015
39	Deferred Tax Without Proration	Line 25		($2,567,998)	($4,569,111)	$592,041	$708,402	$523,332	$182,805	($49,257)	$43,789
40	Proration Adjustment	Line 38 - Line 39		$1,394,224	$2,480,673	($321,433)	($384,608)	($284,129)	($99,249)	$26,743	($23,774)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) divided by 365
(l) through (r) = Current Year Line 25 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of FY 2019 Net Deferred Tax Reserve Proration

Line No.			(a)=Sum of (b) through (i) Total	(b) Vintage Year 2019	(c) Vintage Year 2018	(d) Vintage Year 2017	(e) Vintage Year 2016	(f) Vintage Year 2015	(g) Vintage Year 2014	(h) Vintage Year 2013	(i) Vintage Year 2012
	Deferred Tax Subject to Proration										
	Book Depreciation	Col (b) = Page 4 of 29, Line 12; Col (c) = Page 6 of 29, Line 12; Col (d) = Page 8 of 29, Line 12; Col (e) = Page 10 of 29, Line 12; Col (f) = Page 12 of 29, Line 12; Col (g) = Page 14 of 29, Line 10; Col (h) = Page 16 of 29, Line 10									
1			$12,948,850	$1,533,253	$3,038,209	$2,469,637	$2,911,746	$2,330,109	$667,409	($151,220)	$149,706
2	Bonus Depreciation		($10,773,786)	($10,773,786)	$0	$0	$0	$0	$0	$0	$0
		Col (b) = Page 5 of 29, Line 18; Col (c) = Page 6 of 29, Line 10; Col (d) = Page 8 of 29, Line 10; Col (e) = Page 10 of 29, Line 10; Col (f) = Page 12 of 29, Line 10; Col (g) = Page 14 of 29, Line 8; Col (h) = Page 16 of 29, Line 8									
3	Remaining MACRS Tax Depreciation		($4,811,658)	($1,296,266)	($1,098,261)	($809,884)	($672,971)	($774,884)	($142,869)	$8,845	($25,368)
4	FY19 tax (gain)/loss on retirements		($238,628)	($238,628)	$0	$0	$0	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($2,875,222)	($10,775,427)	$1,939,948	$1,659,754	$2,238,775	$1,555,225	$524,540	($142,375)	$124,338
6	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($1,006,328)	($3,771,399)	$678,982	$580,914	$783,571	$544,329	$183,589	($49,831)	$43,518
	Deferred Tax Not Subject to Proration										
8	Capital Repairs Deduction		($72,041,903)	($72,041,903)							
9	Cost of Removal		($6,307,000)	($6,307,000)							
10	Book/Tax Depreciation Timing Difference at 3/31/2017		$0	$0							
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	($78,348,903)	($78,348,903)							
12	Effective Tax Rate		35.00%	35.00%							
13	Deferred Tax Reserve	Line 11 * Line 12	($27,422,116)	($27,422,116)							
14	Total Deferred Tax Reserve	Line 7 + Line 13	($28,428,444)	($31,193,516)	$678,982	$580,914	$783,571	$544,329	$183,589	($49,831)	$43,518
15	Net Operating Loss		$0	$0							
16	Net Deferred Tax Reserve	Line 14 + Line 15	($28,428,444)	($31,193,516)	$678,982	$580,914	$783,571	$544,329	$183,589	($49,831)	$43,518
	Allocation of FY 2018 Estimated Federal NOL										
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($8,835,479)	($10,775,427)	$1,939,948						
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	($78,348,903)	($78,348,903)	$0						
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($87,184,382)	($89,124,330)	$1,939,948						
20	Total FY 2018 Federal NOL		$0	$0							
21	Allocated FY 2018 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0							
22	Allocated FY 2018 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0							
23	Effective Tax Rate		35.00%	35.00%							
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0							
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($1,006,328)	($3,771,399)	$678,982	$580,914	$783,571	$544,329	$183,589	($49,831)	$43,518

		(j) Number of Days in Month	(k) Proration Percentage	(l)= Sum of (m) through (t)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
	Proration Calculation											
26	April 2017	30	91.78%	($76,968)	($288,452)	$51,931	$44,431	$59,931	$41,632	$14,042	($3,811)	$3,328
27	May 2017	31	83.29%	($69,846)	($261,759)	$47,126	$40,319	$54,385	$37,780	$12,742	($3,459)	$3,020
28	June 2017	30	75.07%	($62,953)	($235,928)	$42,475	$36,340	$49,018	$34,052	$11,485	($3,117)	$2,722
29	July 2017	31	66.58%	($55,831)	($209,235)	$37,670	$32,229	$43,472	$30,199	$10,185	($2,765)	$2,414
30	August 2017	31	58.08%	($48,708)	($182,543)	$32,864	$28,117	$37,926	$26,346	$8,886	($2,412)	$2,106
31	September 2017	30	49.86%	($41,815)	($156,711)	$28,213	$24,138	$32,559	$22,618	$7,629	($2,071)	$1,808
32	October 2017	31	41.37%	($34,693)	($130,019)	$23,408	$20,027	$27,014	$18,766	$6,329	($1,718)	$1,500
33	November 2017	30	33.15%	($27,800)	($104,187)	$18,757	$16,048	$21,647	$15,037	$5,072	($1,377)	$1,202
34	December 2017	31	24.66%	($20,678)	($77,495)	$13,952	$11,937	$16,101	$11,185	$3,772	($1,024)	$894
35	January 2018	31	16.16%	($13,556)	($50,802)	$9,146	$7,825	$10,555	$7,332	$2,473	($671)	$586
36	February 2018	28	8.49%	($7,122)	($26,693)	$4,806	$4,111	$5,546	$3,853	$1,299	($353)	$308
37	March 2018	31	0.00%	$0	$0	$0	$0	$0	$0	$0	$0	$0
38	Total	365		($459,970)	($1,723,822)	$310,347	$265,523	$358,153	$248,800	$83,914	($22,777)	$19,891
39	Deferred Tax Without Proration	Line 25		($1,006,328)	($3,771,399)	$678,982	$580,914	$783,571	$544,329	$183,589	($49,831)	$43,518
40	Proration Adjustment	Line 38 - Line 39		$546,358	$2,047,577	($368,634)	($315,391)	($425,418)	($295,528)	($99,675)	$27,054	($23,627)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) divided by 365
(l) through (r) = Current Year Line 25 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of FY 2020 Net Deferred Tax Reserve Proration

Line No.			(a)=Sum of (b) through (h) Total	(b) Vintage Year 2019	(c) Vintage Year 2018	(d) Vintage Year 2017	(e) Vintage Year 2016	(f) Vintage Year 2015	(g) Vintage Year 2014	(h) Vintage Year 2013	(i) Vintage Year 2012
	Deferred Tax Subject to Proration										
	Book Depreciation	Col (b) = Page 4 of 29, Line 12; Col (c) = Page 6 of 29, Line 12; Col (d) = Page 8 of 29, Line 12; Col (e) = Page 10 of 29, Line 12; Col (f) = Page 12 of 29, Line 12; Col (g) = Page 14 of 29, Line 10; Col (h) = Page 16 of 29, Line 10									
1			$14,482,103	$3,066,506	$3,038,209	$2,469,637	$2,911,746	$2,330,109	$667,409	($151,220)	$149,706
2	Bonus Depreciation		$0	$0	$0	$0	$0	$0	$0	$0	$0
		Col (b) = Page 5 of 29, Line 18; Col (c) = Page 6 of 29, Line 10; Col (d) = Page 8 of 29, Line 10; Col (e) = Page 10 of 29, Line 10; Col (f) = Page 12 of 29, Line 10; Col (g) = Page 14 of 29, Line 8; Col (h) = Page 16 of 29, Line 8									
3	Remaining MACRS Tax Depreciation		($4,549,543)	($1,296,266)	($1,015,804)	($749,236)	($622,419)	($716,832)	($132,137)	$8,183	($25,031)
4	FY19 tax (gain)/loss on retirements		$0	$0	$0	$0	$0	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	$9,932,559	$1,770,240	$2,022,405	$1,720,401	$2,289,327	$1,613,277	$535,272	($143,037)	$124,675
6	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	$3,476,396	$619,584	$707,842	$602,140	$801,264	$564,647	$187,345	($50,063)	$43,636
	Deferred Tax Not Subject to Proration										
8	Capital Repairs Deduction		$0	$0							
9	Cost of Removal		$0	$0							
10	Book/Tax Depreciation Timing Difference at 3/31/2017		$0	$0							
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0							
12	Effective Tax Rate		35.00%	35.00%							
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0							
14	Total Deferred Tax Reserve	Line 7 + Line 13	$3,476,396	$619,584	$707,842	$602,140	$801,264	$564,647	$187,345	($50,063)	$43,636
15	Net Operating Loss		$0	$0	$0						
16	Net Deferred Tax Reserve	Line 14 + Line 15	$3,476,396	$619,584	$707,842	$602,140	$801,264	$564,647	$187,345	($50,063)	$43,636
	Allocation of FY 2018 Estimated Federal NOL										
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	$3,792,645	$1,770,240	$2,022,405						
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	$0						
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	$3,792,645	$1,770,240	$2,022,405						
20	Total FY 2018 Federal NOL		$0	$0							
21	Allocated FY 2018 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0							
22	Allocated FY 2018 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0							
23	Effective Tax Rate		35.00%	35.00%							
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0							
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	$3,476,396	$619,584	$707,842	$602,140	$801,264	$564,647	$187,345	($50,063)	$43,636

		(j) Number of Days in Month	(k) Proration Percentage	(l)= Sum of (m) through (s)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	Proration Calculation										
26	April 2017	30	91.78%	$218,500	$54,139	$54,139	$46,054	$61,284	$43,186	$14,329	($3,829)	$3,337
27	May 2017	31	83.29%	$198,281	$49,129	$49,129	$41,792	$55,613	$39,190	$13,003	($3,475)	$3,029
28	June 2017	30	75.07%	$178,714	$44,281	$44,281	$37,668	$50,125	$35,323	$11,720	($3,132)	$2,730
29	July 2017	31	66.58%	$158,494	$39,271	$39,271	$33,406	$44,454	$31,326	$10,394	($2,777)	$2,421
30	August 2017	31	58.08%	$138,275	$34,261	$34,261	$29,145	$38,783	$27,330	$9,068	($2,423)	$2,112
31	September 2017	30	49.86%	$118,708	$29,413	$29,413	$25,020	$33,295	$23,462	$7,785	($2,080)	$1,813
32	October 2017	31	41.37%	$98,488	$24,403	$24,403	$20,759	$27,623	$19,466	$6,459	($1,726)	$1,504
33	November 2017	30	33.15%	$78,921	$19,555	$19,555	$16,634	$22,135	$15,599	$5,176	($1,383)	$1,205
34	December 2017	31	24.66%	$58,702	$14,545	$14,545	$12,373	$16,464	$11,602	$3,850	($1,029)	$897
35	January 2018	31	16.16%	$38,482	$9,535	$9,535	$8,111	$10,793	$7,606	$2,524	($674)	$588
36	February 2018	28	8.49%	$20,219	$5,010	$5,010	$4,262	$5,671	$3,996	$1,326	($354)	$309
37	March 2018	31	0.00%	$0	$0	$0	$0	$0	$0	$0	$0	$0
38	Total	365		$1,305,785	$323,539	$323,539	$275,225	$366,240	$258,087	$85,631	($22,883)	$19,945
39	Deferred Tax Without Proration	Line 25		$2,856,812	$619,584	$707,842	$602,140	$801,264	$564,647	$187,345	($50,063)	$43,636
40	Proration Adjustment	Line 38 - Line 39		($1,551,027)	($296,045)	($384,303)	($326,915)	($435,024)	($306,559)	($101,714)	$27,180	($23,691)

Column Notes:

(j) Sum of remaining days in the year (Col (i)) divided by 365

(l) through (r) = Current Year Line 25 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Weighted ISR Additions FY 2014

Line No.	Month No.	Month	FY 2014 ISR Additions (a)	In Rates (b)	Not In Rates (c) = (a) - (b)	Weight (d)	Weighted Average (e) = (d) * (c)
1				$57,184,191			
2	1	Apr-13	$5,751,208	4,765,349	$985,858	0.958	$944,781
3	2	May-13	5,751,208	4,765,349	985,858	0.875	862,626
4	3	Jun-13	5,751,208	4,765,349	985,858	0.792	780,471
5	4	Jul-13	5,751,208	4,765,349	985,858	0.708	698,316
6	5	Aug-13	5,751,208	4,765,349	985,858	0.625	616,161
7	6	Sep-13	5,751,208	4,765,349	985,858	0.542	534,007
8	7	Oct-13	5,751,208	4,765,349	985,858	0.458	451,852
9	8	Nov-13	5,751,208	4,765,349	985,858	0.375	369,697
10	9	Dec-13	5,751,208	4,765,349	985,858	0.292	287,542
11	10	Jan-14	5,751,208	4,765,349	985,858	0.208	205,387
12	11	Feb-14	5,751,208	-	5,751,208	0.125	718,901
13	12	Mar-14	5,751,208	-	5,751,208	0.042	239,634
14	Total FY 2014		$69,014,490	$47,653,493	$21,360,998		$6,709,374
15	**Total Additions February & March 2014**				**$11,502,415**		
16	**FY 2014 Weighted Average Incremental Rate Base Percentage**						**31.41%**

Column (a) = Page 18 of 29, Line 1(c)
Column (b) = Page 18 of 29, Line 2(c)
Column (d) = (12.5 - Month No.) ÷ 12
Line 15 = Line 12(c) + Line 13(c)
Line 16 = Line 14(e)/Line 14(c)

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Weighted ISR Deferred Tax Provision FY 2014

Line No.	Month No.	Month	FY 2014 ISR Deferred Tax (a)	In Rates (b)	Not In Rates (c) = (a) - (b)	Weight (d)	Weighted Average (e) = (d) * (c)
1				$13,893,167			
2	1	Apr-13	$ -	1,157,764	($1,157,764)	0.958	($1,109,524)
3	2	May-13	-	1,157,764	(1,157,764)	0.875	(1,013,043)
4	3	Jun-13	-	1,157,764	(1,157,764)	0.792	(916,563)
5	4	Jul-13	-	1,157,764	(1,157,764)	0.708	(820,083)
6	5	Aug-13	-	1,157,764	(1,157,764)	0.625	(723,602)
7	6	Sep-13	-	1,157,764	(1,157,764)	0.542	(627,122)
8	7	Oct-13	-	1,157,764	(1,157,764)	0.458	(530,642)
9	8	Nov-13	-	1,157,764	(1,157,764)	0.375	(434,161)
10	9	Dec-13	-	1,157,764	(1,157,764)	0.292	(337,681)
11	10	Jan-14	-	1,157,764	(1,157,764)	0.208	(241,201)
12	11	Feb-14	-	-	-	0.125	-
13	12	Mar-14	-	-	-	0.042	-
14	Total FY 2014		$ -	$11,577,639	($11,577,639)		($6,753,623)

15 **FY 2014 Weighted Average Deferred Tax Provision Percentage** **58.33%**

Column (a) = Page 4 Line 18(a)
Column (b) = Page 23 of 29, Line 1(k). Lines 2 through 11 = 1/12th of Line 1.
Column (d) = (12.5 - Month No.) ÷ 12
Line 15 = Line 14(e)/Line 14(c)

Section 4
Rate Design & Bill Impacts

Section 4

Rate Design and Bill Impacts
FY 2019 Proposal

Rate Design and Bill Impacts
FY 2019 Proposal

Like the revenue requirement, the proposed Gas ISR Plan rate design for FY 2019 is designed to recover incremental capital investment in excess of capital investment that has been reflected in the rate base in the Company's last general rate case in Docket No. 4323, as well as incremental O&M as described in Section 2 and the property tax described in Section 3, in accordance with the property tax recovery mechanism included in the Amended Settlement Agreement in Docket No. 4323. For purposes of rate design, the revenue requirement associated with cumulative capital investment and property tax recovery is allocated to rate classes based upon the rate base allocator from the Amended Settlement Agreement in Docket No. 4323.

Beginning with the FY 2019 Gas ISR Plan, the Company is proposing to combine the allocated revenue requirement for the Residential Non-Heating and the Residential Heating rate classes, thereby deriving one ISR capital factor applicable to all residential customers. The Company is proposing this change due to recent transfers of Residential Non-Heating customers to the Residential Heating rate classes. The rate base allocator from the Amended Settlement Agreement in Docket No. 4323 was associated with 23,978 Residential Non-Heating customers forecasted for the rate year in that case. Over the past four years, the Company has transferred over 20% of Residential Non-Heating customers to the Residential Heating rate classes. The rate base allocator for the Residential Non-Heating rate class is no longer representative of the number of customers currently receiving service on that rate class, and applying it while maintaining a separate ISR capital factor for this class will result in a disproportionate allocation of the ISR revenue requirement to the Residential Non-Heating rate class in light of the

significant reduction in Residential Non-Heating customers and resulting reduction in forecasted throughput. Without aggregating the allocated revenue requirement as proposed by the Company, the proposed capital component of the FY 2019 Residential Non-Heating ISR factor would be $0.4400 per therm,[12] which is an increase of $0.26 per therm, or 140%, over the currently effective capital component of the FY 2018 ISR factor, resulting in a total bill increase of 13%. Combining the Residential Non-Heating and Residential Heating allocated revenue requirement will result in one residential ISR capital factor applicable to all residential customers. The impact of this proposed change to the capital component will reduce the FY 2019 ISR factor for Residential Non-Heating customers from what the Company would have proposed under the current formula of $0.4556 per therm[13] to $0.1569 per therm,[14] or $0.2987 per therm lower, while resulting in a slightly higher FY 2019 ISR factor for Residential Heating customers of $0.1569 per therm compared to $0.1510 per therm[15] under the current formula, or $0.0059 per therm higher.

The incremental O&M expense associated with hiring, training, and supervising additional personnel to support an increase in Main Replacement work for FY 2019 has been allocated to all rate classes on a per-unit basis. The forecasted throughput for the April 2018 through March 2019 period is from the Company's most recent forecast filed in the Company's Gas Cost Recovery filing in Docket No. 4719. Attachment 1 of this section provides the

[12] See Section 4: Attachment 1, Page 3, Line 3, Column (g).
[13] See Section 4: Attachment 1, Page 3, Line 3, Column (k).
[14] See Section 4: Attachment 1, Page 1, Line 1, Column (k).
[15] See Section 4: Attachment 1, Page 3, Line 4, Column (k).

proposed ISR factors by rate class. Attachment 2 of this section provides the Plan's bill impact[16] associated with the rate design in Attachment 1 by rate class. For the average Residential Heating customer utilizing 846 therms, the cumulative impact of the Gas ISR Plan will represent an annual increase of $30.34, or 2.5%.

[16] Bill impacts are provided using rates approved and currently in effect as of November 1, 2017.

	FY 2019 Revenue Requirement	Rate Class	Rate Base Allocator (%)	Allocation to Rate Class ($)	Throughput (dth)	CapEx Factor (dth)	CapEx Factor (therm)	O&M Allocation (therm)	Total ISR Factor (therm)	Uncollectible %	ISR Factor (therm)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
(1)	$45,274,892										
(2)	$502,000										
(3)		Res-NH									$0.1569
(4)		Res-H									$0.1569
(5)		Residential Total	65.29%	$29,559,977	19,598,273	$1.5082	$0.1508	$0.0012	$0.1520	3.18%	$0.1569
(6)		Small	8.19%	$3,708,014	2,472,466	$1.4997	$0.1499	$0.0012	$0.1511	3.18%	$0.1560
(7)		Medium	13.58%	$6,148,330	5,507,228	$1.1164	$0.1116	$0.0012	$0.1128	3.18%	$0.1165
(8)		Large LL	6.04%	$2,734,603	2,651,210	$1.0314	$0.1031	$0.0012	$0.1043	3.18%	$0.1077
(9)		Large HL	2.35%	$1,063,960	1,264,980	$0.8410	$0.0841	$0.0012	$0.0853	3.18%	$0.0881
(10)		XL-LL	0.77%	$348,617	1,236,022	$0.2820	$0.0282	$0.0012	$0.0294	3.18%	$0.0303
(11)		XL-HL	3.78%	$1,711,391	6,959,192	$0.2459	$0.0245	$0.0012	$0.0257	3.18%	$0.0265
(12)		Total	100.0%	$45,274,892	39,689,371						

(a) Line 1: Proposed Capital Revenue Requirement & Forecasted Annual Property Tax Recovery Mechanism (Section 3, Attachment 1, Page 1, Line 12)
(a) Line 2: Proposed O&M (Section 3, Attachment 1, Page 1, Line 1)
(c) Docket 4323, RI 2012 Rate Case
(d) Column (a) Line 1 * Column (c)
(e) Page 2, Column (m), Line 9
(f) Column (d) / Column (e), truncated to 4 decimal places
(g) Column (d) / (Column (e)*10), truncated to 4 decimal places
(h) Column (a) Line 2 / (Column (e) Line 12 * 10)
(i) Column (g) + Column (h)
(j) Docket 4323, RI 2012 Rate Case
(k) Column (i) / (1- Column (j)), truncated to 4 decimal places

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4781
Gas Infrastructure, Safety, and
Reliability Plan
Section 4: Attachment 1
Page 1 of 3

Forecasted Throughput April 2018 - March 2019

		Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Total
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
(1)	Res-NH	50,294	32,303	22,003	16,157	14,197	15,072	17,788	24,837	37,709	47,476	44,759	61,172	383,768
(2)	Res-H	2,123,608	1,134,913	640,980	439,872	378,733	439,199	549,175	1,238,713	2,322,621	3,324,439	3,561,176	3,061,076	19,214,505
(3)	Small	282,085	127,654	81,210	48,438	44,471	51,076	64,219	134,620	317,128	448,887	460,766	411,912	2,472,466
(4)	Medium	588,016	377,752	220,253	171,990	168,314	165,735	224,869	386,227	685,078	890,474	832,433	796,089	5,507,228
(5)	Large LL	262,122	148,974	70,466	41,947	39,409	55,337	96,300	210,182	383,934	475,839	461,099	405,600	2,651,210
(6)	Large HL	109,831	99,726	101,650	81,771	74,186	78,236	86,545	98,893	127,033	145,310	130,623	131,175	1,264,980
(7)	X-Large LL	107,508	64,454	29,522	20,131	18,769	25,559	78,316	122,232	189,973	219,898	191,723	167,937	1,236,022
(8)	X-Large HL	602,390	555,617	545,537	551,277	543,710	521,696	548,179	582,158	665,807	667,562	572,771	602,487	6,959,192
(9)		4,125,854	2,541,393	1,711,620	1,371,584	1,281,789	1,351,911	1,665,391	2,797,862	4,729,283	6,219,885	6,255,350	5,637,448	39,689,371

Source: Company forecast

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Illustrative Example calculating FY19 ISR Factors for Residential Non-Heating and Residential Heating on a Stand Alone Basis

	FY 2019 Revenue Requirement	Rate Class	Rate Base Allocator (%)	Allocation to Rate Class ($)	Throughput (dth)	CapEx Factor (dth)	CapEx Factor (therm)	O&M Allocation (therm)	Total ISR Factor (therm)	Uncollectible %	ISR Factor (therm)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
(1)	$45,274,892										
(2)	$502,000										
(3)		Res-NH	3.73%	$1,688,753	383,768	$4.4004	$0.4400	$0.0012	$0.4412	3.18%	$0.4556
(4)		Res-H	61.56%	$27,871,223	19,214,505	$1.4505	$0.1450	$0.0012	$0.1462	3.18%	$0.1510
(5)		Residential Total	65.29%	$29,559,977	19,598,273	$1.5082	$0.1508	$0.0012	$0.1520	3.18%	$0.1569
(6)		Small	8.19%	$3,708,014	2,472,466	$1.4997	$0.1499	$0.0012	$0.1511	3.18%	$0.1560
(7)		Medium	13.58%	$6,148,330	5,507,228	$1.1164	$0.1116	$0.0012	$0.1128	3.18%	$0.1165
(8)		Large LL	6.04%	$2,734,603	2,651,210	$1.0314	$0.1031	$0.0012	$0.1043	3.18%	$0.1077
(9)		Large HL	2.35%	$1,063,960	1,264,980	$0.8410	$0.0841	$0.0012	$0.0853	3.18%	$0.0881
(10)		XL-LL	0.77%	$348,617	1,236,022	$0.2820	$0.0282	$0.0012	$0.0294	3.18%	$0.0303
(11)		XL-HL	3.78%	$1,711,391	6,959,192	$0.2459	$0.0245	$0.0012	$0.0257	3.18%	$0.0265
(12)		Total	100%	$45,274,892	39,689,371						

(a) Line 1: Proposed Capital Revenue Requirement & Forecasted Annual Property Tax Recovery Mechanism (Section 3, Attachment 1, Page 1, Line 12)
(a) Line 2: Proposed O&M (Section 3, Attachment 1, Page 1, Line 1)
(c) Docket 4323, RI 2012 Rate Case
(d) Column (a) Line 1 * Column (c)
(e) Page 2, Column (m), Line 9
(f) Column (d) / Column (e), truncated to 4 decimal places
(g) Column (d) / (Column (e)*10), truncated to 4 decimal places
(h) Column (a) Line 2 / (Column (e) Line 12 * 10)
(i) Column (g) + Column (h)
(j) Docket 4323, RI 2012 Rate Case
(k) Column (i) / (1- Column (j)), truncated to 4 decimal places

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Infrastructure, Safety, and Reliability (ISR) Filing

Bill Impact Analysis with Various Levels of Consumption:

Residential Heating:

Line No.		Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Difference due to: Base Rates	GCR	DAC Base DAC	DAC ISR	EE	LIHEAP	GET
(1)													
(2)													
(3)													
(4)													
(5)		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
(6)													
(7)		550	$886.23	$866.53	$19.70	2.3%	$0.00	$0.00	$0.00	$19.11	$0.00	$0.00	$0.59
(8)		608	$961.23	$939.42	$21.81	2.3%	$0.00	$0.00	$0.00	$21.16	$0.00	$0.00	$0.65
(9)		667	$1,037.35	$1,013.45	$23.91	2.4%	$0.00	$0.00	$0.00	$23.19	$0.00	$0.00	$0.72
(10)		727	$1,113.78	$1,087.68	$26.09	2.4%	$0.00	$0.00	$0.00	$25.31	$0.00	$0.00	$0.78
(11)		788	$1,188.40	$1,160.13	$28.27	2.4%	$0.00	$0.00	$0.00	$27.42	$0.00	$0.00	$0.85
(12)	**Average Customer**	**846**	**$1,257.94**	**$1,227.60**	**$30.34**	**2.5%**	$0.00	$0.00	$0.00	$29.43	$0.00	$0.00	$0.91
(13)		904	$1,327.77	$1,295.33	$32.43	2.5%	$0.00	$0.00	$0.00	$31.46	$0.00	$0.00	$0.97
(14)		966	$1,402.14	$1,367.48	$34.66	2.5%	$0.00	$0.00	$0.00	$33.62	$0.00	$0.00	$1.04
(15)		1,023	$1,470.33	$1,433.65	$36.68	2.6%	$0.00	$0.00	$0.00	$35.58	$0.00	$0.00	$1.10
(16)		1,081	$1,539.03	$1,500.24	$38.79	2.6%	$0.00	$0.00	$0.00	$37.63	$0.00	$0.00	$1.16
(17)		1,145	$1,613.80	$1,572.72	$41.08	2.6%	$0.00	$0.00	$0.00	$39.85	$0.00	$0.00	$1.23

Residential Heating Low Income:

		Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Difference due to: Base Rates	GCR	DAC Base DAC	DAC ISR	EE	LIHEAP	GET
(18)													
(19)													
(20)													
(21)													
(22)		550	$843.74	$824.04	$19.70	2.4%	$0.00	$0.00	$0.00	$19.11	$0.00	$0.00	$0.59
(23)		608	$916.00	$894.18	$21.81	2.4%	$0.00	$0.00	$0.00	$21.16	$0.00	$0.00	$0.65
(24)		667	$989.35	$965.44	$23.91	2.5%	$0.00	$0.00	$0.00	$23.19	$0.00	$0.00	$0.72
(25)		727	$1,063.05	$1,036.96	$26.09	2.5%	$0.00	$0.00	$0.00	$25.31	$0.00	$0.00	$0.78
(26)		788	$1,135.22	$1,106.95	$28.27	2.6%	$0.00	$0.00	$0.00	$27.42	$0.00	$0.00	$0.85
(27)	**Average Customer**	**846**	**$1,202.54**	**$1,172.20**	**$30.34**	**2.6%**	$0.00	$0.00	$0.00	$29.43	$0.00	$0.00	$0.91
(28)		904	$1,270.16	$1,237.73	$32.43	2.6%	$0.00	$0.00	$0.00	$31.46	$0.00	$0.00	$0.97
(29)		966	$1,342.19	$1,307.53	$34.66	2.7%	$0.00	$0.00	$0.00	$33.62	$0.00	$0.00	$1.04
(30)		1,023	$1,408.23	$1,371.55	$36.68	2.7%	$0.00	$0.00	$0.00	$35.58	$0.00	$0.00	$1.10
(31)		1,081	$1,474.83	$1,436.03	$38.79	2.7%	$0.00	$0.00	$0.00	$37.63	$0.00	$0.00	$1.16
(32)		1,145	$1,547.37	$1,506.28	$41.08	2.7%	$0.00	$0.00	$0.00	$39.85	$0.00	$0.00	$1.23

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Bill Impact Analysis with Various Levels of Consumption:

Residential Non-Heating:

							Difference due to:						
	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	GCR	DAC Base DAC	DAC ISR	EE	LIHEAP	GET
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	140	$346.68	$351.59	($4.91)	-1.4%	$0.00	$0.00	$0.00	($4.76)	$0.00	$0.00	($0.15)
	155	$365.50	$370.93	($5.43)	-1.5%	$0.00	$0.00	$0.00	($5.27)	$0.00	$0.00	($0.16)
	171	$385.65	$391.64	($5.99)	-1.5%	$0.00	$0.00	$0.00	($5.81)	$0.00	$0.00	($0.18)
	184	$401.92	$408.36	($6.44)	-1.6%	$0.00	$0.00	$0.00	($6.25)	$0.00	$0.00	($0.19)
	198	$419.51	$426.44	($6.93)	-1.6%	$0.00	$0.00	$0.00	($6.72)	$0.00	$0.00	($0.21)
Average Customer	214	**$439.16**	**$446.66**	**($7.49)**	**-1.7%**	$0.00	$0.00	$0.00	($7.27)	$0.00	$0.00	($0.22)
	228	$457.20	$465.15	($7.95)	-1.7%	$0.00	$0.00	$0.00	($7.71)	$0.00	$0.00	($0.24)
	244	$477.31	$485.82	($8.52)	-1.8%	$0.00	$0.00	$0.00	($8.26)	$0.00	$0.00	($0.26)
	258	$494.92	$503.94	($9.02)	-1.8%	$0.00	$0.00	$0.00	($8.75)	$0.00	$0.00	($0.27)
	275	$516.23	$525.84	($9.61)	-1.8%	$0.00	$0.00	$0.00	($9.32)	$0.00	$0.00	($0.29)
	288	$532.58	$542.63	($10.04)	-1.9%	$0.00	$0.00	$0.00	($9.74)	$0.00	$0.00	($0.30)

Residential Non-Heating Low Income:

							Difference due to:						
	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	GCR	DAC Base DAC	DAC ISR	EE	LIHEAP	GET
	140	$324.27	$329.17	($4.91)	-1.5%	$0.00	$0.00	$0.00	($4.76)	$0.00	$0.00	($0.15)
	155	$342.40	$347.83	($5.43)	-1.6%	$0.00	$0.00	$0.00	($5.27)	$0.00	$0.00	($0.16)
	171	$361.83	$367.82	($5.99)	-1.6%	$0.00	$0.00	$0.00	($5.81)	$0.00	$0.00	($0.18)
	184	$377.51	$383.95	($6.44)	-1.7%	$0.00	$0.00	$0.00	($6.25)	$0.00	$0.00	($0.19)
	198	$394.46	$401.39	($6.93)	-1.7%	$0.00	$0.00	$0.00	($6.72)	$0.00	$0.00	($0.21)
Average Customer	**214**	**$413.41**	**$420.90**	**($7.49)**	**-1.8%**	$0.00	$0.00	$0.00	($7.27)	$0.00	$0.00	($0.22)
	228	$430.80	$438.74	($7.95)	-1.8%	$0.00	$0.00	$0.00	($7.71)	$0.00	$0.00	($0.24)
	244	$450.18	$458.70	($8.52)	-1.9%	$0.00	$0.00	$0.00	($8.26)	$0.00	$0.00	($0.26)
	258	$467.16	$476.18	($9.02)	-1.9%	$0.00	$0.00	$0.00	($8.75)	$0.00	$0.00	($0.27)
	275	$487.70	$497.31	($9.61)	-1.9%	$0.00	$0.00	$0.00	($9.32)	$0.00	$0.00	($0.29)
	288	$503.47	$513.51	($10.04)	-2.0%	$0.00	$0.00	$0.00	($9.74)	$0.00	$0.00	($0.30)

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Bill Impact Analysis with Various Levels of Consumption:

C & I Small:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Difference due to: Base Rates	GCR	DAC Base DAC	DAC ISR	EE	LIHEAP	GET
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	880	$1,450.01	$1,428.87	$21.14	1.5%	$0.00	$0.00	$0.00	$20.51	$0.00	$0.00	$0.63
	973	$1,556.94	$1,533.57	$23.37	1.5%	$0.00	$0.00	$0.00	$22.67	$0.00	$0.00	$0.70
	1,067	$1,664.35	$1,638.71	$25.64	1.6%	$0.00	$0.00	$0.00	$24.87	$0.00	$0.00	$0.77
	1,162	$1,772.10	$1,744.20	$27.90	1.6%	$0.00	$0.00	$0.00	$27.06	$0.00	$0.00	$0.84
	1,258	$1,878.88	$1,848.67	$30.22	1.6%	$0.00	$0.00	$0.00	$29.31	$0.00	$0.00	$0.91
Average Customer	**1,352**	**$1,978.48**	**$1,946.00**	**$32.47**	**1.7%**	$0.00	$0.00	$0.00	$31.50	$0.00	$0.00	$0.97
	1,446	$2,078.54	$2,043.81	$34.73	1.7%	$0.00	$0.00	$0.00	$33.69	$0.00	$0.00	$1.04
	1,542	$2,180.36	$2,143.33	$37.03	1.7%	$0.00	$0.00	$0.00	$35.92	$0.00	$0.00	$1.11
	1,635	$2,279.17	$2,239.87	$39.30	1.8%	$0.00	$0.00	$0.00	$38.12	$0.00	$0.00	$1.18
	1,730	$2,379.98	$2,338.40	$41.58	1.8%	$0.00	$0.00	$0.00	$40.33	$0.00	$0.00	$1.25
	1,825	$2,480.85	$2,436.97	$43.88	1.8%	$0.00	$0.00	$0.00	$42.56	$0.00	$0.00	$1.32

C & I Medium:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Difference due to: Base Rates	GCR	DAC Base DAC	DAC ISR	EE	LIHEAP	GET
	7,941	$9,185.87	$8,960.74	$225.13	2.5%	$0.00	$0.00	$0.00	$218.38	$0.00	$0.00	$6.75
	8,796	$10,080.92	$9,831.55	$249.37	2.5%	$0.00	$0.00	$0.00	$241.89	$0.00	$0.00	$7.48
	9,650	$10,974.51	$10,700.92	$273.59	2.6%	$0.00	$0.00	$0.00	$265.38	$0.00	$0.00	$8.21
	10,505	$11,869.58	$11,571.78	$297.80	2.6%	$0.00	$0.00	$0.00	$288.87	$0.00	$0.00	$8.93
	11,361	$12,765.03	$12,442.96	$322.07	2.6%	$0.00	$0.00	$0.00	$312.41	$0.00	$0.00	$9.66
Average Customer	**12,217**	**$13,660.79**	**$13,314.42**	**$346.37**	**2.6%**	$0.00	$0.00	$0.00	$335.98	$0.00	$0.00	$10.39
	13,073	$14,556.57	$14,185.93	$370.64	2.6%	$0.00	$0.00	$0.00	$359.52	$0.00	$0.00	$11.12
	13,928	$15,451.03	$15,056.20	$394.84	2.6%	$0.00	$0.00	$0.00	$382.99	$0.00	$0.00	$11.85
	14,782	$16,345.17	$15,926.12	$419.05	2.6%	$0.00	$0.00	$0.00	$406.48	$0.00	$0.00	$12.57
	15,637	$17,239.70	$16,796.40	$443.30	2.6%	$0.00	$0.00	$0.00	$430.00	$0.00	$0.00	$13.30
	16,492	$18,134.81	$17,667.26	$467.56	2.6%	$0.00	$0.00	$0.00	$453.53	$0.00	$0.00	$14.03

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Bill Impact Analysis with Various Levels of Consumption:

C & I LLF Large:

							Difference due to:						
		Annual	Proposed	Current					DAC		EE	LIHEAP	GET
		Consumption (Therms)	Rates	Rates	Difference	% Chg	Base Rates	GCR	Base DAC	ISR			
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
		41,066	$44,283.42	$43,305.45	$977.97	2.3%	$0.00	$0.00	$0.00	$948.63	$0.00	$0.00	$29.34
		45,488	$48,817.71	$47,734.44	$1,083.27	2.3%	$0.00	$0.00	$0.00	$1,050.77	$0.00	$0.00	$32.50
		49,910	$53,351.99	$52,163.40	$1,188.59	2.3%	$0.00	$0.00	$0.00	$1,152.93	$0.00	$0.00	$35.66
		54,334	$57,888.08	$56,594.19	$1,293.90	2.3%	$0.00	$0.00	$0.00	$1,255.08	$0.00	$0.00	$38.82
		58,757	$62,423.26	$61,023.99	$1,399.27	2.3%	$0.00	$0.00	$0.00	$1,357.29	$0.00	$0.00	$41.98
	Average Customer	**63,179**	**$66,957.64**	**$65,453.08**	**$1,504.57**	**2.3%**	$0.00	$0.00	$0.00	$1,459.43	$0.00	$0.00	$45.14
		67,600	$71,490.89	$69,881.04	$1,609.86	2.3%	$0.00	$0.00	$0.00	$1,561.56	$0.00	$0.00	$48.30
		72,023	$76,026.09	$74,310.90	$1,715.19	2.3%	$0.00	$0.00	$0.00	$1,663.73	$0.00	$0.00	$51.46
		76,447	$80,562.80	$78,742.25	$1,820.55	2.3%	$0.00	$0.00	$0.00	$1,765.93	$0.00	$0.00	$54.62
		80,870	$85,097.95	$83,172.09	$1,925.86	2.3%	$0.00	$0.00	$0.00	$1,868.08	$0.00	$0.00	$57.78
		85,292	$89,632.26	$87,601.06	$2,031.21	2.3%	$0.00	$0.00	$0.00	$1,970.27	$0.00	$0.00	$60.94

C & I HLF Large:

							Difference due to:						
		Annual	Proposed	Current					DAC		EE	LIHEAP	GET
		Consumption (Therms)	Rates	Rates	Difference	% Chg	Base Rates	GCR	Base DAC	ISR			
		50,411	$46,018.06	$45,638.66	$379.39	0.8%	$0.00	$0.00	$0.00	$368.01	$0.00	$0.00	$11.38
		55,841	$50,740.61	$50,320.38	$420.24	0.8%	$0.00	$0.00	$0.00	$407.63	$0.00	$0.00	$12.61
		61,273	$55,464.70	$55,003.57	$461.13	0.8%	$0.00	$0.00	$0.00	$447.30	$0.00	$0.00	$13.83
		66,699	$60,184.12	$59,682.13	$501.99	0.8%	$0.00	$0.00	$0.00	$486.93	$0.00	$0.00	$15.06
		72,129	$64,906.64	$64,363.80	$542.84	0.8%	$0.00	$0.00	$0.00	$526.55	$0.00	$0.00	$16.29
	Average Customer	**77,558**	**$69,628.34**	**$69,044.66**	**$583.68**	**0.8%**	$0.00	$0.00	$0.00	$566.17	$0.00	$0.00	$17.51
		82,989	$74,350.91	$73,726.35	$624.56	0.8%	$0.00	$0.00	$0.00	$605.82	$0.00	$0.00	$18.74
		88,416	$79,071.11	$78,405.70	$665.41	0.8%	$0.00	$0.00	$0.00	$645.45	$0.00	$0.00	$19.96
		93,847	$83,794.40	$83,088.15	$706.25	0.8%	$0.00	$0.00	$0.00	$685.06	$0.00	$0.00	$21.19
		99,275	$88,515.37	$87,768.25	$747.12	0.9%	$0.00	$0.00	$0.00	$724.71	$0.00	$0.00	$22.41
		104,705	$93,237.90	$92,449.90	$788.00	0.9%	$0.00	$0.00	$0.00	$764.36	$0.00	$0.00	$23.64

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

C & I LLF Extra-Large:

							Difference due to:						
	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	GCR	DAC Base DAC	DAC ISR	EE	LIHEAP	GET
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	174,357	$141,297.90	$140,147.51	$1,150.39	0.8%	$0.00	$0.00	$0.00	$1,115.88	$0.00	$0.00	$34.51
	193,136	$155,948.58	$154,674.28	$1,274.30	0.8%	$0.00	$0.00	$0.00	$1,236.07	$0.00	$0.00	$38.23
	211,912	$170,597.22	$169,199.04	$1,398.19	0.8%	$0.00	$0.00	$0.00	$1,356.24	$0.00	$0.00	$41.95
	230,688	$185,246.37	$183,724.31	$1,522.06	0.8%	$0.00	$0.00	$0.00	$1,476.40	$0.00	$0.00	$45.66
	249,466	$199,896.35	$198,250.40	$1,645.95	0.8%	$0.00	$0.00	$0.00	$1,596.57	$0.00	$0.00	$49.38
Average Customer	**268,243**	**$214,545.55**	**$212,775.72**	**$1,769.84**	**0.8%**	$0.00	$0.00	$0.00	$1,716.74	$0.00	$0.00	$53.10
	287,018	$229,193.59	$227,299.88	$1,893.71	0.8%	$0.00	$0.00	$0.00	$1,836.90	$0.00	$0.00	$56.81
	305,796	$243,844.17	$241,826.55	$2,017.62	0.8%	$0.00	$0.00	$0.00	$1,957.09	$0.00	$0.00	$60.53
	324,573	$258,493.48	$256,351.99	$2,141.49	0.8%	$0.00	$0.00	$0.00	$2,077.25	$0.00	$0.00	$64.24
	343,350	$273,142.76	$270,877.37	$2,265.39	0.8%	$0.00	$0.00	$0.00	$2,197.43	$0.00	$0.00	$67.96
	362,127	$287,792.06	$285,402.77	$2,389.29	0.8%	$0.00	$0.00	$0.00	$2,317.61	$0.00	$0.00	$71.68

C & I HLF Extra-Large:

							Difference due to:						
	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	GCR	DAC Base DAC	DAC ISR	EE	LIHEAP	GET
	447,421	$320,922.84	$318,708.77	$2,214.07	0.7%	$0.00	$0.00	$0.00	$2,147.65	$0.00	$0.00	$66.42
	495,605	$354,916.28	$352,463.80	$2,452.48	0.7%	$0.00	$0.00	$0.00	$2,378.91	$0.00	$0.00	$73.57
	543,789	$388,910.51	$386,219.58	$2,690.93	0.7%	$0.00	$0.00	$0.00	$2,610.20	$0.00	$0.00	$80.73
	591,972	$422,903.28	$419,973.95	$2,929.33	0.7%	$0.00	$0.00	$0.00	$2,841.45	$0.00	$0.00	$87.88
	640,155	$456,896.13	$453,728.33	$3,167.80	0.7%	$0.00	$0.00	$0.00	$3,072.77	$0.00	$0.00	$95.03
Average Customer	**688,340**	**$490,890.70**	**$487,484.46**	**$3,406.24**	**0.7%**	$0.00	$0.00	$0.00	$3,304.05	$0.00	$0.00	$102.19
	736,523	$524,883.81	$521,239.16	$3,644.65	0.7%	$0.00	$0.00	$0.00	$3,535.31	$0.00	$0.00	$109.34
	784,708	$558,877.90	$554,994.81	$3,883.09	0.7%	$0.00	$0.00	$0.00	$3,766.60	$0.00	$0.00	$116.49
	832,891	$592,871.51	$588,749.99	$4,121.52	0.7%	$0.00	$0.00	$0.00	$3,997.87	$0.00	$0.00	$123.65
	881,074	$626,864.35	$622,504.39	$4,359.96	0.7%	$0.00	$0.00	$0.00	$4,229.16	$0.00	$0.00	$130.80
	929,259	$660,859.20	$656,260.81	$4,598.39	0.7%	$0.00	$0.00	$0.00	$4,460.44	$0.00	$0.00	$137.95

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Testimony of
William R. Richer

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 4781
RE: FY 2019 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN
WITNESS: WILLIAM R. RICHER

DIRECT TESTIMONY

OF

WILLIAM R. RICHER

December 19, 2017

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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. Please state your position at National Grid and responsibilities in that position.

A. I am the Director of Revenue Requirements for National Grid USA Service Company, Inc. (Service Company), where I provide services to The Narragansett Electric Company d/b/a National Grid (Company) to both its gas and electric businesses.

Q. Please describe your education and professional experience.

A. In 1985, I earned a Bachelor of Science degree in Accounting from Northeastern University. During college, 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 became a Certified Public Accountant in the State of Rhode Island. In June 1990, I joined National Grid (then known as New England Electric System) 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 (PUC)?

A. Yes, I have testified before the PUC on numerous occasions, most recently in the Company's 2017-18 Distribution Adjustment Charge filing in Docket No. 4708.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to sponsor Section 3 of the fiscal year (FY) 2019 Gas Infrastructure, Safety, and Reliability (ISR) Plan (Gas ISR Plan or Plan), which describes the calculation of the Company's revenue requirement for FY 2019 in Attachment 1 of that section. The revenue requirement is based on the FY 2019 Gas ISR Plan capital investment and associated operation and maintenance (O&M) expenses described in the testimony of Company Witness John B. Currie.

II. ISR PLAN REVENUE REQUIREMENT

Q. Please summarize the revenue requirement for the Company's FY 2019 Gas ISR Plan.

A. As demonstrated in the Plan at Attachment 1, Page 1, Column (b), the Company's FY 2019 Gas ISR Plan revenue requirement amounts to $45,776,892, or an incremental

$9,225,940 over the amount currently being billed for the FY 2018 Gas ISR Plan. The revenue requirement consists of the following elements: (1) $502,000 of incremental O&M expense for the hiring, training, and supervision of additional personnel to support the increase in leak-prone pipe replacement for FY 2019; (2) a revenue requirement of $4,159,401 comprised of the Company's return, taxes, and depreciation expense associated with FY 2019 proposed non-growth ISR capital investment in gas utility infrastructure of $107,079,000, plus the FY 2019 revenue requirement on incremental non-growth ISR capital investment for FY 2012 through FY 2018, totaling $31,569,228; and (3) FY 2019 property tax expense of $9,546,263, as shown in the Plan at Attachment 1, Page 21. Importantly, these amounts will be trued up to actual O&M and capital investment activity after the conclusion of the fiscal year, with rate adjustments for the revenue requirement differences incorporated in future ISR filings.

For illustration purposes only, Column (c) of Attachment 1, Page 1 of the Plan provides the FY 2020 revenue requirement. A detailed description of the calculation of the Company's revenue requirement for FY 2019 can be found in Section 3 of the Gas ISR Plan.

Q. Did the Company calculate the FY 2019 Gas ISR Plan revenue requirement in the same fashion as calculated in the previous ISR factor submissions?

A. Yes.

III. CONCLUSION

Q. Does this conclude your testimony?

A. Yes.

Testimony of
Ann E. Leary

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 4781
RE: FY 2019 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN
WITNESS: ANN E. LEARY

DIRECT TESTIMONY

OF

ANN E. LEARY

December 19, 2017

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I. INTRODUCTION

Q. Please state your names and business address.

A. My name is Ann E. Leary, and my business address is 40 Sylvan Road, Waltham, Massachusetts 02451.

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

A. I am the Manager of New England Gas Pricing for National Grid USA Service Company, Inc. (Service Company). My responsibilities include the design, implementation, and administration of rates and tariffs for the gas division of The Narragansett Electric Company d/b/a National Grid (Company) and its affiliates, Boston Gas Company (Boston Gas) and Colonial Gas Company, each d/b/a National Grid.

Q. Please provide your educational background and professional experience.

In 1983, I earned a Bachelor of Science in Mechanical Engineering from Cornell University. In 1985, I joined the Essex County Gas Company (Essex) as Staff Engineer. In 1987, I became a planning analyst and eventually accepted the position of Manager of Rates at Essex. Following Essex's merger with Eastern Enterprises in 1998, I became Manager of Pricing for Boston Gas. When KeySpan Corporation (KeySpan) acquired Boston Gas in 2000, I became the Manager of Pricing, New England, for KeySpan and held this position following National Grid plc's (National Grid USA's parent Company)

acquisition of KeySpan. In 2011, I began my current position as Manager of New England Gas Pricing for the Service Company.

Q. Have you previously filed testimony or testified before the Rhode Island Public Utilities Commission (PUC)?

A. Yes, I have testified before the PUC on numerous occasions, most recently in the Company's 2017-18 Distribution Adjustment Charge and Gas Cost Recovery filings in Docket Nos. 4708 and 4719, respectively.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to sponsor Section 4 of the Fiscal Year (FY) 2019 Gas Infrastructure, Safety, and Reliability (ISR) Plan (Gas ISR Plan or Plan), which describes the calculation of the proposed FY 2019 ISR factors and the customer bill impacts of the proposed ISR factors.

II. RATE DESIGN

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

A. Like the revenue requirement, the proposed Gas ISR Plan rate design for FY 2019 is based on the revenue requirement of incremental capital investment in excess of capital investment that has been reflected in rate base in the Company's most recent general rate

case in Docket No. 4323, as well as incremental Operation and Maintenance (O&M) expense as described in Section 2 of the Plan and property tax expense as described in Section 3 of the Plan. The Company allocated the revenue requirement associated with the capital investment to each rate class based on the rate base allocator from the Company's Amended Settlement Agreement in Docket No. 4323. The Company allocated the proposed incremental O&M expense described by Company Witness John B. Currie to all rate classes volumetrically, such that the Company proposes to assess all rate classes the same per-unit factor. The Company also utilized the most recently available forecasted throughput for the period April 2018 through March 2019 that had been developed for the Company's 2017-18 Gas Cost Recovery filing in Docket No. 4719. That data was compiled by rate class and summarized as set forth in Section 4, Attachment 1, Page 2, of the proposed Gas ISR Plan. As shown in Section 4, Attachment 1, Page 1, the Company divided the allocated rate class revenue requirement, as multiplied by the rate base allocation, by the forecasted throughput for each rate class to develop separate ISR capital factors per rate class on a per-therm basis. Finally, the Company divided the total incremental O&M expense of $502,000 by the total forecasted throughput to derive the proposed ISR O&M factor applicable to all rate classes on a per-therm basis. The Company then adjusted each rate class' total ISR factor (capital factors plus O&M factor) to reflect the 3.18 percent uncollectible factor from the Amended Settlement Agreement in Docket No. 4323.

Q. Is the Company proposing any changes to the calculation of the Residential Non-Heating and Residential Heating ISR capital factors?

A. Yes, the Company is proposing one ISR capital factor applicable to all residential customers by combining the allocated revenue requirements of the Residential Non-Heating and the Residential Heating rate classes. The Company is proposing this change because the rate base allocator used to allocate the revenue requirement to the Residential Non-Heating rate classes is no longer representative of the number of customers receiving service on those rate classes due to recent transfers of Residential Non-Heating customers to the Residential Heating rate classes. The rate base allocator from the Amended Settlement Agreement in Docket No. 4323 was associated with 23,978 Residential Non-Heating customers forecasted for the rate year in that case. Over the past four years, the Company has transferred over 20 percent of Residential Non-Heating customers to the Residential Heating rate classes. As a result, using the current rate base allocator to assign revenue requirement to the Residential Non-Heating rate classes would result in a disproportionate allocation of the ISR revenue requirement to those customers in light of the significant reduction in Residential Non-Heating customers and associated throughput. Combining the Residential Non-Heating and Residential Heating revenue requirements into one results in a single ISR capital factor applicable to all residential customers. Without the revision to the calculation of the residential ISR capital factor as proposed by the Company, the capital component of the proposed FY

2019 Residential Non-Heating ISR factor would be $0.4400 per therm,[1] which would be $0.26 per therm, or 140 percent, higher than the currently effective capital component of the FY 2018 Residential Non-Heating ISR factor, and result in a total bill increase of 13 percent. The proposed change in the design of the capital component of the ISR factor for residential customers will reduce the FY19 ISR factor for Residential Non-Heating customers from what the Company would have proposed under the current formula of $0.4556 per therm[2] to $0.1569 per therm[3] under the Company's proposal, or $0.2987 per therm lower, while resulting in a slightly higher FY19 ISR factor for Residential Heating customers of $0.1569 per therm compared to $0.1510 per therm[4] under the current formula, or $0.0059 per therm higher. As a result of the Company's proposal, all residential customers would be assessed a proposed FY19 ISR factor of $0.1569 per therm.

III. ISR FACTORS

Q. What are the ISR factors proposed by the Company?

A. The ISR factors proposed by the Company, which represent both the ISR capital factors and the ISR O&M factor, are shown in the table below and in the Gas ISR Plan at Section 4, Attachment 1.

[1] See Section 4: Attachment 1, Page 3, Line 3, Column (g).
[2] See Section 4: Attachment 1, Page 3, Line 3, Column (k).
[3] See Section 4: Attachment 1, Page 1, Line 3, Column (k).
[4] See Section 4: Attachment 1, Page 3, Line 4, Column (k).

Table 3-1 FY 2019 ISR factors per rate class

Rate Class	ISR Rate ($/therm)
Res-Non-Heating	$0.1569
Res-Heating	$0.1569
Small C&I	$0.1560
Medium C&I	$0.1165
Large LL	$0.1077
Large HL	$0.0881
XL-LL	$0.0303
XL-HL	$0.0265

*Rates include uncollectible allowance.

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

IV. BILL IMPACTS

Q. What is the impact of the proposed ISR factors on customers' bills?

A. For the average Residential Heating customer using 846 therms annually, the proposed FY 19 ISR factors will result in an annual bill increase of $30.34, or 2.5 percent,[5] as shown in the proposed Gas ISR Plan at Section 4, Attachment 2. The annual impact of the proposed ISR factors for all rate classes is set forth in Section 4 (Rate Design and Bill Impacts) of the Plan.

[5] Please note that the bill impact includes the Rhode Island Gross Earnings Tax of 3 percent.

Q. Does this conclude your testimony?

A. Yes.