

The Narragansett Electric Company
d/b/a National Grid

**Gas Infrastructure,
Safety, and Reliability Plan
FY 2019 Proposal (Revised)**

February 21, 2018

Submitted to:
Rhode Island Public Utilities Commission

nationalgrid

February 21, 2018

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 Revised FY 2019 Gas Infrastructure, Safety, and Reliability Plan
Docket No. 4781**

Dear Ms. Massaro:

Enclosed please find 10 copies of National Grid's¹ revised Gas Infrastructure, Safety, and Reliability (ISR) Plan for fiscal year (FY) 2019 (Revised Plan). This revised filing updates National Grid's initial FY 2019 Gas ISR Plan filing submitted on December 19, 2017 (Initial ISR Filing) in two ways. First, the Revised Plan updates the revenue requirement as a result of the recent federal Tax Cuts and Jobs Act of 2017 (Tax Act). Second, the Revised Plan reflects the changes to the Initial ISR Filing as a result of the removal of the costs associated with the former liquefied natural gas (LNG) facility in Cumberland, Rhode Island that the Company will no longer be incurring in FY 2019.

This filing includes the pre-filed supplemental direct testimony of John B. Currie, Stephen P. Greco, and Kathleen A. Sullivan, which attaches a clean version of the Revised Plan as JBC -Exhibit 1S (Clean) and a redlined version of the Revised Plan as JBC - Exhibit 2S (Redlined). Mr. Currie, Mr. Greco, and Ms. Sullivan's testimony presents the removal of the costs associated with the Cumberland LNG facility and, through Mr. Currie, presents the reductions to the projected total spending as a result of the removal of such costs. Mr. Currie, Mr. Greco, and Ms. Sullivan's supplemental testimony focuses on Section 2 of the Revised Plan. The filing also includes the pre-filed supplemental direct testimony of William R. Richer and Pamela D. Bushmich, which presents an updated revenue requirement and explains the changes to the revenue requirement as a result of the Tax Act and the removal of the costs associated with the Cumberland LNG facility. Mr. Richer and Ms. Bushmich's testimony focuses on Section 3 of the Revised Plan. Finally, the filing includes the pre-filed supplemental direct testimony of Ann E. Leary, which presents the updated bill impacts as a result of the foregoing changes in the Revised Plan. For the average residential heating customer using 846 therms annually, implementation of the proposed ISR factors in the Revised Plan for the period of April 1, 2018 through March 31, 2019 will result in an annual bill increase of \$24.96, or 2.0 percent.

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

Luly Massaro, Commission Clerk
Revised FY 2019 Gas ISR Plan
February 21, 2018
Page 2 of 2

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

Very truly yours,

A handwritten signature in blue ink, appearing to read 'RH', with a long horizontal flourish extending to the right.

Robert J. Humm

Enclosure

cc: Leo Wold, Esq.
Al Mancini
John Bell

**Suppl. Testimony of
Currie, Greco & Sullivan**

**THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 4781
RE: FY 2019 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN (REVISED)
WITNESSES: JOHN B. CURRIE, STEPHEN P. GRECO, AND KATHY A. SULLIVAN**

SUPPLEMENTAL DIRECT TESTIMONY

OF

JOHN B. CURRIE

STEPHEN P. GRECO

KATHY A. SULLIVAN

February 21, 2018

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Overview	6
III.	Capital Investment Plan.....	7
IV.	Conclusion	8

1 **I. INTRODUCTION**

2 **Q. Mr. Currie, please state your name and business address.**

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

5

6 **Q. Have you previously submitted testimony in this docket?**

7 A. Yes, I submitted direct testimony on December 19, 2017 in support of The Narragansett
8 Electric Company d/b/a National Grid's (the Company) Fiscal Year (FY) 2019 Gas
9 Infrastructure, Safety, and Reliability (ISR) Plan (the Initial ISR Filing).

10

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

12 A. Yes, I am including the following exhibits to my supplemental testimony.

13 Exhibit 1S - Revised Gas ISR Plan (Clean version)

14 Exhibit 2S - Revised Gas ISR Plan (Redlined version)

15 My supplemental testimony focuses on Sections 1 and 2 of the revised FY 2019 Gas ISR
16 Plan (the Revised Plan). The Revised Plan also includes an updated revenue requirement
17 calculation in Section 3, which is sponsored by Company Witnesses William R. Richer
18 and Pamela D. Bushmich, and updated bill impacts in Section 4, which is sponsored by
19 Company Witness Ann E. Leary.

20

1 **Q. Mr. Greco, please state your name and business address.**

2 A. My name is Stephen P. Greco. My business address is 25 Hub Drive, Melville, New
3 York 11747.

4
5 **Q. What is your position at National Grid and responsibilities within that position?**

6 A. I am the Director of Pressure Regulation and Liquefied Natural Gas (LNG) and
7 Compressed Natural Gas (CNG) Assets for National Grid U.S.A. (National Grid). In this
8 position, I am responsible for the asset management of National Grid's pressure
9 regulating facilities, LNG facilities and related equipment, in all jurisdictions, including
10 those related to The Narragansett Electric Company (Company).

11
12 **Q. Please summarize your educational background.**

13 A. I graduated from the New York Institute of Technology in 1981 with a Bachelor of
14 Science degree in Mechanical Engineering Technology. In 1987, I graduated from the
15 State University of New York at Stony Brook with a Master of Science degree in
16 Engineering. I also hold a Professional Engineer license, and am licensed in the State of
17 New York.

18

1 **Q. Please summarize your professional experience.**

2 A. I have worked for National Grid or one of its predecessor companies for the last 28 years.
3 My experience at National Grid includes 15 years in various management roles related to
4 LNG, including Plant Engineer, Plant Manager, and Project Manager. I have held my
5 current position since August 2016.

6
7 **Q. Are you a member of any professional organizations?**

8 A. I am a member of the American Gas Association, as well as the American Society of
9 Mechanical Engineers (ASME).

10

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

12 A. Yes, I submitted pre-filed direct testimony in the Company's 2017-18 Gas Cost Recovery
13 filing in Docket No. 4719.

14

15 **Q. Have you previously submitted testimony in this docket?**

16 A. No, I have not.

17

18

1 **Q. Ms. Sullivan, please state your name and business address.**

2 A. My name is Kathleen Ann Sullivan. My business address is 121 Terminal Road,
3 Providence, Rhode Island 02905.

4

5 **Q. What is your position at National Grid and responsibilities within that position?**

6 A. I am National Grid's Director of LNG Operations in Rhode Island. In this position, I am
7 responsible for the three existing LNG plants in Rhode Island.

8

9 **Q. Please summarize your educational background.**

10 A. I graduated from Bristol Community College in 2009 with an Associate's degree in
11 Engineering Science Transfer. In 2016, I graduated from Wentworth Institute of
12 Technology with a Bachelor of Science degree in Project Management.

13

14 **Q. Please summarize your professional experience.**

15 I have 27 years working in the gas utility business, with a particular focus on LNG
16 operations for the last 16 years. In 1991, I began working at Fall River Gas Company,
17 where I worked for eight-and-a-half years in an engineering and supervisory role. In
18 1999, I started at Boston Gas Company in the Planning Engineer department as a
19 Planning Engineer. In 2002, I then transferred to the LNG operations department at the
20 South Yarmouth LNG plant, where I was responsible for the LNG plants at South
21 Yarmouth, Wareham, and a portable LNG operation in Chatham, all in Massachusetts.

1 These three plants were operated under Keyspan Energy. In 2012, I was promoted to a
2 managerial position in Providence. I was named to my current position of Director of
3 LNG Operations in Rhode Island in 2014.

4

5 **Q. Are you a member of any professional organizations?**

6 A. I am a member of the American Gas Association and the LNG Consortium.

7

8 **Q. Have you previously testified before the Public Utilities Commission (PUC) or any**
9 **other state regulatory commissions?**

10 A. No, I have not.

11

12 **Q. Have you previously submitted testimony in this docket?**

13 A. No. However, I have sponsored several of the Company's responses to data requests
14 provided in this proceeding.

15

16 **Q. What is the purpose of your testimony in this supplemental filing?**

17 A. The purpose of our testimony is to explain the removal of the site restoration costs
18 associated with the LNG facility in Cumberland from the FY 2019 Gas ISR Plan.

19

1 **II. OVERVIEW**

2 **Q. What is the nature of the Cumberland LNG costs included in the Initial ISR Filing?**

3 A. The final work associated with the decommissioning of the Cumberland LNG plant
4 intended to address the installation of a new storm water management system in FY
5 2019. The scope of the work included the installation of an underground infiltration
6 system; the excavation of the existing site to subgrade; and the installation of filter fabric,
7 bedding stone, rip rap, and bituminous concrete at the sliding gate. The Company
8 proposed to spend \$0.87 million for the final restoration of the Cumberland LNG site.
9 The Company will continue to use this site for periodic pressure support using portable
10 LNG equipment.

11
12 **Q. Have there been any changes to the Company’s plan for the site restoration work at
13 the Cumberland site?**

14 A. Yes. The Company has determined that the storm water management work is no longer
15 needed, so has cancelled the storm water management project. Thus, the Company will
16 be removing the \$0.87 million in costs associated with such work from the Revised Plan.

17
18 **Q. Why is the Company cancelling the storm water management project?**

19 A. As part of the ongoing process of preparing for the execution of the FY 2019 work plan,
20 the Cumberland LNG Operations group and project manager consulted with the
21 Company’s Environmental group regarding specific elements of the storm water

1 management project. Upon completion of that review, the Environmental group
2 determined that the Company had no requirement or need to replace the existing drainage
3 system. Thus, because the Company no longer had a need to perform the work at the
4 Cumberland site, the Company cancelled the project and has removed it from its Revised
5 Plan.

6
7 **Q. Does this conclude the Company's work related to Cumberland LNG**
8 **decommissioning?**

9 A. Yes. The Company will complete all work related to decommissioning the Cumberland
10 LNG plant in FY 2018. The FY 2018 Gas ISR Plan included \$3.59 million of funding
11 for Cumberland LNG. All work will be completed in FY 2018 for a current forecast of
12 \$2.15 million.

13
14 **III. CAPITAL INVESTMENT PLAN**

15 **Q. As a result of the removal of the Cumberland LNG costs from the FY 2019 Plan,**
16 **what are the levels of spending currently proposed in the Revised Plan?**

17 A. For FY 2019, after removing the costs associated with the Cumberland LNG site, the
18 Company proposes ISR spending totaling \$106.71 million, including \$40.03 million for
19 Non-Discretionary capital expenditures (i.e., work required by legal, regulatory code,
20 and/or agreement, or a result of damage or failure with limited exception) and \$66.18
21 million for Discretionary capital expenditures. The Revised Plan is broken down into

1 categories of Non-Discretionary and Discretionary programs designed to maintain the
2 safety and reliability of the Company’s gas delivery infrastructure. Without the costs
3 associated with the Cumberland LNG site, the total amount of proposed spending for
4 Special Projects under the Revised Plan is \$8.77 million.

5

6 **IV. CONCLUSION**

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

8 **A. Yes.**

Exhibit 1S
(Clean)

The Narragansett Electric Company
d/b/a National Grid

**Gas Infrastructure,
Safety, and Reliability Plan
FY 2019 Proposal (Revised)**

February 21, 2018

Submitted to:
Rhode Island Public Utilities Commission

nationalgrid

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 1: Introduction and Summary

Section 1
Introduction and Summary
FY 2019 Proposal (Revised)

Introduction and Summary FY 2019 Proposal

In consultation with the Rhode Island Division of Public Utilities and Carriers (Division), National Grid¹ has developed the following proposed fiscal year (FY) 2019² 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).

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 1: Introduction and Summary
Page 2 of 5

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 \$106.71 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 Discretionary⁵ and Non-Discretionary⁶ 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. The revenue requirement at Section 3 of the Plan takes into account the recent changes as a result of the federal Tax Cuts and Jobs Act of 2017.

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 \$24.96, or 2.0%.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan

Section 2
Gas Capital Investment Plan
FY 2019 Proposal (Revised)

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.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 2 of 25

invest a total of \$106.71 million of Plan investments, including \$40.03 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 \$106.71 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
- \$8.77 million for Special Projects, including gas expansion projects, the Allens Avenue Main Replacement project, and the Veterans Memorial Main Replacement project.

⁸ For FY 2019, the Company plans to spend \$136.37 million of total capital investment. Of that total amount, \$28.56 million will be for projected growth, 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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 4 of 25

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 \$8.77 million.

- 1. Gas Expansion Projects** – 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 liquefied natural gas (LNG) facility in Cumberland. 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. A permanent solution is required to supplement the 24,000 Dth, which has been secured for a period of 20 years. This will likely require infrastructure enhancements to deliver supply to the Cumberland citygate. 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. Under the current schedule, the Company anticipates developing a plan for Southern Rhode Island that would begin construction in FY 2020. The permanent solution, including the timing of implementation for the permanent solution, for Northern Rhode Island is currently under review.

- 2. 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

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.

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.

- 3. 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 \$40.03 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 at 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 \$66.18 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 Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 22 of 25

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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 23 of 25

Table 1
Narragansett Gas FY 2019
(\$000)

	Budget	Total
NON-DISCRETIONARY		
Public Works		
<i>CSC/Public Works - Non-Reimbursable</i>	\$11,084	
<i>CSC/Public Works - Reimbursable</i>	\$1,354	
<i>CSC/Public Works - Reimbursements</i>	-\$1,354	
Public Works Total		\$11,084
Mandated Programs		
<i>Corrosion</i>	\$1,144	
<i>Purchase Meters (Replacements)</i>	\$4,371	
<i>Main Replacement (Reactive) - Maintenance (incl Water Intrusion)</i>	\$670	
<i>Main Replacement (Reactive) - CI Joint Encapsulation</i>	\$4,012	
<i>Service Replacement (Reactive) - Leaks</i>	\$7,146	
<i>Service Replacements (Reactive) - Non-Leaks/Other</i>	\$2,331	
<i>Pipeline Integrity IVP (Integrity Verification Program)</i>	\$252	
Mandated Total		\$19,925
Damage / Failure (Reactive)		
Damage / Failure Total	\$250	\$250
Special Project		
<i>Gas Expansion Plan</i>	\$1,500	
<i>Pipeline Integrity IVP - Allens Ave 200 psig main replacement due to weld issue</i>	\$4,735	
<i>Pipeline Integrity IVP - Veterans Memorial Drive 200 psig main replacement</i>	\$2,533	
Special Project Total		\$8,768
NON-DISCRETIONARY TOTAL		\$40,027
DISCRETIONARY		
Proactive Main Replacement		
<i>Main Replacement (Proactive) - Leak Prone Pipe</i>	\$52,802	
Proactive Main Replacement Total		\$52,802
Reliability		
<i>Gas System Control</i>	\$550	
<i>Valve Installation/Replacement</i>	\$159	
<i>System Automation</i>	\$1,033	
<i>Heater Program</i>	\$800	
<i>Pressure Regulating Facilities</i>	\$2,666	
<i>Allens Ave Multi Station Rebuild</i>	\$2,970	
<i>Take Stations</i>	\$1,000	
<i>Gas System Reliability - Gas Planning</i>	\$1,472	
<i>I&R - Reactive</i>	\$1,202	
<i>LNG</i>	\$903	
<i>Replace Pipe on Bridges</i>	\$100	
<i>Access Protection Remediation</i>	\$100	
<i>Tools & Equipment</i>	\$427	
Reliability Total		\$13,382
DISCRETIONARY TOTAL		\$66,184
Capital Spending Total		\$106,212
O&M		\$502
Gas ISR Plan Total		\$106,714

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 24 of 25

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	\$ 8,768	\$ -	\$ -	\$ -	\$ -	\$ 8,768
NON-DISCRETIONARY TOTAL	\$ 40,027	\$ 32,655	\$ 33,341	\$ 34,042	\$ 34,507	\$ 174,572
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)	\$ 106,212	\$ 117,889	\$ 129,558	\$ 128,017	\$ 128,098	\$ 584,145
O&M Total	\$ 502					\$ 502
GAS ISR TOTAL	\$ 106,714	\$ 117,889	\$ 129,558	\$ 128,017	\$ 128,098	\$ 584,647

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 25 of 25

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
FY 2019 Proposal (Revised)

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 1S, Page 1, Column (b), the Company's Gas ISR Plan cumulative revenue requirement totals \$43,994,856, which is an incremental \$7,443,904 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 \$4,353,572 on FY 2019 proposed non-growth ISR capital investment of \$106,212,400, as calculated on Attachment 1S, Page 2, plus the FY 2019 revenue requirement on incremental non-growth ISR capital investment for FY 2012 through FY 2018, totaling 29,619,486; and (3) property tax expenses of \$9,519,797, as shown on Attachment 1S, 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 FYs 2012 through 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 1S, 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 1S, 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, was 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 ISR Plans, excluding investments reflected in rate base in Docket No. 4323 for FY 2012 through FY 2014.

Attachment 1S, 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 1S, 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. 3943,¹ 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

¹ 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.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 3: Revenue Requirement
Page 4 of 12

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 of 21%, 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 calculated on Page 31 and 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 \$43,994,856, as

shown on Page 1, Line 13. This represents a \$7,443,904 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 1S, 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.² In addition, plant additions not subject to the capital repairs deduction may be subject to bonus depreciation for vintage FY 2012 through FY 2018. During 2010, Congress passed the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (2010 Tax Act), which provided for an extension of bonus depreciation. Specifically, the 2010 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

² 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. On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (2017 Tax Act) was signed into law by the President, which, among other things, eliminated bonus depreciation for certain capital investments, including ISR-eligible investments, effective September 28, 2017. Consequently, no bonus depreciation has been calculated related to vintage FY 2019 capital investment. 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.

Tax Cuts and Jobs Act of 2017 (2017 Tax Act)

The 2017 Tax Act has many elements, but two particular aspects of the new law have an impact on the Gas ISR revenue requirement. The first is the reduction of the federal income tax rate from 35% to 21% commencing January 1, 2018. The second 2017 Tax Act element affecting the Gas ISR revenue requirement involves the elimination of bonus depreciation, effective September 28, 2017, affecting ISR capital investment as described above.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 3: Revenue Requirement
Page 7 of 12

The decrease in the federal income tax rate from 35% to 21% reduces the amount of income tax to be recovered from customers on the return on equity component of each Gas ISR vintage year revenue requirement. The return on rate base in each revenue requirement is calculated by multiplying the Gas ISR rate base by the weighted average cost of capital (WACC). The equity component of the return on rate base is the taxable component of the Gas ISR revenue requirement. The federal income taxes that the Company must recover from customers are derived by grossing up the WACC to a pre-tax rate of return. The calculation of the pre-tax WACC is shown on Attachment 1S, Page 31. The pre-tax WACC approved in Docket No. 4323 was 10.05% at the 35% tax rate, as shown on Page 31. The new pre-tax WACC at the 21% tax rate, which became effective January 1, 2018, is 8.78%. This new pre-tax WACC is in effect for the entirety of the FY 2019 revenue requirement since the effective date of the federal income tax rate change occurred prior to the start of FY 2019. However, the Company used a blended WACC of 9.73% to calculate the return on rate base on the FY 2018 column of each vintage year revenue requirement calculation, as the 35% federal income tax was in effect for nine months of FY 2018 (April to December) and the 21% federal income tax rate will be in effect for three months of FY 2018 (January to March).

As a consequence of the reduction in the federal income tax rate from 35% to 21%, the Company must restate all of its deferred tax balances based on the new 21% federal income tax rate because the Company will be paying income taxes as the book/tax timing differences reverse at that 21% federal income tax rate. However, because deferred taxes are an offset to rate base in the Gas ISR revenue requirement, reducing the deferred tax balances based on the 21% federal

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 3: Revenue Requirement
Page 8 of 12

income tax rate has the effect of artificially increasing rate base. To counteract this artificial increase to rate base, a new line item called Excess Deferred Income Taxes has been added to each vintage year's revenue requirement calculation reflecting the value of the decrease to ISR rate base as of December 31, 2017. These excess deferred income taxes represent the net benefit as of December 31, 2017 that will eventually be earned by the Company through reduced future income taxes, and ultimately passed back to customers through base distribution rates, along with non-ISR embedded plant-related excess deferred taxes and non-plant excess deferred taxes. The period of time during which the pass back of the depreciation related excess deferred taxes to customers will take place over the average remaining book life of the Company's plant assets, in accordance with the normalization deferred tax provisions of the 2017 Tax Act. Other unprotected excess deferred tax balances will be returned to customers over a period of time agreed with the PUC. The Company is currently in the process of calculating the amount of excess deferred taxes and the period of time to return that amount to customers in connection with the Company's pending general distribution rate case in Docket No. 4770. The restatement of the Gas ISR deferred tax balances at the new 21% tax rate, and the addition of the new line item for excess deferred taxes to counteract its effect, results in a very small change to the amount of total FY 2019 revenue requirement.

The excess deferred income taxes are calculated on Attachment 1S, Page 30. The Company derived the excess deferred income tax amounts by calculating the balance of ISR deferred taxes as of December 31, 2017 by vintage fiscal year, and multiplying that amount by the 14% change in the tax rate (35% minus 21%). Although calculated on Page 30, ISR deferred

taxes for vintage FY 2012 and FY 2014 are fully offset by tax net operating loss deferred tax assets. Therefore, the adjustment to re-set deferred taxes based on the 21% federal income tax rate had no impact on ISR rate base, and therefore no excess deferred tax offset was necessary in the revenue requirement calculation for those vintage years.

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. The Company filed its FY 2017 federal income tax return in December 2017. The Company's tax deductions did not exceed taxable income in FY 2017, meaning that the Company earned 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 25a and 25b, Page 26a and 26b, and Page 27a and 27b, respectively, the effects of which are included in each year's respective revenue requirement. Proration adjustment amounts are shown on these pages for vintage FY 2012 and FY 2014, but no proration adjustment has been reflected on their respective revenue requirement calculations, as ISR deferred taxes for those years are fully offset by net operating loss deferred tax assets.

Property Tax Recovery Adjustment

The Property Tax Recovery Adjustment is set forth on Attachment 1S, 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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 3: Revenue Requirement
Page 12 of 12

periods subsequent to the end of the rate year for that docket, or January 31, 2014. The FY 2019 revenue requirement includes \$9,519,797 for the Net Property Tax Recovery Adjustment.

Updates Include Tax Act Change

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	Fiscal Year
		Fiscal Year	2018	2019
		(a)	(b)	(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	\$958,187	\$942,721
3	Actual Revenue Requirement on Incremental FY 2013 Capital included in ISR Rate Base	\$259,032	\$210,394	\$225,724
4	Actual Revenue Requirement on Incremental FY 2014 Capital included in ISR Rate Base	\$3,303,452	\$3,085,893	\$3,037,065
5	Actual Annual Revenue Requirement on FY 2015 Capital Included in ISR Rate Base	\$6,555,992	\$5,826,786	\$5,650,428
6	Actual Annual Revenue Requirement on FY 2016 Capital Included in ISR Rate Base	\$7,715,333	\$6,797,242	\$6,581,122
7	Actual Annual Revenue Requirement on FY 2017 Capital Included in ISR Rate Base	\$6,015,643	\$5,298,285	\$5,577,807
8	Forecasted Annual Revenue Requirement on FY 2018 Capital Included in ISR Rate Base	\$3,928,534	\$7,442,699	\$7,459,305
9	Forecasted Annual Revenue Requirement on FY 2019 Capital Included in ISR Rate Base		\$4,353,572	\$8,571,074
10	Total Capital Investment Revenue Requirement	\$28,837,421	\$33,973,059	\$38,045,246
11	Forecasted Annual Property Tax Recovery Mechanism	\$7,699,824	\$9,519,797	
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	\$43,492,856	
13	Total Fiscal Year Revenue Requirement	\$36,550,952	\$43,994,856	
14	Total Incremental Fiscal Year Rate Adjustment		\$7,443,904	

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 31, Line 34
3(b)-(c) From Page 14 of 31, Line 34
4(b)-(c) From Page 12 of 31, Line 36
5(b)-(c) From Page 10 of 31, Line 30
6(b)-(c) From Page 8 of 31, Line 30
7(b)-(c) From Page 6 of 31, Line 30
8(b)-(c) From Page 4 of 31, Line 30
9 Sum of Lines 2 through 8
10 From Page 20 of 31, Line 96(g)
11 Line 9 + Line 10 + Line 10a
12 Line 1 + Line 11
13 Line 12(b) - Line 12(a)

Updates Include Tax Act Change

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/ \$10,050,337	\$0
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) = Prior Year Line 3	\$90,721,663	\$90,721,663
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	\$5,440,400	\$5,440,400
8	Net Plant Amount	Line 6 + Line 7	\$81,856,217	\$81,856,217
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 3	\$78,798,310	\$2,074,026
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	\$78,798,310	\$80,872,336
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Column (b) = Line 3 * Line 9	\$1,533,196	\$3,066,392
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12	\$1,533,196	\$4,599,588
14	Cumulative Book / Tax Timer	Line 11 - Line 13	\$77,265,114	\$76,272,747
15	Effective Tax Rate		21.00%	21.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$16,225,674	\$16,017,277
17	Less: FY 2019 Federal NOL	Estimated NOL, per Tax Department	\$0	\$0
18	Proration Adjustment	Col (a) = Page 25b of 31, Line 40; Col (b) = Page 26b of 31, Line 40	(\$148,115)	\$93,435
19	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18	\$16,077,559	\$16,110,712
ISR Rate Base Calculation:				
20	Cumulative Incremental Capital Included in ISR Rate Base	Line 8	\$81,856,217	\$81,856,217
21	Accumulated Depreciation	- Line 13	(\$1,533,196)	(\$4,599,588)
22	Deferred Tax Reserve	- Line 19	(\$16,077,559)	(\$16,110,712)
23	Year End Rate Base before Deferred Tax Proration	Sum of Lines 20 through 22	\$64,245,462	\$61,145,917
Revenue Requirement Calculation:				
24	Average ISR Rate Base	Column (a) = Current Year Line 23 ÷ 2; Column (b) = (Prior Year Line	\$32,122,731	\$62,695,689
25	Pre-Tax ROR	Page 31, Line 29(e)	8.78%	8.78%
26	Return and Taxes	Line 24 * Line 25	\$2,820,376	\$5,504,681
27	Book Depreciation	Line 12	\$1,533,196	\$3,066,392
28	Property Taxes	2/	\$0	\$0
29	Annual Revenue Requirement	Sum of Lines 26 through 28	\$4,353,572	\$8,571,074

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

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.

Updates Include Tax Act Change

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)	
<u>Capital Repairs Deduction</u>				
1	Plant Additions	Page 2 of 31, Line 1	\$100,772,000	20 Year MACRS Depreciation
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 71.49%	
3	Capital Repairs Deduction	Line 2 * Line 3	\$72,041,903	
MACRS basis: \$28,730,097				
<u>Bonus Depreciation</u>				
4	Plant Additions	Line 1	\$100,772,000	Fiscal Year
5	Less Capital Repairs Deduction	Line 3	\$72,041,903	2019 3.750% \$1,077,379
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	\$28,730,097	2020 7.219% \$2,074,026
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	2021 6.677% \$1,918,309
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	\$28,730,097	2022 6.177% \$1,774,658
9	Bonus Depreciation Rate (April 2018 - December 2018)	1 * 75% * 0%	0.00%	2023 5.713% \$1,641,350
10	Bonus Depreciation Rate (January 2019 - March 2019)	1 * 25% * 0%	0.00%	2024 5.285% \$1,518,386
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	2025 4.888% \$1,404,327
12	Bonus Depreciation	Line 8 * Line 11	\$0	2026 4.522% \$1,299,175
<u>Remaining Tax Depreciation</u>				
13	Plant Additions	Line 1	\$100,772,000	2027 4.462% \$1,281,937
14	Less Capital Repairs Deduction	Line 3	\$72,041,903	2028 4.461% \$1,281,650
15	Less Bonus Depreciation	Line 12	\$0	2029 4.462% \$1,281,937
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 4 - 5	\$28,730,097	2030 4.461% \$1,281,650
17	20 YR MACRS Tax Depreciation Rates	IRS Publication 946	3.750%	2031 4.462% \$1,281,937
18	Remaining Tax Depreciation	Line 6 * Line 7	\$1,077,379	2032 4.461% \$1,281,650
19	FY19 tax (gain)/loss on retirements	Per Tax Department	\$238,628	2033 4.462% \$1,281,937
20	Cost of Removal	Page 2 of 31, Line 7	\$5,440,400	2034 4.461% \$1,281,650
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19 & 20	\$78,798,310	2035 4.462% \$1,281,937
				2036 4.461% \$1,281,650
				2037 4.462% \$1,281,937
				2038 4.461% \$1,281,650
				2039 2.231% \$640,968
				100.000% \$28,730,097

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

Updates Include Tax Act Change

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 3	\$80,505,096	\$1,568,944	\$1,451,148
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	\$80,505,096	\$82,074,040	\$83,525,189
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	\$78,985,991	\$77,516,726	\$75,929,665
15	Effective Tax Rate		21.00%	21.00%	21.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$16,587,058	\$16,278,512	\$15,945,230
17	Less: FY 2018 Federal NOL	Estimated NOL, per Tax Department	\$0	\$0	\$0
18	Proration Adjustment	Col (a) = Page 25b of 31, Line 40; Col (b) = Page 26b of 31, Line 40	(\$2,480,673)	\$279,194	\$301,578
19	Excess Deferred Taxes	Page 30, Line 9(e)	\$8,293,529	\$8,293,529	\$8,293,529
20	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18 + Line 19	\$22,399,914	\$24,851,235	\$24,540,337
ISR Rate Base Calculation:					
21	Cumulative Incremental Capital Included in ISR Rate Base	Line 8	\$76,828,817	\$76,828,817	\$76,828,817
22	Accumulated Depreciation	- Line 13	(\$1,519,105)	(\$4,557,314)	(\$7,595,524)
23	Deferred Tax Reserve	- Line 20	(\$22,399,914)	(\$24,851,235)	(\$15,945,230)
24	Year End Rate Base before Deferred Tax Proration	Sum of Lines 21 through 23	\$52,909,798	\$47,420,267	\$53,288,064
Revenue Requirement Calculation:					
25	Average ISR Rate Base	Column (a) = Current Year Line 23 ÷ 2; Column (b) = (Prior Year Line 23 + Current Year Line 22) ÷ 2	\$26,454,899	\$50,165,032	\$50,354,165
26	Pre-Tax ROR	Page 31, Line 29(e)	9.73%	8.78%	8.78%
27	Return and Taxes	Line 25 * Line 26	\$2,574,062	\$4,404,490	\$4,421,096
28	Book Depreciation	Line 12	\$1,519,105	\$3,038,209	\$3,038,209
29	Property Taxes		\$0	\$0	\$0
30	Annual Revenue Requirement	Sum of Lines 27 through 29	\$4,093,167	\$7,442,699	\$7,459,305

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

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.

Updates Include Tax Act Change

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)	
<u>Capital Repairs Deduction</u>				
1	Plant Additions	Page 4 of 31, Line 1	\$93,177,000	20 Year MACRS Depreciation
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 68.90%	
3	Capital Repairs Deduction	Line 2 * Line 3	\$64,198,946	
<u>Bonus Depreciation</u>				
4	Plant Additions	Line 1	\$93,177,000	Fiscal Year
5	Less Capital Repairs Deduction	Line 3	\$64,198,946	2018 3.750% \$815,008
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	\$28,978,054	2019 7.219% \$1,568,944
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	2020 6.677% \$1,451,148
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	\$28,978,054	2021 6.177% \$1,342,481
9	Bonus Depreciation Rate (April 2017 - September 2017)	1 * 50% * 50%	25.00%	2022 5.713% \$1,241,637
10	Bonus Depreciation Rate (January 2018 - March 2018)	1 * 25% * 0%	0.00%	2023 5.285% \$1,148,618
11	Total Bonus Depreciation Rate	Line 9 + Line 10	25.00%	2024 4.888% \$1,062,335
12	Bonus Depreciation	Line 8 * Line 11	\$7,244,514	2025 4.522% \$982,791
<u>Remaining Tax Depreciation</u>				
13	Plant Additions	Line 1	\$93,177,000	2026 4.462% \$969,751
14	Less Capital Repairs Deduction	Line 3	\$64,198,946	2027 4.461% \$969,533
15	Less Bonus Depreciation	Line 12	\$7,244,514	2028 4.462% \$969,751
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 4 - 5	\$21,733,540	2029 4.461% \$969,533
17	20 YR MACRS Tax Depreciation Rates	IRS Publication 946	3.750%	2030 4.462% \$969,751
18	Remaining Tax Depreciation	Line 6 * Line 7	\$815,008	2031 4.461% \$969,533
19	FY 18 tax (gain)/loss on retirements	Per Tax Department	\$238,628	2032 4.462% \$969,751
20	Cost of Removal	Page 4 of 31, Line 7	\$8,008,000	2033 4.461% \$969,533
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19 & 20	\$80,505,096	2034 4.462% \$969,751
				2035 4.461% \$969,533
				2036 4.462% \$969,751
				2037 4.461% \$969,533
				2038 2.231% \$484,875
				100.000% \$21,733,540

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

Updates Include Tax Act Change

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) =	\$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	\$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 3	\$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	\$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	\$71,336,449	\$69,616,048
15	Effective Tax Rate		35.00%	21.00%	21.00%	21.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$26,106,575	\$15,329,202	\$14,980,654	\$14,619,370
17	Less: FY 2017 Federal NOL	Estimated NOL, per Tax Department	\$0	\$0	\$0	\$0
18	Proration Adjustment	Col (b) = Page 25b of 31, Line 40; Col (c) = Page 26b of 31, Line 40	\$0	\$321,433	\$315,391	\$326,915
19	Excess Deferred Taxes	Page 30, Line 8(e)		\$10,275,259	\$10,275,259	\$10,275,259
20	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18 + Line 19	\$26,106,575	\$25,925,894	\$25,571,304	\$25,221,544
ISR Rate Base Calculation:						
21	Cumulative Incremental Capital Included in ISR Rate Base	Line 8	\$62,904,821	\$62,904,821	\$62,904,821	\$62,904,821
22	Accumulated Depreciation	- Line 13	(\$1,234,819)	(\$3,704,456)	(\$6,174,093)	(\$8,643,730)
23	Deferred Tax Reserve	- Line 20	(\$26,106,575)	(\$25,925,894)	(\$25,571,304)	(\$14,619,370)
24	Year End Rate Base	Sum of Lines 21 through 23	\$35,563,427	\$33,274,471	\$31,159,424	\$39,641,720
Revenue Requirement Calculation:						
25	Average ISR Rate Base	Column (a) = Current Year Line 23 ÷ 2; Column (b) = (Prior Year	\$17,781,714	\$34,418,949	\$32,216,947	\$35,400,572
26	Pre-Tax ROR	Page 31, Line 29(e)	10.05%	9.73%	8.78%	8.78%
27	Return and Taxes	Line 25 * 26	\$1,787,062	\$3,348,964	\$2,828,648	\$3,108,170
28	Book Depreciation	Line 12	\$1,234,819	\$2,469,637	\$2,469,637	\$2,469,637
29	Property Taxes	1/	\$0	\$0	\$0	\$0
30	Annual Revenue Requirement	Sum of Lines 27 through 29	\$3,021,881	\$5,818,601	\$5,298,285	\$5,577,807

1/ 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.

Updates Include Tax Act Change

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)
<u>Capital Repairs Deduction</u>			
1	Plant Additions	Page 6 of 31, 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
<u>Bonus Depreciation</u>			
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
<u>Remaining Tax Depreciation</u>			
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
17	20 YR MACRS Tax Depreciation Rates	IRS Publication 946	3.750%
18	Remaining Tax Depreciation	Line 16 * Line 17	\$454,855
19	FY17 tax (gain)/loss on retirements	Per Tax Department	\$238,628
20	Cost of Removal	Page 6 of 31, Line 7	\$6,100,390
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19 & 20	\$75,825,033

20 Year MACRS Depreciation		
MACRS basis: \$12,129,454		
Fiscal Year		
2017	3.750%	\$454,855
2018	7.219%	\$875,625
2019	6.677%	\$809,884
2020	6.177%	\$749,236
2021	5.713%	\$692,956
2022	5.285%	\$641,042
2023	4.888%	\$592,888
2024	4.522%	\$548,494
2025	4.462%	\$541,216
2026	4.461%	\$541,095
2027	4.462%	\$541,216
2028	4.461%	\$541,095
2029	4.462%	\$541,216
2030	4.461%	\$541,095
2031	4.462%	\$541,216
2032	4.461%	\$541,095
2033	4.462%	\$541,216
2034	4.461%	\$541,095
2035	4.462%	\$541,216
2036	4.461%	\$541,095
2037	2.231%	\$270,608
	100.000%	\$12,129,454

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.

Updates Include Tax Act Change

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 (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. 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	Page 3	\$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%	21.00%	21.00%	21.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$28,518,812	\$27,774,974	\$16,206,281	\$15,736,138	\$15,255,380
17	Less: FY 2016 Federal NOL	Per Page 23 of 31, Line 13	(\$11,594,940)	(\$11,594,940)	(\$11,594,940)	(\$11,594,940)	(\$11,594,940)
18	Proration Adjustment	Col (d) = Page 25b of 31, Line 40; Col (e) = Page 26b of 31, Line 40	\$0	\$0	\$384,608	\$425,418	\$435,024
19	Excess Deferred Taxes	Page 30, Line 7(e)			\$10,880,638	\$10,880,638	\$10,880,638
20	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18 + Line 19	\$16,923,872	\$16,180,034	\$15,876,587	\$15,447,255	\$14,976,102
ISR Rate Base Calculation:							
21	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
22	Accumulated Depreciation	- Line 13	(\$1,455,873)	(\$4,367,619)	(\$7,279,366)	(\$10,191,112)	(\$13,102,858)
23	Deferred Tax Reserve	- Line 20	(\$16,923,872)	(\$16,180,034)	(\$15,876,587)	(\$15,447,255)	(\$14,976,102)
24	Year End Rate Base	Sum of Lines 21 through 23	\$50,271,349	\$48,103,440	\$45,495,141	\$43,012,727	\$40,572,133
Revenue Requirement Calculation:							
25	Average ISR Rate Base	Column (a) = Current Year Line 24 ÷ 2; Column (b) through (d) = (Prior Year Line 24 + Current Year Line 24 ÷ 2)	\$25,135,674	\$49,187,394	\$46,799,291	\$44,253,934	\$41,792,430
26	Pre-Tax ROR	Page 31, Line 29(e)	10.05%	10.05%	9.73%	8.78%	8.78%
27	Return and Taxes	Line 25 * 26	\$2,526,135	\$4,943,333	\$4,553,571	\$3,885,495	\$3,669,375
28	Book Depreciation	Line 12	\$1,455,873	\$2,911,746	\$2,911,746	\$2,911,746	\$2,911,746
29	Property Taxes	1/	\$0	\$0	\$0	\$0	\$0
30	Annual Revenue Requirement	Sum of Lines 27 through 29	\$3,982,008	\$7,855,079	\$7,465,317	\$6,797,242	\$6,581,122

1/ 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.

Updates Include Tax Act Change

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)
<u>Capital Repairs Deduction</u>			
1	Plant Additions	Page 8 of 31, 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
<u>Bonus Depreciation</u>			
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
<u>Remaining Tax Depreciation</u>			
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
17	20 YR MACRS Tax Depreciation Rates	IRS Publication 946	3.750%
18	Remaining Tax Depreciation	Line 16 * Line 17	\$408,555
19	FY 16 tax (gain)/loss on retirements	Per Tax Department	\$248,321
20	Cost of Removal	Page 8 of 31, 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

20 Year MACRS Depreciation		
MACRS basis:		\$10,894,791
Fiscal Year		
2016	3.750%	\$408,555
2017	7.219%	\$786,495
2018	6.677%	\$727,445
2019	6.177%	\$672,971
2020	5.713%	\$622,419
2021	5.285%	\$575,790
2022	4.888%	\$532,537
2023	4.522%	\$492,662
2024	4.462%	\$486,126
2025	4.461%	\$486,017
2026	4.462%	\$486,126
2027	4.461%	\$486,017
2028	4.462%	\$486,126
2029	4.461%	\$486,017
2030	4.462%	\$486,126
2031	4.461%	\$486,017
2032	4.462%	\$486,126
2033	4.461%	\$486,017
2034	4.462%	\$486,126
2035	4.461%	\$486,017
2036	2.231%	\$243,063
	100.000%	\$10,894,791

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 1/ a percentage of the total annual plant additions in those categories that are considered as potentially qualifying for Capital Repairs deduction.

Updates Include Tax Act Change

**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)	Cumulative FY16-FY17 (d)	Fiscal Year 2018 (e)	Fiscal Year 2019 (f)	Fiscal Year 2020 (g)
<u>Depreciable Net Capital Included in ISR Rate Base</u>							
1	Total Allowed Capital Included in ISR Rate Base in Current Year	Per RIPUC Docket No. 4474	\$74,915,000		\$0	\$0	\$0
1a	Work Order Write Off Adjustment	Per Company's books	\$323,217		\$0	\$0	\$0
	New Service Installation and Service Relocations, Growth (per Informal Request Division 1-2)	Per Company's books	\$87,115				
1b	Retirements	Per Company's books (actual)	\$5,566,546		\$0	\$0	\$0
2							
3	Net Depreciable Capital Included in ISR Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) through (e) =	\$68,938,122		\$68,938,122	\$68,938,122	\$68,938,122
<u>Change in Net Capital Included in ISR Rate Base</u>							
4	Capital Included in ISR Rate Base	Line 1 - Line 1a - Line 1b	\$74,504,668		\$0	\$0	\$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General	\$24,356,183		\$0	\$0	\$0
6	Incremental Capital Amount	Line 4 - Line 5	\$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
7a	Work Order Write Off Adjustment	Per Company's books	\$253,782		\$0	\$0	\$0
	New Service Installation and Service Relocations, Growth (per Informal Request Division 1-2)	Per Company's books	\$6,782				
7b							
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
<u>Deferred Tax Calculation:</u>							
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323	3.38%		3.38%	3.38%	3.38%
10	Tax Depreciation	Page 3	\$68,843,570		\$837,819	\$774,884	\$716,832
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	\$68,843,570	\$70,728,358	\$71,566,177	\$72,341,061	\$73,057,894
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Column (b) = Line 3 * Line	\$1,165,054		\$2,330,109	\$2,330,109	\$2,330,109
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12	\$1,165,054	\$5,825,271	\$8,155,380	\$10,485,488	\$12,815,597
14	Cumulative Book / Tax Timer	Line 11 - Line 13	\$67,678,516	\$64,903,087	\$63,410,797	\$61,855,573	\$60,242,297
15	Effective Tax Rate		35.00%	35.00%	21.00%	21.00%	21.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$23,687,481	\$22,716,080	\$13,316,267	\$12,989,670	\$12,650,882
17	Less: FY 2015 NOL	Per Page 23 of 31, Line 13	(\$19,205,538)	(\$19,205,538)	(\$19,205,538)	(\$19,205,538)	(\$19,205,538)
18	Proration Adjustment	Col (e) = Page 25b of 31, Line 40; Col (f) = Page 26b of 31, Line 40	\$0	\$0	\$284,129	\$295,528	\$306,559
19	Excess Deferred Taxes	Page 30, Line 6(e)			\$8,929,742	\$8,929,742	\$8,929,742
20	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18 + Line 19	\$4,481,943	\$3,510,543	\$3,324,600	\$3,009,402	\$2,681,646
<u>ISR Rate Base Calculation:</u>							
21	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
22	Accumulated Depreciation	- Line 13	(\$1,165,054)	(\$5,825,271)	(\$8,155,380)	(\$10,485,488)	(\$12,815,597)
23	Deferred Tax Reserve	- Line 20	(\$4,481,943)	(\$3,510,543)	(\$3,324,600)	(\$3,009,402)	(\$2,681,646)
24	Year End Rate Base	Sum of Lines 21 through 23	\$46,665,924	\$42,977,108	\$40,832,942	\$38,818,031	\$36,815,679
<u>Revenue Requirement Calculation:</u>							
25	Average ISR Rate	Column (a) = Current Year Line 24 ÷ 2; Column (b) through (d) =	\$23,332,962		\$41,905,025	\$39,825,486	\$37,816,855
26	Pre-Tax ROR	Page 31, Line 29(e)	10.05%		9.73%	8.78%	8.78%
27	Return and Taxes	Line 25 * 26	\$2,344,963		\$4,077,359	\$3,496,678	\$3,320,320
28	Book Depreciation	Line 12	\$1,165,054		\$2,330,109	\$2,330,109	\$2,330,109
29	Property taxes	1/	\$0		\$0	\$0	\$0
30	Annual Revenue Requirement	Sum of Lines 27 through 29	\$3,510,017		\$6,407,467	\$5,826,786	\$5,650,428

1/ 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.

Column (d) - Summarizes previously submitted ISR filings

Updates Include Tax Act Change
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)	20 Year MACRS Depreciation
<u>Capital Repairs Deduction</u>				
1	Plant Additions	Per Page 10 of 31, 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	MACRS basis: \$13,563,528
<u>Bonus Depreciation</u>				
4	Plant Additions	Line 1	\$74,591,783	Fiscal Year
5	Less Capital Repairs Deduction	Line 3	\$47,597,001	2015 3.750% \$508,632
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	\$26,994,782	2016 7.219% \$979,151
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	99.51%	2017 6.677% \$905,637
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	\$26,862,508	2018 6.177% \$837,819
9	Bonus Depreciation Rate (April 2014 - December 2014)	1 * 75% * 50%	37.50%	2019 5.713% \$774,884
10	Bonus Depreciation Rate (January 2015 - March 2015)	1 * 25% * 50%	12.50%	2020 5.285% \$716,832
11	Total Bonus Depreciation Rate	Line 9 + Line 10	50.00%	2021 4.888% \$662,985
12	Bonus Depreciation	Line 8 * Line 11	\$13,431,254	2022 4.522% \$613,343
<u>Remaining Tax Depreciation</u>				
13	Plant Additions	Line 1	\$74,591,783	2023 4.462% \$605,205
14	Less Capital Repairs Deduction	Line 3	\$47,597,001	2024 4.461% \$605,069
15	Less Bonus Depreciation	Line 12	\$13,431,254	2025 4.462% \$605,205
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	\$13,563,528	2026 4.461% \$605,069
17	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946	3.750%	2027 4.462% \$605,205
18	Remaining Tax Depreciation	Line 16 * Line 17	\$508,632	2028 4.461% \$605,069
19	\$481(a) FY09- FY14 adjustment for tax (gain)/loss on retirements	Per Tax Department	\$4,311,849	2029 4.462% \$605,205
20	FY15 tax (gain)/loss on retirements	Per Tax Department	\$823,616	2030 4.461% \$605,069
21	Cost of Removal	Per Page 10 of 31, Line 7 minus Line 7a	\$2,171,218	2031 4.462% \$605,205
22	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, 20 & 21	<u>\$68,843,570</u>	2032 4.461% \$605,069
				2033 4.462% \$605,205
				2034 4.461% \$605,069
				2035 2.231% \$302,602
				100.000% \$13,563,528

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 additions in those categories that are considered as potentially qualifying for Capital Repairs deduction.

The Narragansett Electric Company
d/b/a National Grid

Updates Include Tax Act Change

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)	Cumulative FY 15-FY 17 (e)	Fiscal Year 2018 (f)	Fiscal Year 2019 (g)	Fiscal Year 2020 (h)
Depreciable Net Capital Included in Rate Base							
1	Total Allowed Capital Included in Rate Base in Current Year	Page 18 of 31, Line 3, Column (c);	\$21,360,998		\$0	\$0	\$0
2	Retirements	Page 18 of 31, Line 9, Column (c)	1,615,155		\$0	\$0	\$0
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) through (f) =	\$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
5	Depreciation expense	Per Compliance filing Docket No. 4323, excluding General Plant	\$4,060,176		\$0	\$0	\$0
6	Incremental Capital Amount	Line 4 - Line 5	\$17,300,822		\$17,300,822	\$17,300,822	\$17,300,822
7	Cost of Removal	Page 18 of 31, Line 6, Column (c);	(\$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
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%
10	Tax Depreciation	Page 3	\$17,439,322		\$154,439	\$142,869	\$132,137
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	\$17,439,322	\$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 *	\$333,705		\$667,409	\$667,409	\$667,409
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12	\$333,705	\$2,335,933	\$3,003,343	\$3,670,752	\$4,338,162
14	Cumulative Book / Tax Timer	Line 11 - Line 13	\$17,105,617	\$15,646,021	\$15,133,051	\$14,608,511	\$14,073,239
15	Effective Tax Rate		35.00%	35.00%	21.00%	21.00%	21.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$5,986,966	\$5,476,107	\$3,177,941	\$3,067,787	\$2,955,380
17	Less: FY 2014 Federal NOL	Lessor of Line 16 or Page 23 of 31, Line 12	(\$5,986,966)	(\$5,476,107)	(\$3,177,941)	(\$3,067,787)	(\$2,955,380)
18	Proration Adjustment	Col (f) = Page 25b of 31, Line 40; Col (g) = Page 26b of 31, Line 40	\$0	\$0	\$0	\$0	\$0
19	Excess Deferred Taxes	Page 30, Line 5(e)			\$0	\$0	\$0
20	Net Deferred Tax Reserve	Line 16 + Line 17 + Line 18 + Line 19	\$0	\$0	\$0	\$0	\$0
Rate Base Calculation:							
21	Cumulative Incremental Capital Included in Rate Base	Line 8	\$15,981,069	\$15,981,069	\$15,981,069	\$15,981,069	\$15,981,069
22	Accumulated Depreciation	- Line 13	(\$333,705)	(\$2,335,933)	(\$3,003,343)	(\$3,670,752)	(\$4,338,162)
23	Deferred Tax Reserve	- Line 20	\$0	\$0	\$0	\$0	\$0
24	Year End Rate Base	Sum of Lines 21 through 23	\$15,647,365	\$13,645,136	\$12,977,727	\$12,310,317	\$11,642,908
Revenue Requirement Calculation:							
25	Average ISR Rate Base	Column (a) = Current Year Line 24 * 31.41%; Column (b) through	\$4,914,753		\$13,311,432	\$12,644,022	\$11,976,613
26	Pre-Tax ROR	Page 31, Line 29(e)	10.05%		9.73%	8.78%	8.78%
27	Return and Taxes	Line 25 * Line 26	\$493,933		\$1,295,202	\$1,110,145	\$1,051,547
28	Book Depreciation	Line 12	\$333,705		\$667,409	\$667,409	\$667,409
29	Property Taxes		\$0		\$0	\$0	\$0
30	Annual Revenue Requirement on Incremental FY14 Investment	Sum of Lines 27 through 29	\$827,637		\$1,962,612	\$1,777,555	\$1,718,956
31	Incremental Revenue Requirement	Line 26 Current Year - Line 27 Prior Year	\$827,637		\$650,892	\$1,126,663	\$592,293
31	Remaining FY14 NOL attributable to embedded rate base in RIPUC Docket 4323	Per Page 23 of 31, Line 13 less Line 17	\$12,037,252		\$14,846,277	\$14,956,431	\$15,068,838
32	Average Rate Base	Col (a) = Current Year Line 31 * 58.33%; Col (b) through (f) =	\$7,021,730		\$13,697,194	\$14,901,354	\$15,012,634
33	Pre-Tax ROR	Page 31, Line 29(e)	10.05%		9.73%	8.78%	8.78%
34	Return and Taxes	Line 32 * Line 33	\$705,684		\$1,332,737	\$1,308,339	\$1,318,109
35	Annual Revenue Requirement adjustment to base rates	Line 34	\$705,684		\$1,332,737	\$1,308,339	\$1,318,109
36	Total Annual Revenue Requirement	Line 30 + Line 35	\$1,533,321		\$3,295,349	\$3,085,893	\$3,037,065

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 31

5/ 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

6/ 58.33% per Docket No. 4474

7/ No proration or excessed deferred taxes due to NOL offset.

Column (e) - Summarizes previously submitted ISR filings

Updates Include Tax Act Change

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)	
<u>Capital Repairs Deduction</u>				
1	Plant Additions	Per Page 12 of 31, Line 1	\$21,360,998	20 Year MACRS Depreciation
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 74.94%	
3	Capital Repairs Deduction	Line 1 * Line 2	\$16,007,932	
<u>Bonus Depreciation</u>				
4	Plant Additions	Line 1	\$21,360,998	Fiscal Year
5	Less Capital Repairs Deduction	Line 3	\$16,007,932	2014
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	\$5,353,066	2015
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	99.00%	2016
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	\$5,299,535	2017
9	Bonus Depreciation Rate (April 2013 - December 2013)	1 * 75% * 50%	37.50%	2018
10	Bonus Depreciation Rate (January 2014 - March 2014)	1 * 25% * 50%	12.50%	2019
11	Total Bonus Depreciation Rate	Line 9 + Line 10	50.00%	2020
12	Bonus Depreciation	Line 8 * Line 11	\$2,649,768	2021
<u>Remaining Tax Depreciation</u>				
13	Plant Additions	Line 1	\$21,360,998	2022
14	Less Capital Repairs Deduction	Line 3	\$16,007,932	2023
15	Less Bonus Depreciation	Line 12	\$2,649,768	2024
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15	\$2,703,298	2025
17	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946	3.750%	2026
18	Remaining Tax Depreciation	Line 16 * Line 17	\$101,374	2027
19	Cost of Removal	Per Page 12 of 31, Line 7	(\$1,319,752)	2028
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19	\$17,439,322	2029
				2030
				2031
				2032
				2033
				2034
				100.000%
				\$2,703,298

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

Updates Include Tax Act Change

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)	Cumulative FY14-FY17 (f)	Fiscal Year 2018 (g)	Fiscal Year 2019 (h)	Fiscal Year 2020 (i)
Depreciable Net Capital Included in Rate Base						
	Total Allowed Capital Included in Rate Base in Current Year	Page 18 of 31, Line 3, Column (b); (Includes Work Order Write Off Adjustment)				
1	Year	(\$1,197,129)		(\$1,197,129)	(\$1,197,129)	(\$1,197,129)
2	Retirements	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		(\$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 31, Line 6, Column (b);				
		2/ (\$1,701,046)				
6	Net Plant Amount	Line 4 + Line 5	(\$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%
8	Tax Depreciation	Page 3				
		(\$2,724,002)		(\$9,564)	(\$8,845)	(\$8,183)
9	Cumulative Tax Depreciation	Col (a)= Current Yr Line 8; Col (b)-(d)= Prior Yr Line 9 + Current				
		(\$2,724,002)	(\$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 *				
		(\$75,610)		(\$151,220)	(\$151,220)	(\$151,220)
11	Cumulative Book Depreciation	Col (a) =Current Yr Line 10; Col (b)-(d) = Prior Yr Line 9 +				
		(\$75,610)	(\$680,491)	(\$831,711)	(\$982,931)	(\$1,134,152)
12	Cumulative Book / Tax Timer	Line 9 - Line 11				
		(\$2,648,392)	(\$2,090,173)	(\$1,948,516)	(\$1,806,141)	(\$1,663,104)
13	Effective Tax Rate	35.00%				
		35.00%		21.00%	21.00%	21.00%
14	Deferred Tax Reserve	Line 12 * Line 13				
		(\$926,937)	(\$731,561)	(\$409,188)	(\$379,290)	(\$349,252)
15	Less: FY 2013 Federal NOL	Per Page 23 of 31, Line 13				
		\$0	\$0	\$0	\$0	\$0
16	Proration Adjustment	Col (g) = Page 25b of 31, Line 40; Col (h) = Page 26b of 31, Line 40				
		\$0	\$0	(\$26,743)	(\$27,054)	(\$27,180)
17	Excess Deferred Taxes	Page 30, Line 4(e)				
				(\$277,750)	(\$277,750)	(\$277,750)
18	Net Deferred Tax Reserve	Sum of Lines 14 through 17				
		(\$926,937)	(\$731,561)	(\$713,681)	(\$684,094)	(\$654,183)
Rate Base Calculation:						
19	Cumulative Incremental Capital Included in Rate Base	Line 6				
		(\$2,898,175)	(\$2,898,175)	(\$2,898,175)	(\$2,898,175)	(\$2,898,175)
20	Accumulated Depreciation	- Line 11				
		\$75,610	\$680,491	\$831,711	\$982,931	\$1,134,152
21	Deferred Tax Reserve	- Line 18				
		\$926,937	\$731,561	\$713,681	\$684,094	\$654,183
22	Year End Rate Base	Sum of Lines 19 through 21				
		(\$1,895,627)	(\$1,486,123)	(\$1,352,782)	(\$1,231,149)	(\$1,109,841)
Revenue Requirement Calculation:						
23	Average ISR Rate Base	Col (a) = Current Yr Line 22 ÷ 2; Col (b) through (g) = (Prior Yr				
		(\$947,814)		(\$1,419,453)	(\$1,291,966)	(\$1,170,495)
24	Pre-Tax ROR	Page 31, Line 29(e)				
		11.18%		9.73%	8.78%	8.78%
25	Return and Taxes	Line 23 * Line 24				
		(\$105,966)		(\$138,113)	(\$113,435)	(\$102,769)
26	Book Depreciation	Line 10				
		(\$75,610)		(\$151,220)	(\$151,220)	(\$151,220)
27	Property Taxes	\$0 in Year 1, then Prior Year (Line 6 - Line 11) * Property Tax				
		4/ \$0		(\$68,865)	(\$63,738)	(\$59,073)
28	Annual Revenue Requirement on Incremental FY 2013 Investment	Sum of Lines 25 through 27	(\$181,576)	(\$358,198)	(\$328,392)	(\$313,063)
Remaining FY13 NOL attributable to embedded rate base in RIPUC Docket 4323						
29		Per Page 23 of 31, Line 13 less Line 15				
		\$6,136,520		\$6,136,520	\$6,136,520	\$6,136,520
30	Average Rate Base	Col (a) = Line 29 * 50%; Col (b) through (g) = (Prior Year Line				
		\$3,068,260		\$6,136,520	\$6,136,520	\$6,136,520
31	Pre-Tax ROR	Page 31, Line 29(e)				
		11.18%		9.73%	8.78%	8.78%
32	Return and Taxes	Line 30 * Line 31				
		\$343,031		\$597,083	\$538,786	\$538,786
33	Annual Revenue Requirement adjustment to base rates related to NOL	Line 32	\$343,031	\$597,083	\$538,786	\$538,786
34	Total Annual Revenue Requirement	Line 28 + Line 33	\$161,456	\$238,886	\$210,394	\$225,724

1/ Actual Incremental Retirements
2/ Actual Incremental Cost of Removal
3/ Page 31
4/ FY 2018 effective property tax rate of 3.11% per Page 20 of 31 at Line 72(h)

Column (f) - Summarizes previously submitted ISR filings

Updates Include Tax Act Change
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 <u>2013</u> (a)
<u>Capital Repairs Deduction</u>			
1	Plant Additions	Per Page 14 of 31, Line 1	(\$1,197,129)
2	Capital Repairs Deduction Rate	Per Tax Department	1/ <u>67.95%</u>
3	Capital Repairs Deduction	Line 1 * Line 2	(\$813,449)
<u>Bonus Depreciation</u>			
4	Plant Additions	Line 1	(\$1,197,129)
5	Less Capital Repairs Deduction	Line 3	<u>(\$813,449)</u>
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/ <u>5.67%</u>
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%	<u>25.00%</u>
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%	<u>12.50%</u>
17	Total Bonus Depreciation Rate	Line 9 + Line 10	50.00%
18	50% Bonus Depreciation	Line 13 * Line 17	(\$180,958)
<u>Remaining Tax Depreciation</u>			
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	<u>(\$202,721)</u>
22	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 19 - 20 - 21	(\$180,958)
23	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946	<u>3.750%</u>
24	Remaining Tax Depreciation	Line 22 * Line 23	(\$6,786)
25	Cost of Removal	Per Page 14 of 31, Line 5	(\$1,701,046)
26	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 24, & 25	<u><u>(\$2,724,002)</u></u>

20 Year MACRS Depreciation		
MACRS basis: (\$180,958)		
Fiscal Year		
2013	3.750%	(\$6,786)
2014	7.219%	(\$13,063)
2015	6.677%	(\$12,083)
2016	6.177%	(\$11,178)
2017	5.713%	(\$10,338)
2018	5.285%	(\$9,564)
2019	4.888%	(\$8,845)
2020	4.522%	(\$8,183)
2021	4.462%	(\$8,074)
2022	4.461%	(\$8,073)
2023	4.462%	(\$8,074)
2024	4.461%	(\$8,073)
2025	4.462%	(\$8,074)
2026	4.461%	(\$8,073)
2027	4.462%	(\$8,074)
2028	4.461%	(\$8,073)
2029	4.462%	(\$8,074)
2030	4.461%	(\$8,073)
2031	4.462%	(\$8,074)
2032	4.461%	(\$8,073)
2033	2.231%	(\$4,037)
	<u>100.000%</u>	<u>(\$180,958)</u>

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

Updates Include Tax Act Change
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)	Cumulative FY13-FY17 (g)	Fiscal Year 2018 (h)	Fiscal Year 2019 (i)	Fiscal Year 2020 (j)
Depreciable Net Capital Included in Rate Base						
1	Total Allowed Capital Included in Rate Base in Current Year	Page 18 of 31, Line 3, Column (a)	\$6,721,626	\$0	\$0	\$0
2	Retirements	Page 18 of 31, Line 9, Column (a)	2,292,446	\$0	\$0	\$0
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 1a - Line 2; Column (b) through (h) =	\$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
5	Cost of Removal	Page 18 of 31, Line 6, Column (a)	2/ (\$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
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%
8	Tax Depreciation	Page 3	\$3,001,202	\$27,421	\$25,368	\$25,031
9	Cumulative Tax Depreciation	Prior Year Line 9 + Current Year Line 8	\$3,001,202	\$3,175,507	\$3,202,929	\$3,228,297
10	Book Depreciation	Column (a) = Line 3 * Line 7 * 50%; Columns (b)-(e) = Line 3 *	\$74,853	\$149,706	\$149,706	\$149,706
11	Cumulative Book Depreciation	Prior Year Line 11 + Current Year Line 10	\$74,853	\$823,385	\$973,091	\$1,122,797
12	Cumulative Book / Tax Timer	Line 9 - Line 11	\$2,926,349	\$2,352,123	\$2,229,838	\$2,105,500
13	Effective Tax Rate		35.00%	21.00%	21.00%	21.00%
14	Deferred Tax Reserve	Line 12 * Line 13	\$1,024,222	\$823,243	\$468,266	\$442,155
15	Less: FY 2012 Federal NOL	Lessor of Line 14 or Page 23 of 31, Line 12	(\$1,024,222)	(\$823,243)	(\$468,266)	(\$442,155)
16	Proration Adjustment	Col (h) = Page 25b of 31, Line 40; Col (i) = Page 26b of 31, Line 40	\$0	\$0	\$0	\$0
17	Excess Deferred Taxes	Page 30, Line 3(e)	\$0	\$0	\$0	\$0
18	Net Deferred Tax Reserve	Sum of Lines 14 through 17	4/ \$0	\$0	\$0	\$0
Rate Base Calculation:						
19	Cumulative Incremental Capital Included in Rate Base	Line 6	\$3,541,156	\$3,541,156	\$3,541,156	\$3,541,156
20	Accumulated Depreciation	- Line 11	(\$74,853)	(\$823,385)	(\$973,091)	(\$1,122,797)
21	Deferred Tax Reserve	- Line 18	\$0	\$0	\$0	\$0
22	Year End Rate Base	Sum of Lines 19 through 21	\$3,466,303	\$2,717,771	\$2,568,065	\$2,418,359
Revenue Requirement Calculation:						
23	Average ISR Rate Base	Column (a) = Current Yr Line 21 ÷ 2; Columns (b)-(e) = (Prior Yr	\$1,733,151	\$2,642,918	\$2,493,212	\$2,343,505
24	Pre-Tax ROR	Page 31, Line 29(e)	11.41%	9.73%	8.78%	8.78%
25	Return and Taxes	Line 23 * Line 24	\$197,753	\$257,156	\$218,904	\$205,760
26	Book Depreciation	Line 10	\$74,853	\$149,706	\$149,706	\$149,706
27	Property Taxes	\$0 in Year 1, then Prior Year (Line 6 - Line 11) * Property Tax	3/ \$0	\$84,394	\$79,209	\$74,591
28	Annual Revenue Requirement	Sum of Lines 25 through 27	\$272,606	\$491,256	\$447,819	\$430,057
Remaining FY12 NOL attributable to embedded rate base in RIPUC Docket 4323						
29		Per Page 23 of 31, Line 13 less Line 15	\$5,243,839	\$5,799,795	\$5,825,906	\$5,852,088
30	Average Rate Base	Col (a) = Line 29 * 50%; Col (b) through (g) = (Prior Year Line	\$2,621,920	\$5,622,307	\$5,812,851	\$5,838,997
31	Pre-Tax ROR	Page 31, Line 29(e)	11.41%	9.73%	8.78%	8.78%
32	Return and Taxes	Line 30 * Line 31	\$299,161	\$547,050	\$510,368	\$512,664
33	Annual Revenue Requirement adjustment to base rates related to NOL	Line 32	\$299,161	\$547,050	\$510,368	\$512,664
34	Total Annual Revenue Requirement	Line 28 + Line 33	\$571,767	\$1,038,307	\$958,187	\$942,721

1/ Actual Incremental Retirements

2/ Actual Incremental Cost of Removal

3/ FY 2018 effective property tax rate of 3.11% per Page 20 of 31 at Line 72(h)

4/ No proration or excessed deferred taxes due to NOL offset.

Column (g) - Summarizes previously submitted ISR filings

Updates Include Tax Act Change
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)
<u>Capital Repairs Deduction</u>			
1	Plant Additions	Per Page 16 of 31, Line 1	\$6,721,626
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 67.43%
3	Capital Repairs Deduction	Line 1 * Line 2	<u>\$4,532,392</u>
<u>Bonus Depreciation</u>			
4	Plant Additions	Line 1	\$6,721,626
5	Less Capital Repairs Deduction	Line 3	<u>\$4,532,392</u>
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	<u>\$1,860,849</u>
9	Bonus Depreciation Rate (April 2011 - December 2011)	1 * 75% * 100%	75.00%
10	Bonus Depreciation Rate (January 2012 - March 2012)	1 * 25% * 50%	<u>12.50%</u>
11	Total Bonus Depreciation Rate	Line 9 + Line 10	87.50%
12	Bonus Depreciation	Line 8 * Line 11	<u>\$1,628,243</u>
<u>Remaining Tax Depreciation</u>			
13	Plant Additions	Line 1	\$6,721,626
14	Less Capital Repairs Deduction	Line 3	<u>\$4,532,392</u>
15	Less Bonus Depreciation	Line 12	<u>\$1,628,243</u>
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15	\$560,991
17	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946	<u>3.750%</u>
18	Remaining Tax Depreciation	Line 16 * Line 17	<u>\$21,037</u>
19	Cost of Removal	Per Page 16 of 31, Line 5	(\$3,180,470)
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19	<u><u>\$3,001,202</u></u>

20 Year MACRS Depreciation		
MACRS basis:		\$560,991
Fiscal Year		
2012	3.750%	\$21,037
2013	7.219%	\$40,498
2014	6.677%	\$37,457
2015	6.177%	\$34,652
2016	5.713%	\$32,049
2017	5.285%	\$29,648
2018	4.888%	\$27,421
2019	4.522%	\$25,368
2020	4.462%	\$25,031
2021	4.461%	\$25,026
2022	4.462%	\$25,031
2023	4.461%	\$25,026
2024	4.462%	\$25,031
2025	4.461%	\$25,026
2026	4.462%	\$25,031
2027	4.461%	\$25,026
2028	4.462%	\$25,031
2029	4.461%	\$25,026
2030	4.462%	\$25,031
2031	4.461%	\$25,026
2032	2.231%	\$12,516
	100.000%	<u>\$560,991</u>

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

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

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)
<u>Capital Investment</u>				
1	ISR-eligible Capital Investment	\$ 54,477,445	\$56,416,101	\$70,137,361
1a	Work Order Write Off Adjustment	\$0	\$393,288	\$771,673
1b	New Service Installation and Service Relocations, Growth (per Informal Request Division 1-2)	\$95,103	\$35,750	\$351,197
2	ISR-eligible Capital Additions included in Rate Base per R.I.P.U.C. Docket No. 4323	\$47,660,716	\$57,184,191	\$47,653,493
3	Incremental ISR Capital Investment	\$6,721,626	(\$1,197,129)	\$21,360,998
<u>Cost of Removal</u>				
4	ISR-eligible Cost of Removal	\$2,583,612	\$3,152,565	\$2,707,824
4a	Work Order Write Off Adjustment	\$0	\$141,414	105,654.38
4b	Growth (per Informal Request Division 1-2)	\$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	\$5,755,088	\$4,701,396	\$3,917,830
6	Incremental Cost of Removal	(\$3,180,470)	(\$1,701,046)	(\$1,319,752)
<u>Retirements</u>				
7	ISR-eligible Retirements	\$5,366,562	5,775,791	\$5,274,944
8	ISR-eligible Retirements per R.I.P.U.C. Docket No. 4323	\$3,074,116	\$2,498,949	\$3,659,788
9	Incremental Retirements	\$2,292,446	\$3,276,842	\$1,615,155

Updates Include Tax Act Change

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)	(b)	(c)	(d)	(e)	(f)	(g)	(h)				
		RY End	ISR Additions	Non-ISR Add's	Total Add's	Bk Depr	Retirements	COR	End of FY14				
1	Plant In Service	\$805,721	\$11,502	\$994	\$12,496				As filed				
2									\$817,337				
3	Accumulated Depr	\$347,664				\$4,691	(\$879)	(\$433)					
4													
5	Net Plant	\$458,057										\$466,294	
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							\$906,119	
15													
16	Accumulated Depr	\$351,043				\$30,019	(\$7,969)	(\$2,164)				\$370,928	
17													
18	Net Plant	\$466,526										\$535,191	
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							\$1,019,550	
28													
29	Accumulated Depr	\$370,928				\$33,433	(\$3,178)	(\$3,684)				\$397,499	
30													
31	Net Plant	\$535,191										\$622,052	
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								\$89,323		
42	Book Depreciation: base allowance on ISR eligible plant		(\$4,060)								(\$24,356)		
43	Book Depreciation: current year ISR additions		(\$631)								(\$1,456)		
44	COR		\$433								\$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%								3.11%		
54	RY Effective Tax Rate & differential		3.06%	0.29%							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)				\$290	
61													
62	Total ISR Property Tax Recovery			\$468				\$1,661				\$4,055	

Updates Include Tax Act Change

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)
	<u>End of FY16</u>	<u>ISR Additions</u>	<u>Non-ISR Add's</u>	<u>Total Add's</u>	<u>Bk Depr</u>	<u>Retirements</u>	<u>COR</u>	<u>End of FY17</u>
63 Plant In Service	\$1,019,550	\$81,161	\$ 22,407	\$103,568		\$ 20,507		\$1,143,625
64 Accumulated Depr	\$397,499				\$37,446	\$20,507	(\$6,100)	\$449,352
65 Net Plant	\$622,052							\$694,273
66 Property Tax Expense	\$19,316							\$21,414
67 Effective Prop tax Rate	3.11%							3.08%

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	<u>End of FY17</u>	<u>ISR Additions</u>	<u>Non-ISR Add's</u>	<u>Total Add's</u>	<u>Bk Depr</u>	<u>Retirements</u>	<u>COR</u>	<u>End of FY18</u>
68 Plant In Service	\$1,143,625	\$93,177	\$25,518	\$118,695		(\$3,289)		\$1,259,031
69 Accumulated Depr	\$449,352				\$41,494	(\$3,289)	(\$8,008)	\$479,548
70 Net Plant	\$694,273							\$779,482
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)
	<u>Cumulative Incremental ISR Property Tax for FY17</u>				<u>Cumulative Incremental ISR Property Tax for FY18</u>		
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							
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	\$6,735	* 0.02%	\$1		\$6,342	* 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

Updates Include Tax Act Change

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)
	<u>End of FY18</u>	<u>ISR Additions</u>	<u>Non-ISR Add's</u>	<u>Total Add's</u>	<u>Bk Depr</u>	<u>Retirements</u>	<u>COR</u>	<u>End of FY19</u>
97 Plant In Service	\$1,259,031	\$100,772	\$2,800	\$103,572		(\$10,050)		\$1,352,552
98 Accumulated Depr	\$479,548				\$45,025	(\$10,050)	(\$5,440)	\$509,082
99 Net Plant	\$779,482							\$843,470
100 Property Tax Expense	\$24,205							\$26,016
101 Effective Prop tax Rate	3.11%							3.08%

Property Tax Recovery Calculation

	(a)	(b)	(c)
	<u>Cumulative Incremental ISR Property Tax for FY19</u>		
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		<u>\$5,440</u>	
106			
107 Net Plant Additions		\$80,323	
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			\$2,454
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	\$5,949	* 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	\$80,323	* 0.02%	\$16
125 Total Property Tax related to rate differential			<u>\$153</u>
126			
127 Total ISR Property Tax Recovery			<u>\$9,520</u>

Updates Include Tax Act Change

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 31, 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 31, 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 31, 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 31, Line 5
75(f) Per Page 4 of 31, 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 31, 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 31, 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 31, 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 31, Line 5
104(b) Per Page 2 of 31, 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) * Colum (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)

Updates Include Tax Act Change

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				
2 Total Base Rate Plant DIT Provision	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
3 Incremental FY 12	\$1,121,846	\$1,080,717	\$1,038,476	\$906,443	\$865,263	\$823,243	\$468,266	\$17,193,641	\$18,309,741	\$11,577,639	\$0	\$0	\$0	\$0	\$0
4 Incremental FY 13	\$0	(\$734,732)	(\$690,174)	(\$829,884)	(\$780,869)	(\$731,561)	(\$409,188)	\$1,121,846	(\$41,129)	(\$42,241)	(\$132,033)	(\$41,180)	(\$42,020)	(\$354,977)	(\$468,266)
5 Incremental FY 14	\$0	\$0	\$6,444,262	\$5,821,675	\$5,651,257	\$5,476,107	\$3,177,941	\$0	\$0	\$6,444,262	(\$622,587)	(\$170,419)	(\$175,149)	(\$2,298,167)	(\$3,177,941)
6 FY 2015	\$0	\$0	\$0	\$23,687,481	\$23,214,645	\$22,716,080	\$13,316,267	\$0	\$0	\$0	\$23,687,481	(\$472,835)	(\$498,565)	(\$9,399,813)	(\$13,316,267)
7 FY 2016	\$0	\$0	\$0	\$0	\$28,518,812	\$27,774,974	\$16,206,281	\$0	\$0	\$0	\$0	\$28,518,812	(\$743,838)	(\$11,568,693)	(\$16,206,281)
8 FY 2017	\$0	\$0	\$0	\$0	\$0	\$26,106,575	\$15,329,202	\$0	\$0	\$0	\$0	\$0	\$26,106,575	(\$10,777,372)	(\$15,329,202)
9 FY 2018	\$0	\$0	\$0	\$0	\$0	\$0	\$16,587,058	\$0	\$0	\$0	\$0	\$0	\$0	\$16,587,058	(\$16,587,058)
10 FY 2019	\$0	\$0	\$0	\$0	\$0	\$0	(\$16,077,559)	\$0	\$0	\$0	\$0	\$0	\$0	(\$16,077,559)	\$16,077,559
11 TOTAL Plant DIT Provision	\$ 1,121,846	\$ 345,985	\$ 6,792,564	\$ 29,585,715	\$ 57,469,108	\$ 82,165,419	\$ 48,598,268	\$ 18,315,487	\$ 17,533,880	\$ 18,024,218	\$ 22,793,151	\$ 27,883,393	\$ 24,696,311	\$ (33,567,151)	\$ (48,598,268)
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

Updates Include Tax Act Change

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%	9.73%	8.78%
	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	\$ 609,882	\$ 550,336
4 FY 2013	\$ -	\$ 343,031	\$ 616,720	\$ 616,720	\$ 616,720	\$ 616,720	\$ 597,083	\$ 538,786
5 FY 2014	\$ -	\$ -	\$ 882,298	\$ 1,811,434	\$ 1,811,434	\$ 1,811,434	\$ 1,753,756	\$ 1,582,526
6 FY 2015	\$ -	\$ -	\$ -	\$ 965,078	\$ 1,930,157	\$ 1,930,157	\$ 1,868,699	\$ 1,686,246
7 FY 2016	\$ -	\$ -	\$ -	\$ -	\$ 582,646	\$ 1,165,291	\$ 1,128,188	\$ 1,018,036
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	\$ 5,957,609	\$ 5,375,931

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
Per Page 23 of 31, Line 13
- 2 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)
- 3 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)
- 4 Col (c) =
- a) NOL applied to FY 2014 ISR DIT \$ 6,444,262 Page 23 of 31 Line 2(j)
 - b) FY 2014 ISR weighted average additions rate 31.41% Page 28 of 31 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 31 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

Updates Include Tax Act Change

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.	Deferred Tax Subject to Proration		(a)=Sum of (b)	(b)	(c)	(d)	
			through (h)	Vintage Year	Vintage Year	Vintage Year	
			Total	2018	2017	2016	
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	Bonus Depreciation	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 2	(\$13,764,576)	(\$13,764,576)	\$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)	
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	
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	(\$7,337,137)	(\$13,054,604)	\$1,691,547	\$2,024,007	
6	Effective Tax Rate		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	
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	
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	
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	
Proration Calculation							
		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (r)	(l)	(m)	(n)
26	April 2017	30	91.78%	(\$196,411)	(\$349,464)	\$45,282	\$54,181
27	May 2017	31	83.29%	(\$178,235)	(\$317,126)	\$41,091	\$49,168
28	June 2017	30	75.07%	(\$160,646)	(\$285,830)	\$37,036	\$44,316
29	July 2017	31	66.58%	(\$142,471)	(\$253,492)	\$32,846	\$39,302
30	August 2017	31	58.08%	(\$124,296)	(\$221,153)	\$28,656	\$34,288
31	September 2017	30	49.86%	(\$106,707)	(\$189,858)	\$24,601	\$29,436
32	October 2017	31	41.37%	(\$88,531)	(\$157,520)	\$20,411	\$24,422
33	November 2017	30	33.15%	(\$70,942)	(\$126,224)	\$16,355	\$19,570
34	December 2017	31	24.66%	(\$52,767)	(\$93,886)	\$12,165	\$14,556
35	January 2018	31	16.16%	(\$34,592)	(\$61,547)	\$7,975	\$9,542
36	February 2018	28	8.49%	(\$18,175)	(\$32,338)	\$4,190	\$5,014
37	March 2018	31	0.00%	\$0	\$0	\$0	\$0
38	Total	365		(\$1,173,774)	(\$2,088,439)	\$270,609	\$323,795
39	Deferred Tax Without Proration	Line 25	(\$2,567,998)	(\$4,569,111)	\$592,041	\$708,402	
40	Proration Adjustment	Line 38 - Line 39	\$1,394,224	\$2,480,673	(\$321,433)	(\$384,608)	

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)

Updates Include Tax Act Change

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)	(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	\$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)	\$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)	(\$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)	\$0	\$0	\$0	\$0	
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	(\$7,337,137)	\$1,495,234	\$522,301	(\$140,734)	\$125,112	
6	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	
7	Deferred Tax Reserve	Line 5 * Line 6	(\$2,567,998)	\$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)					
9	Cost of Removal	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 9	(\$8,008,000)					
10	Book/Tax Depreciation Timing Difference at 3/31/2017		\$0					
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	(\$72,206,946)					
12	Effective Tax Rate		35.00%					
13	Deferred Tax Reserve	Line 11 * Line 12	(\$25,272,431)					
14	Total Deferred Tax Reserve	Line 7 + Line 13	(\$27,840,429)	\$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					
16	Net Deferred Tax Reserve	Line 14 + Line 15	(\$27,840,429)	\$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)					
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	(\$72,206,946)					
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	(\$85,261,550)					
20	Total FY 2018 Federal NOL	RIPUC Docket No. 4678 (FY 2018 Plan), Page 22 of 25, Line 20	\$0					
21	Allocated FY 2018 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	\$0					
22	Allocated FY 2018 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	\$0					
23	Effective Tax Rate		35.00%					
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	\$0					
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	(\$2,567,998)	\$523,332	\$182,805	(\$49,257)	\$43,789	
Proration Calculation								
		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (r)	(o)	(p)	(q)	(r)
26	April 2017	30	91.78%	(\$196,411)	\$40,027	\$13,982	(\$3,767)	\$3,349
27	May 2017	31	83.29%	(\$178,235)	\$36,323	\$12,688	(\$3,419)	\$3,039
28	June 2017	30	75.07%	(\$160,646)	\$32,738	\$11,436	(\$3,081)	\$2,739
29	July 2017	31	66.58%	(\$142,471)	\$29,034	\$10,142	(\$2,733)	\$2,429
30	August 2017	31	58.08%	(\$124,296)	\$25,330	\$8,848	(\$2,384)	\$2,119
31	September 2017	30	49.86%	(\$106,707)	\$21,746	\$7,596	(\$2,047)	\$1,820
32	October 2017	31	41.37%	(\$88,531)	\$18,042	\$6,302	(\$1,698)	\$1,510
33	November 2017	30	33.15%	(\$70,942)	\$14,457	\$5,050	(\$1,361)	\$1,210
34	December 2017	31	24.66%	(\$52,767)	\$10,753	\$3,756	(\$1,012)	\$900
35	January 2018	31	16.16%	(\$34,592)	\$7,049	\$2,462	(\$664)	\$590
36	February 2018	28	8.49%	(\$18,175)	\$3,704	\$1,294	(\$349)	\$310
37	March 2018	31	0.00%	\$0	\$0	\$0	\$0	\$0
38	Total	365		(\$1,173,774)	\$239,203	\$83,556	(\$22,514)	\$20,015
39	Deferred Tax Without Proration	Line 25	(\$2,567,998)	\$523,332	\$182,805	(\$49,257)	\$43,789	
40	Proration Adjustment	Line 38 - Line 39	\$1,394,224	(\$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)

Updates Include Tax Act Change

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety,
and Reliability Plan Proposal Filing
Section 3, Attachment 1S
Page 26a of 31

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)	(b)	(c)	(d)	(e)	
			through (i)	Vintage Year	Vintage Year	Vintage Year	Vintage Year	
			Total	2019	2018	2017	2016	
Deferred Tax Subject to Proration								
	Book Depreciation	Col (b) = Page 4 of 31, Line 12; Col (c) = Page 6 of 31, Line 12; Col (d) = Page 8 of 31, Line 12; Col (e) = Page 10 of 31, Line 12; Col (f) = Page 12 of 31, Line 12; Col (g) = Page 14 of 31, Line 10; Col (h) = Page 16 of 31, Line 10	\$12,948,793	\$1,533,196	\$3,038,209	\$2,469,637	\$2,911,746	
1	Bonus Depreciation		\$0	\$0	\$0	\$0	\$0	
	Remaining MACRS Tax Depreciation	Col (b) = Page 5 of 31, Line 18; Col (c) = Page 6 of 31, Line 10; Col (d) = Page 8 of 31, Line 10; Col (e) = Page 10 of 31, Line 10; Col (f) = Page 12 of 31, Line 10; Col (g) = Page 14 of 31, Line 8; Col (h) = Page 16 of 31, Line 8	(\$6,060,101)	(\$2,074,026)	(\$1,568,944)	(\$809,884)	(\$672,971)	
3	FY19 tax (gain)/loss on retirements		(\$238,628)	(\$238,628)	\$0	\$0	\$0	
4	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	\$6,650,064	(\$779,458)	\$1,469,265	\$1,659,754	\$2,238,775	
5	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	
6	Deferred Tax Reserve	Line 5 * Line 6	\$2,327,522	(\$272,810)	\$514,243	\$580,914	\$783,571	
Deferred Tax Not Subject to Proration								
8	Capital Repairs Deduction		(\$72,041,903)	(\$72,041,903)				
9	Cost of Removal		(\$5,440,400)	(\$5,440,400)				
10	Book/Tax Depreciation Timing Difference at 3/31/2017		\$0	\$0				
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	(\$77,482,303)	(\$77,482,303)				
12	Effective Tax Rate		21.00%	21.00%				
13	Deferred Tax Reserve	Line 11 * Line 12	(\$16,271,284)	(\$16,271,284)				
14	Total Deferred Tax Reserve	Line 7 + Line 13	(\$13,943,761)	(\$16,544,094)	\$514,243	\$580,914	\$783,571	
15	Net Operating Loss		\$0	\$0				
16	Net Deferred Tax Reserve	Line 14 + Line 15	(\$13,943,761)	(\$16,544,094)	\$514,243	\$580,914	\$783,571	
Allocation of FY 2018 Estimated Federal NOL								
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	\$689,807	(\$779,458)	\$1,469,265			
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	(\$77,482,303)	(\$77,482,303)	\$0			
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	(\$76,792,496)	(\$78,261,761)	\$1,469,265			
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		21.00%	21.00%				
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	\$2,327,522	(\$272,810)	\$514,243	\$580,914	\$783,571	
Proration Calculation								
		(j) Number of Days in Month	(k) Proration Percentage	(l)= Sum of (m) through (t)	(m)	(n)	(o)	(p)
26	April 2017	30	91.78%	\$178,018	(\$20,866)	\$39,331	\$44,431	\$59,931
27	May 2017	31	83.29%	\$161,545	(\$18,935)	\$35,692	\$40,319	\$54,385
28	June 2017	30	75.07%	\$145,603	(\$17,066)	\$32,170	\$36,340	\$49,018
29	July 2017	31	66.58%	\$129,130	(\$15,135)	\$28,530	\$32,229	\$43,472
30	August 2017	31	58.08%	\$112,656	(\$13,205)	\$24,890	\$28,117	\$37,926
31	September 2017	30	49.86%	\$96,714	(\$11,336)	\$21,368	\$24,138	\$32,559
32	October 2017	31	41.37%	\$80,241	(\$9,405)	\$17,728	\$20,027	\$27,014
33	November 2017	30	33.15%	\$64,299	(\$7,537)	\$14,206	\$16,048	\$21,647
34	December 2017	31	24.66%	\$47,826	(\$5,606)	\$10,567	\$11,937	\$16,101
35	January 2018	31	16.16%	\$31,352	(\$3,675)	\$6,927	\$7,825	\$10,555
36	February 2018	28	8.49%	\$16,473	(\$1,931)	\$3,640	\$4,111	\$5,546
37	March 2018	31	0.00%	\$0	\$0	\$0	\$0	\$0
38	Total	365		\$1,063,858	(\$124,695)	\$235,049	\$265,523	\$358,153
39	Deferred Tax Without Proration	Line 25		\$2,327,522	(\$272,810)	\$514,243	\$580,914	\$783,571
40	Proration Adjustment	Line 38 - Line 39		(\$1,263,664)	\$148,115	(\$279,194)	(\$315,391)	(\$425,418)

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)

Updates Include Tax Act Change

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)	(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 31, Line 12; Col (c) = Page 6 of 31, Line 12; Col (d) = Page 8 of 31, Line 12; Col (e) = Page 10 of 31, Line 12; Col (f) = Page 12 of 31, Line 12; Col (g) = Page 14 of 31, Line 10; Col (h) = Page 16 of 31, Line 10	\$12,948,793	\$2,330,109	\$667,409	(\$151,220)	\$149,706	
1								
2	Bonus Depreciation		\$0	\$0	\$0	\$0		
	Remaining MACRS Tax Depreciation	Col (b) = Page 5 of 31, Line 18; Col (c) = Page 6 of 31, Line 10; Col (d) = Page 8 of 31, Line 10; Col (e) = Page 10 of 31, Line 10; Col (f) = Page 12 of 31, Line 10; Col (g) = Page 14 of 31, Line 8; Col (h) = Page 16 of 31, Line 8	(\$6,060,101)	(\$774,884)	(\$142,869)	\$8,845	(\$25,368)	
3								
4	FY19 tax (gain)/loss on retirements		(\$238,628)	\$0	\$0	\$0	\$0	
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	\$6,650,064	\$1,555,224	\$524,540	(\$142,375)	\$124,338	
6	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	
7	Deferred Tax Reserve	Line 5 * Line 6	\$2,327,522	\$544,328	\$183,589	(\$49,831)	\$43,518	
Deferred Tax Not Subject to Proration								
8	Capital Repairs Deduction		(\$72,041,903)					
9	Cost of Removal		(\$5,440,400)					
10	Book/Tax Depreciation Timing Difference at 3/31/2017		\$0					
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	(\$77,482,303)					
12	Effective Tax Rate		21.00%					
13	Deferred Tax Reserve	Line 11 * Line 12	(\$16,271,284)					
14	Total Deferred Tax Reserve	Line 7 + Line 13	(\$13,943,761)	\$544,328	\$183,589	(\$49,831)	\$43,518	
15	Net Operating Loss		\$0					
16	Net Deferred Tax Reserve	Line 14 + Line 15	(\$13,943,761)	\$544,328	\$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	\$689,807					
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	(\$77,482,303)					
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	(\$76,792,496)					
20	Total FY 2018 Federal NOL		\$0					
21	Allocated FY 2018 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	\$0					
22	Allocated FY 2018 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	\$0					
23	Effective Tax Rate		21.00%					
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	\$0					
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	\$2,327,522	\$544,328	\$183,589	(\$49,831)	\$43,518	
Proration Calculation								
		(j) Number of Days in Month	(k) Proration Percentage	(l)= Sum of (m) through (t)	(q)	(r)	(s)	(t)
26	April 2017	30	91.78%	\$178,018	\$41,632	\$14,042	(\$3,811)	\$3,328
27	May 2017	31	83.29%	\$161,545	\$37,780	\$12,742	(\$3,459)	\$3,020
28	June 2017	30	75.07%	\$145,603	\$34,052	\$11,485	(\$3,117)	\$2,722
29	July 2017	31	66.58%	\$129,130	\$30,199	\$10,185	(\$2,765)	\$2,414
30	August 2017	31	58.08%	\$112,656	\$26,346	\$8,886	(\$2,412)	\$2,106
31	September 2017	30	49.86%	\$96,714	\$22,618	\$7,629	(\$2,071)	\$1,808
32	October 2017	31	41.37%	\$80,241	\$18,766	\$6,329	(\$1,718)	\$1,500
33	November 2017	30	33.15%	\$64,299	\$15,037	\$5,072	(\$1,377)	\$1,202
34	December 2017	31	24.66%	\$47,826	\$11,185	\$3,772	(\$1,024)	\$894
35	January 2018	31	16.16%	\$31,352	\$7,332	\$2,473	(\$671)	\$586
36	February 2018	28	8.49%	\$16,473	\$3,853	\$1,299	(\$353)	\$308
37	March 2018	31	0.00%	\$0	\$0	\$0	\$0	\$0
38	Total	365		\$1,063,858	\$248,800	\$83,914	(\$22,777)	\$19,891
39	Deferred Tax Without Proration	Line 25		\$2,327,522	\$544,328	\$183,589	(\$49,831)	\$43,518
40	Proration Adjustment	Line 38 - Line 39		(\$1,263,664)	(\$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)

Updates Include Tax Act Change

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)	(b) Vintage Year 2019	(c) Vintage Year 2018	(d) Vintage Year 2017	(e) Vintage Year 2016
			Total				
Deferred Tax Subject to Proration							
	Book Depreciation	Col (b) = Page 4 of 31, Line 12; Col (c) = Page 6 of 31, Line 12; Col (d) = Page 8 of 31, Line 12; Col (e) = Page 10 of 31, Line 12; Col (f) = Page 12 of 31, Line 12; Col (g) = Page 14 of 31, Line 10; Col (h) = Page 16 of 31, Line 10					
1			\$14,481,989	\$3,066,392	\$3,038,209	\$2,469,637	\$2,911,746
2	Bonus Depreciation		\$0	\$0	\$0	\$0	\$0
	Remaining MACRS Tax Depreciation	Col (b) = Page 5 of 31, Line 18; Col (c) = Page 6 of 31, Line 10; Col (d) = Page 8 of 31, Line 10; Col (e) = Page 10 of 31, Line 10; Col (f) = Page 12 of 31, Line 10; Col (g) = Page 14 of 31, Line 8; Col (h) = Page 16 of 31, Line 8					
3			(\$5,762,648)	(\$2,074,026)	(\$1,451,148)	(\$749,236)	(\$622,419)
4	FY 19 tax (gain)/loss on retirements		\$0	\$0	\$0	\$0	\$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	\$8,719,341	\$992,367	\$1,587,061	\$1,720,401	\$2,289,327
6	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	\$3,051,769	\$347,328	\$555,471	\$602,140	\$801,264
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		21.00%	21.00%			
13	Deferred Tax Reserve	Line 11 * Line 12	\$0	\$0			
14	Total Deferred Tax Reserve	Line 7 + Line 13	\$3,051,769	\$347,328	\$555,471	\$602,140	\$801,264
15	Net Operating Loss		\$0	\$0	\$0		
16	Net Deferred Tax Reserve	Line 14 + Line 15	\$3,051,769	\$347,328	\$555,471	\$602,140	\$801,264
Allocation of FY 2018 Estimated Federal NOL							
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	\$2,579,427	\$992,367	\$1,587,061		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	\$0	\$0	\$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	\$2,579,427	\$992,367	\$1,587,061		
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		21.00%	21.00%			
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	\$3,051,769	\$347,328	\$555,471	\$602,140	\$801,264
Proration Calculation							
		(j) Number of Days in Month	(k) Proration Percentage	(l)= Sum of (m) through (s)	(m)	(n)	(o)
26	April 2017	30	91.78%	\$206,847	\$42,485	\$42,485	\$61,284
27	May 2017	31	83.29%	\$187,705	\$38,553	\$38,553	\$55,613
28	June 2017	30	75.07%	\$169,182	\$34,749	\$34,749	\$50,125
29	July 2017	31	66.58%	\$150,041	\$30,817	\$30,817	\$44,454
30	August 2017	31	58.08%	\$130,900	\$26,886	\$26,886	\$38,783
31	September 2017	30	49.86%	\$112,376	\$23,081	\$23,081	\$33,295
32	October 2017	31	41.37%	\$93,235	\$19,150	\$19,150	\$27,623
33	November 2017	30	33.15%	\$74,712	\$15,345	\$15,345	\$22,135
34	December 2017	31	24.66%	\$55,571	\$11,414	\$11,414	\$16,464
35	January 2018	31	16.16%	\$36,430	\$7,482	\$7,482	\$10,793
36	February 2018	28	8.49%	\$19,141	\$3,931	\$3,931	\$5,671
37	March 2018	31	0.00%	\$0	\$0	\$0	\$0
38	Total	365		\$1,236,140	\$253,894	\$253,894	\$366,240
39	Deferred Tax Without Proration	Line 25		\$2,704,441	\$347,328	\$555,471	\$602,140
40	Proration Adjustment	Line 38 - Line 39		(\$1,468,302)	(\$93,435)	(\$301,578)	(\$435,024)

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)

Updates Include Tax Act Change

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.	Description		(a)=Sum of (b) through (h)	(b) Vintage Year 2019	(f) Vintage Year 2015	(g) Vintage Year 2014	(h) Vintage Year 2013	(i) Vintage Year 2012	
			Total						
Deferred Tax Subject to Proration									
	Book Depreciation	Col (b) = Page 4 of 31, Line 12; Col (c) = Page 6 of 31, Line 12; Col (d) = Page 8 of 31, Line 12; Col (e) = Page 10 of 31, Line 12; Col (f) = Page 12 of 31, Line 12; Col (g) = Page 14 of 31, Line 10; Col (h) = Page 16 of 31, Line 10							
1			\$14,481,989	\$3,066,392	\$2,330,109	\$667,409	(\$151,220)	\$149,706	
2	Bonus Depreciation		\$0	\$0	\$0	\$0	\$0	\$0	
	Remaining MACRS Tax Depreciation	Col (b) = Page 5 of 31, Line 18; Col (c) = Page 6 of 31, Line 10; Col (d) = Page 8 of 31, Line 10; Col (e) = Page 10 of 31, Line 10; Col (f) = Page 12 of 31, Line 10; Col (g) = Page 14 of 31, Line 8; Col (h) = Page 16 of 31, Line 8							
3			(\$5,762,648)	(\$2,074,026)	(\$716,832)	(\$132,137)	\$8,183	(\$25,031)	
4	FY19 tax (gain)/loss on retirements		\$0	\$0	\$0	\$0	\$0	\$0	
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	\$8,719,341	\$992,367	\$1,613,276	\$535,272	(\$143,037)	\$124,675	
6	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	
7	Deferred Tax Reserve	Line 5 * Line 6	\$3,051,769	\$347,328	\$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		21.00%	21.00%					
13	Deferred Tax Reserve	Line 11 * Line 12	\$0	\$0					
14	Total Deferred Tax Reserve	Line 7 + Line 13	\$3,051,769	\$347,328	\$564,647	\$187,345	(\$50,063)	\$43,636	
15	Net Operating Loss		\$0	\$0					
16	Net Deferred Tax Reserve	Line 14 + Line 15	\$3,051,769	\$347,328	\$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	\$2,579,427	\$992,367					
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	\$0	\$0					
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	\$2,579,427	\$992,367					
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		21.00%	21.00%					
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	\$3,051,769	\$347,328	\$564,647	\$187,345	(\$50,063)	\$43,636	
Proration Calculation									
		(j) Number of Days in Month	(k) Proration Percentage	(l)= Sum of (m) through (s)	(p)	(q)	(r)	(s)	
26	April 2017	30	91.78%	\$206,847	\$42,485	\$43,186	\$14,329	(\$3,829)	\$3,337
27	May 2017	31	83.29%	\$187,705	\$38,553	\$39,190	\$13,003	(\$3,475)	\$3,029
28	June 2017	30	75.07%	\$169,182	\$34,749	\$35,323	\$11,720	(\$3,132)	\$2,730
29	July 2017	31	66.58%	\$150,041	\$30,817	\$31,326	\$10,394	(\$2,777)	\$2,421
30	August 2017	31	58.08%	\$130,900	\$26,886	\$27,330	\$9,068	(\$2,423)	\$2,112
31	September 2017	30	49.86%	\$112,376	\$23,081	\$23,462	\$7,785	(\$2,080)	\$1,813
32	October 2017	31	41.37%	\$93,235	\$19,150	\$19,466	\$6,459	(\$1,726)	\$1,504
33	November 2017	30	33.15%	\$74,712	\$15,345	\$15,599	\$5,176	(\$1,383)	\$1,205
34	December 2017	31	24.66%	\$55,571	\$11,414	\$11,602	\$3,850	(\$1,029)	\$897
35	January 2018	31	16.16%	\$36,430	\$7,482	\$7,606	\$2,524	(\$674)	\$588
36	February 2018	28	8.49%	\$19,141	\$3,931	\$3,996	\$1,326	(\$354)	\$309
37	March 2018	31	0.00%	\$0	\$0	\$0	\$0	\$0	\$0
38	Total	365		\$1,236,140	\$253,894	\$258,087	\$85,631	(\$22,883)	\$19,945
39	Deferred Tax Without Proration	Line 25		\$2,704,441	\$347,328	\$564,647	\$187,345	(\$50,063)	\$43,636
40	Proration Adjustment	Line 38 - Line 39		(\$1,468,302)	(\$93,435)	(\$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

<u>Line No.</u>	<u>Month No.</u>	<u>Month</u>	<u>FY 2014 ISR Additions</u> (a)	<u>In Rates</u> (b)	<u>Not In Rates</u> (c) = (a) - (b)	<u>Weight</u> (d)	<u>Weighted Average</u> (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		<u>\$69,014,490</u>	<u>\$47,653,493</u>	<u>\$21,360,998</u>		<u>\$6,709,374</u>
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 31, Line 1(c)
 Column (b) = Page 18 of 31, 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**

<u>Line No.</u>	<u>Month No.</u>	<u>Month</u>	<u>FY 2014 ISR Deferred Tax</u> (a)	<u>In Rates</u> (b)	<u>Not In Rates</u> (c) = (a) - (b)	<u>Weight</u> (d)	<u>Weighted Average</u> (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		<u>\$ -</u>	<u>\$11,577,639</u>	<u>(\$11,577,639)</u>		<u>(\$6,753,623)</u>
15	FY 2014 Weighted Average Deferred Tax Provision Percentage						58.33%

Column (a) = Page 4 Line 18(a)

Column (b) = Page 23 of 31, 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)

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Excess Deferred Taxes at 12/31/17

<u>Line No</u>		Cumulative Book/Tax Timing Difference at 03/31/17 (a)	Projected Book/Tax Timing Difference at 3/31/18 (b)	Difference (c) = (b) - (a)	Prorated Change as of 12/31/17 (d) = (c) x 75%	Cumulative Timing Difference through 12/31/17 (e) = (a) + (d)	Excess Deferred Taxes at 12/31/17 (f)
1	Vintage Year						
2	2012	\$2,352,123	\$2,229,838	(\$122,285)	(\$91,714)	\$2,260,409	\$316,457
3	2013	(\$2,090,173)	(\$1,948,516)	\$141,657	\$106,242	(\$1,983,931)	(\$277,750)
4	2014	\$15,646,021	\$15,133,051	(\$512,970)	(\$384,728)	\$15,261,294	\$2,136,581
5	2015	\$64,903,087	\$63,410,797	(\$1,492,289)	(\$1,119,217)	\$63,783,870	\$8,929,742
6	2016	\$79,357,069	\$77,172,768	(\$2,184,301)	(\$1,638,226)	\$77,718,843	\$10,880,638
7	2017	\$74,590,214	\$72,996,202	(\$1,594,012)	(\$1,195,509)	\$73,394,705	\$10,275,259
8	2018	\$ -	\$78,985,991	\$78,985,991	\$59,239,493	\$59,239,493	\$8,293,529

Line Notes

- 2(a) Page 16, Line 12(f)
- 2(b) Page 16, Line 12(h)
- 3(a) Page 14, Line 12(e)
- 3(b) Page 14, Line 12(g)
- 4(a) Page 12, Line 14(d)
- 4(b) Page 12, Line 14(f)
- 5(a) Page 10 Line 14(d)
- 5(b) Page 10, Line 14(e)
- 6(a) Page 8, Line 14(c)
- 6(b) Page 8, Line 14(d)
- 7(a) Page 6, Line 14(a)
- 7(b) Page 6, Line 14(b)
- 8(b) Page 4, Line 14(a)

**The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety,
and Reliability Plan Proposal Filing
Section 3, Attachment 1S
Page 31 of 31**

**The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas ISR Plan Revenue Requirement
Calculation of Weighted Average Cost of Capital**

Line No.

1 Weighted Average Cost of Capital as approved in R.I.P.U.C. Docket No. 3943						
2	(a)	(b)	(c)	(d)	(e)	
3	Ratio	Rate	Rate	Taxes	Return	
4	Long Term Debt	40.63%	7.99%	3.25%	3.25%	
5	Short Term Debt	11.66%	3.91%	0.45%	0.45%	
6	Preferred Stock	0.00%	0.00%	0.00%	0.00%	
7	Common Equity	47.71%	10.50%	5.01%	2.70%	7.71%
8		<u>100.00%</u>		<u>8.71%</u>	<u>2.70%</u>	<u>11.41%</u>

9
10 (d) - Column (c) x 35% divided by (1 - 35%)
11

12 Weighted Average Cost of Capital as approved in R.I.P.U.C. Docket No. 4323 at 35% income tax rate						
13	(a)	(b)	(c)	(d)	(e)	
14	Ratio	Rate	Rate	Taxes	Return	
15	Long Term Debt	49.95%	5.70%	2.85%	2.85%	
16	Short Term Debt	0.76%	0.80%	0.01%	0.01%	
17	Preferred Stock	0.15%	4.50%	0.01%	0.01%	
18	Common Equity	49.14%	9.50%	4.67%	2.51%	7.18%
19		<u>100.00%</u>		<u>7.54%</u>	<u>2.51%</u>	<u>10.05%</u>

20
21 (d) - Column (c) x 35% divided by (1 - 35%)
22
23

24 Weighted Average Cost of Capital as approved in R.I.P.U.C. Docket No. 4323 at 21% income tax rate						
25	(a)	(b)	(c)	(d)	(e)	
26	Ratio	Rate	Rate	Taxes	Return	
27	Long Term Debt	49.95%	5.70%	2.85%	2.85%	
28	Short Term Debt	0.76%	0.80%	0.01%	0.01%	
29	Preferred Stock	0.15%	4.50%	0.01%	0.01%	
30	Common Equity	49.14%	9.50%	4.67%	1.24%	5.91%
31		<u>100.00%</u>		<u>7.54%</u>	<u>1.24%</u>	<u>8.78%</u>

32 (d) - Column (c) x 21% divided by (1 - 21%)
33

34 FY18 Blended Rate
Line 19(e) x 75% + Line 31(e) x 25% 9.73%

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 4: Rate Design and Bill Impacts

Section 4
Rate Design and Bill Impacts
FY 2019 Proposal (Revised)

**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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 4: Rate Design and Bill Impacts
Page 2 of 3

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 \$0.4227 per therm,³ which is an increase of \$0.24 per therm, or 130%, over the currently effective capital component of the FY 2018 ISR factor, resulting in a total bill increase of 12%. 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 \$0.4378 per therm⁴ to \$0.1507 per therm⁵, or \$0.2871 per therm lower, while resulting in a slightly higher FY 2019 ISR factor for Residential Heating customers of \$0.1507 per therm compared to \$0.1451 per therm⁶ under the current formula, or \$0.0056 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 1S of this section provides the

³ See Section 4: Attachment 1S, Page 3, Line 3, Column (g).

⁴ See Section 4: Attachment 1S, Page 3, Line 3, Column (k).

⁵ See Section 4: Attachment 1S, Page 1, Line 1, Column (k).

⁶ See Section 4: Attachment 1S, Page 3, Line 4, Column (k).

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 4: Rate Design and Bill Impacts
Page 3 of 3

proposed ISR factors by rate class. Attachment 2S of this section provides the Plan's bill impact⁷ associated with the rate design in Attachment 1S 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 \$24.96, or 2.0%.

⁷ Bill impacts are provided using rates approved and currently in effect as of January 11, 2018.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4781
FY2019 Gas Infrastructure, Safety, and
Reliability Plan
Section 4: Attachment 1S
Page 1 of 3

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
	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)
(1)	\$43,492,856										
(2)	\$502,000										
(3)		Res-NH									\$0.1507
(4)		Res-H									\$0.1507
(5)		Residential Total	65.29%	\$28,396,485	19,598,273	\$1.4489	\$0.1448	\$0.0012	\$0.1460	3.18%	\$0.1507
(6)		Small	8.19%	\$3,562,065	2,472,466	\$1.4406	\$0.1440	\$0.0012	\$0.1452	3.18%	\$0.1499
(7)		Medium	13.58%	\$5,906,330	5,507,228	\$1.0724	\$0.1072	\$0.0012	\$0.1084	3.18%	\$0.1119
(8)		Large LL	6.04%	\$2,626,968	2,651,210	\$0.9908	\$0.0990	\$0.0012	\$0.1002	3.18%	\$0.1034
(9)		Large HL	2.35%	\$1,022,082	1,264,980	\$0.8079	\$0.0807	\$0.0012	\$0.0819	3.18%	\$0.0845
(10)		XL-LL	0.77%	\$334,895	1,236,022	\$0.2709	\$0.0270	\$0.0012	\$0.0282	3.18%	\$0.0291
(11)		XL-HL	3.78%	\$1,644,030	6,959,192	\$0.2362	\$0.0236	\$0.0012	\$0.0248	3.18%	\$0.0256
(12)		Total	100.0%	\$43,492,856	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

Forecasted Throughput April 2018 - March 2019

	Apr-18 (a)	May-18 (b)	Jun-18 (c)	Jul-18 (d)	Aug-18 (e)	Sep-18 (f)	Oct-18 (g)	Nov-18 (h)	Dec-18 (i)	Jan-19 (j)	Feb-19 (k)	Mar-19 (l)	Total (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

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4781
FY2019 Gas Infrastructure, Safety, and
Reliability Plan
Section 4: Attachment 1S
Page 3 of 3

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

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
	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)
(1)	\$43,492,856										
(2)	\$502,000										
(3)		Res-NH	3.73%	\$1,622,284	383,768	\$4,2272	\$0.4227	\$0.0012	\$0.4239	3.18%	\$0.4378
(4)		Res-H	61.56%	\$26,774,202	19,214,505	\$1,3934	\$0.1393	\$0.0012	\$0.1405	3.18%	\$0.1451
(5)		Residential Total	65.29%	\$28,396,485	19,598,273	\$1,4489	\$0.1448	\$0.0012	\$0.1460	3.18%	\$0.1507
(6)		Small	8.19%	\$3,562,065	2,472,466	\$1,4406	\$0.1440	\$0.0012	\$0.1452	3.18%	\$0.1499
(7)		Medium	13.58%	\$5,906,330	5,507,228	\$1,0724	\$0.1072	\$0.0012	\$0.1084	3.18%	\$0.1119
(8)		Large LL	6.04%	\$2,626,968	2,651,210	\$0,9908	\$0.0990	\$0.0012	\$0.1002	3.18%	\$0.1034
(9)		Large HL	2.35%	\$1,022,082	1,264,980	\$0,8079	\$0.0807	\$0.0012	\$0.0819	3.18%	\$0.0845
(10)		XL-LL	0.77%	\$334,895	1,236,022	\$0,2709	\$0.0270	\$0.0012	\$0.0282	3.18%	\$0.0291
(11)		XL-HL	3.78%	\$1,644,030	6,959,192	\$0,2362	\$0.0236	\$0.0012	\$0.0248	3.18%	\$0.0256
(12)		Total	100%	\$43,492,856	39,689,371						

(a) Line 1: Proposed Capital Revenue Requirement & Forecasted Annual Property Tax Recovery Mechanism (Section 3, Attachment 1, Page 1, Line 12)

(b) Line 2: Proposed O&M (Section 3, Attachment 1, Page 1, Line 1)

(c) Docket 4323, RI 2012 Rate Case

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

(e) Page 2, Column (m), Line 9

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

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

(h) Column (a) Line 2 / (Column (e) Line 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

National Grid - RI Gas

Infrastructure, Safety, and Reliability (ISR) Filing
Bill Impact Analysis with Various Levels of Consumption:

Line No.	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates								
						(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Residential Heating:														
(1)	550	\$881.62	\$865.43	\$16.20	1.9%	\$0.00	\$0.00	\$0.00	\$15.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.49
(2)	608	\$956.17	\$938.24	\$17.93	1.9%	\$0.00	\$0.00	\$0.00	\$17.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.54
(3)	667	\$1,031.80	\$1,012.15	\$19.65	1.9%	\$0.00	\$0.00	\$0.00	\$19.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.59
(4)	727	\$1,107.68	\$1,086.24	\$21.44	2.0%	\$0.00	\$0.00	\$0.00	\$20.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.64
(5)	788	\$1,181.80	\$1,158.59	\$23.22	2.0%	\$0.00	\$0.00	\$0.00	\$22.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.70
(6)	846	\$1,250.90	\$1,225.94	\$24.96	2.0%	\$0.00	\$0.00	\$0.00	\$24.21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.75
(7)	904	\$1,320.22	\$1,293.57	\$26.65	2.1%	\$0.00	\$0.00	\$0.00	\$25.85	\$0.00	\$0.00	\$0.00	\$0.00	\$0.80
(8)	966	\$1,394.08	\$1,365.61	\$28.47	2.1%	\$0.00	\$0.00	\$0.00	\$27.62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.85
(9)	1,023	\$1,461.81	\$1,431.64	\$30.16	2.1%	\$0.00	\$0.00	\$0.00	\$29.26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.90
(10)	1,081	\$1,530.02	\$1,498.14	\$31.89	2.1%	\$0.00	\$0.00	\$0.00	\$30.93	\$0.00	\$0.00	\$0.00	\$0.00	\$0.96
(11)	1,145	\$1,604.23	\$1,570.46	\$33.77	2.2%	\$0.00	\$0.00	\$0.00	\$32.76	\$0.00	\$0.00	\$0.00	\$0.00	\$1.01
Average Customer														

Line No.	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates								
						(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Residential Heating Low Income:														
(18)	550	\$839.13	\$822.93	\$16.20	2.0%	\$0.00	\$0.00	\$0.00	\$15.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.49
(19)	608	\$910.93	\$893.01	\$17.93	2.0%	\$0.00	\$0.00	\$0.00	\$17.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.54
(20)	667	\$983.79	\$964.14	\$19.65	2.0%	\$0.00	\$0.00	\$0.00	\$19.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.59
(21)	727	\$1,056.96	\$1,035.52	\$21.44	2.1%	\$0.00	\$0.00	\$0.00	\$20.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.64
(22)	788	\$1,128.62	\$1,105.41	\$23.22	2.1%	\$0.00	\$0.00	\$0.00	\$22.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.70
(23)	846	\$1,195.50	\$1,170.54	\$24.96	2.1%	\$0.00	\$0.00	\$0.00	\$24.21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.75
(24)	904	\$1,262.62	\$1,235.97	\$26.65	2.2%	\$0.00	\$0.00	\$0.00	\$25.85	\$0.00	\$0.00	\$0.00	\$0.00	\$0.80
(25)	966	\$1,334.13	\$1,305.65	\$28.47	2.2%	\$0.00	\$0.00	\$0.00	\$27.62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.85
(26)	1,023	\$1,399.71	\$1,369.54	\$30.16	2.2%	\$0.00	\$0.00	\$0.00	\$29.26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.90
(27)	1,081	\$1,465.82	\$1,433.93	\$31.89	2.2%	\$0.00	\$0.00	\$0.00	\$30.93	\$0.00	\$0.00	\$0.00	\$0.00	\$0.96
(28)	1,145	\$1,537.80	\$1,504.02	\$33.77	2.2%	\$0.00	\$0.00	\$0.00	\$32.76	\$0.00	\$0.00	\$0.00	\$0.00	\$1.01
Average Customer														

Note: Bill Impacts are based on rates approved and currently in effect as of January 11, 2018.

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

Residential Non-Heating:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	GCR	Base DAC	DAC	ISR	EE	LIHEAP	GET
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
(33)													
(34)	140	\$345.50	\$351.31	(\$5.81)	-1.7%	\$0.00	\$0.00	\$0.00	(\$5.64)	\$0.00	\$0.00	\$0.00	(\$0.17)
(35)	155	\$364.20	\$370.63	(\$6.43)	-1.7%	\$0.00	\$0.00	\$0.00	(\$6.24)	\$0.00	\$0.00	\$0.00	(\$0.19)
(36)	171	\$384.25	\$391.31	(\$7.06)	-1.8%	\$0.00	\$0.00	\$0.00	(\$6.85)	\$0.00	\$0.00	\$0.00	(\$0.21)
(37)	184	\$400.40	\$408.01	(\$7.61)	-1.9%	\$0.00	\$0.00	\$0.00	(\$7.38)	\$0.00	\$0.00	\$0.00	(\$0.23)
(38)	198	\$417.87	\$426.05	(\$8.19)	-1.9%	\$0.00	\$0.00	\$0.00	(\$7.94)	\$0.00	\$0.00	\$0.00	(\$0.25)
(39)	214	\$437.42	\$446.25	(\$8.84)	-2.0%	\$0.00	\$0.00	\$0.00	(\$8.57)	\$0.00	\$0.00	\$0.00	(\$0.27)
(40)	228	\$455.30	\$464.70	(\$9.40)	-2.0%	\$0.00	\$0.00	\$0.00	(\$9.12)	\$0.00	\$0.00	\$0.00	(\$0.28)
(41)	244	\$475.27	\$485.35	(\$10.08)	-2.1%	\$0.00	\$0.00	\$0.00	(\$9.78)	\$0.00	\$0.00	\$0.00	(\$0.30)
(42)	258	\$492.74	\$503.42	(\$10.68)	-2.1%	\$0.00	\$0.00	\$0.00	(\$10.36)	\$0.00	\$0.00	\$0.00	(\$0.32)
(43)	275	\$513.91	\$525.28	(\$11.37)	-2.2%	\$0.00	\$0.00	\$0.00	(\$11.03)	\$0.00	\$0.00	\$0.00	(\$0.34)
(44)	288	\$530.20	\$542.09	(\$11.89)	-2.2%	\$0.00	\$0.00	\$0.00	(\$11.53)	\$0.00	\$0.00	\$0.00	(\$0.36)
(45)													
(46)													
(47)													
(48)													
(49)													

Residential Non-Heating Low Income:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates	GCR	Base DAC	DAC	ISR	EE	LIHEAP	GET
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
(50)													
(51)	140	\$323.08	\$328.89	(\$5.81)	-1.8%	\$0.00	\$0.00	\$0.00	(\$5.64)	\$0.00	\$0.00	\$0.00	(\$0.17)
(52)	155	\$341.10	\$347.53	(\$6.43)	-1.9%	\$0.00	\$0.00	\$0.00	(\$6.24)	\$0.00	\$0.00	\$0.00	(\$0.19)
(53)	171	\$360.43	\$367.49	(\$7.06)	-1.9%	\$0.00	\$0.00	\$0.00	(\$6.85)	\$0.00	\$0.00	\$0.00	(\$0.21)
(54)	184	\$375.99	\$383.60	(\$7.61)	-2.0%	\$0.00	\$0.00	\$0.00	(\$7.38)	\$0.00	\$0.00	\$0.00	(\$0.23)
(55)	198	\$392.83	\$401.01	(\$8.19)	-2.0%	\$0.00	\$0.00	\$0.00	(\$7.94)	\$0.00	\$0.00	\$0.00	(\$0.25)
(56)	214	\$411.67	\$420.50	(\$8.84)	-2.1%	\$0.00	\$0.00	\$0.00	(\$8.57)	\$0.00	\$0.00	\$0.00	(\$0.27)
(57)	228	\$428.90	\$438.30	(\$9.40)	-2.1%	\$0.00	\$0.00	\$0.00	(\$9.12)	\$0.00	\$0.00	\$0.00	(\$0.28)
(58)	244	\$448.14	\$458.22	(\$10.08)	-2.2%	\$0.00	\$0.00	\$0.00	(\$9.78)	\$0.00	\$0.00	\$0.00	(\$0.30)
(59)	258	\$464.98	\$475.66	(\$10.68)	-2.2%	\$0.00	\$0.00	\$0.00	(\$10.36)	\$0.00	\$0.00	\$0.00	(\$0.32)
(60)	275	\$485.38	\$496.76	(\$11.37)	-2.3%	\$0.00	\$0.00	\$0.00	(\$11.03)	\$0.00	\$0.00	\$0.00	(\$0.34)
(61)	288	\$501.09	\$512.97	(\$11.89)	-2.3%	\$0.00	\$0.00	\$0.00	(\$11.53)	\$0.00	\$0.00	\$0.00	(\$0.36)
(62)													
(63)													
(64)													

Note: Bill Impacts are based on rates approved and currently in effect as of January 11, 2018.

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

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates			EE	LIHEAP	GET	
						Base DAC	DAC	ISR				
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
(65)												
(66)												
(67)												
(68)												
(69)												
(70)												
(71)	880	\$1,439.51	\$1,423.88	\$15.63	1.1%	\$0.00	\$0.00	\$0.00	\$15.16	\$0.00	\$0.00	\$0.47
(72)	973	\$1,545.31	\$1,528.05	\$17.26	1.1%	\$0.00	\$0.00	\$0.00	\$16.74	\$0.00	\$0.00	\$0.52
(73)	1,067	\$1,651.58	\$1,632.64	\$18.94	1.2%	\$0.00	\$0.00	\$0.00	\$18.37	\$0.00	\$0.00	\$0.57
(74)	1,162	\$1,758.22	\$1,737.61	\$20.61	1.2%	\$0.00	\$0.00	\$0.00	\$19.99	\$0.00	\$0.00	\$0.62
(75)	1,258	\$1,863.87	\$1,841.55	\$22.32	1.2%	\$0.00	\$0.00	\$0.00	\$21.65	\$0.00	\$0.00	\$0.67
(76)	1,352	\$1,962.29	\$1,938.32	\$23.97	1.2%	\$0.00	\$0.00	\$0.00	\$23.25	\$0.00	\$0.00	\$0.72
(77)	1,446	\$2,061.23	\$2,035.60	\$25.63	1.3%	\$0.00	\$0.00	\$0.00	\$24.86	\$0.00	\$0.00	\$0.77
(78)	1,542	\$2,161.94	\$2,134.61	\$27.33	1.3%	\$0.00	\$0.00	\$0.00	\$26.51	\$0.00	\$0.00	\$0.82
(79)	1,635	\$2,259.58	\$2,230.59	\$28.99	1.3%	\$0.00	\$0.00	\$0.00	\$28.12	\$0.00	\$0.00	\$0.87
(80)	1,730	\$2,359.29	\$2,328.61	\$30.68	1.3%	\$0.00	\$0.00	\$0.00	\$29.76	\$0.00	\$0.00	\$0.92
(81)	1,825	\$2,459.04	\$2,426.64	\$32.39	1.3%	\$0.00	\$0.00	\$0.00	\$31.42	\$0.00	\$0.00	\$0.97

C & I Small:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates			EE	LIHEAP	GET	
						Base DAC	DAC	ISR				
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
(82)												
(83)												
(84)												
(85)												
(86)	7,941	\$9,103.18	\$8,915.71	\$187.47	2.1%	\$0.00	\$0.00	\$0.00	\$181.85	\$0.00	\$0.00	\$5.62
(87)	8,796	\$9,989.35	\$9,781.70	\$207.65	2.1%	\$0.00	\$0.00	\$0.00	\$201.42	\$0.00	\$0.00	\$6.23
(88)	9,650	\$10,874.05	\$10,646.23	\$227.82	2.1%	\$0.00	\$0.00	\$0.00	\$220.99	\$0.00	\$0.00	\$6.83
(89)	10,505	\$11,760.22	\$11,512.22	\$248.00	2.2%	\$0.00	\$0.00	\$0.00	\$240.56	\$0.00	\$0.00	\$7.44
(90)	11,361	\$12,646.74	\$12,378.55	\$268.20	2.2%	\$0.00	\$0.00	\$0.00	\$260.15	\$0.00	\$0.00	\$8.05
(91)	12,217	\$13,533.58	\$13,245.15	\$288.43	2.2%	\$0.00	\$0.00	\$0.00	\$279.78	\$0.00	\$0.00	\$8.65
(92)	13,073	\$14,420.45	\$14,111.82	\$308.63	2.2%	\$0.00	\$0.00	\$0.00	\$299.37	\$0.00	\$0.00	\$9.26
(93)	13,928	\$15,306.01	\$14,977.24	\$328.77	2.2%	\$0.00	\$0.00	\$0.00	\$318.91	\$0.00	\$0.00	\$9.86
(94)	14,782	\$16,191.31	\$15,842.32	\$348.99	2.2%	\$0.00	\$0.00	\$0.00	\$338.52	\$0.00	\$0.00	\$10.47
(95)	15,637	\$17,076.93	\$16,707.77	\$369.15	2.2%	\$0.00	\$0.00	\$0.00	\$358.08	\$0.00	\$0.00	\$11.07
(96)	16,492	\$17,963.08	\$17,573.74	\$389.34	2.2%	\$0.00	\$0.00	\$0.00	\$377.66	\$0.00	\$0.00	\$11.68

C & I Medium:

Note: Bill Impacts are based on rates approved and currently in effect as of January 11, 2018.

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

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates			EE	LIHEAP	GET	
						Base DAC	DAC	ISR				
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
(97)												
(98)												
(99)												
(100)												
(101)												
(102)												
(103)	41,066	\$43,868.52	\$43,072.60	\$795.92	1.8%	\$0.00	\$0.00	\$0.00	\$772.04	\$0.00	\$0.00	\$23.88
(104)	45,488	\$48,358.15	\$47,476.54	\$881.61	1.9%	\$0.00	\$0.00	\$0.00	\$855.16	\$0.00	\$0.00	\$26.45
(105)	49,910	\$52,847.73	\$51,880.39	\$967.34	1.9%	\$0.00	\$0.00	\$0.00	\$938.32	\$0.00	\$0.00	\$29.02
(106)	54,334	\$57,339.18	\$56,286.11	\$1,053.06	1.9%	\$0.00	\$0.00	\$0.00	\$1,021.47	\$0.00	\$0.00	\$31.59
(107)	58,757	\$61,829.65	\$60,690.83	\$1,138.81	1.9%	\$0.00	\$0.00	\$0.00	\$1,104.65	\$0.00	\$0.00	\$34.16
(108)	63,179	\$66,319.34	\$65,094.85	\$1,224.49	1.9%	\$0.00	\$0.00	\$0.00	\$1,187.76	\$0.00	\$0.00	\$36.73
(109)	67,600	\$70,807.92	\$69,497.73	\$1,310.20	1.9%	\$0.00	\$0.00	\$0.00	\$1,270.89	\$0.00	\$0.00	\$39.31
(110)	72,023	\$75,298.43	\$73,902.51	\$1,395.92	1.9%	\$0.00	\$0.00	\$0.00	\$1,354.04	\$0.00	\$0.00	\$41.88
(111)	76,447	\$79,790.41	\$78,308.77	\$1,481.64	1.9%	\$0.00	\$0.00	\$0.00	\$1,437.19	\$0.00	\$0.00	\$44.45
(112)	80,870	\$84,280.90	\$82,713.54	\$1,567.36	1.9%	\$0.00	\$0.00	\$0.00	\$1,520.34	\$0.00	\$0.00	\$47.02
(113)	85,292	\$88,770.53	\$87,117.44	\$1,653.09	1.9%	\$0.00	\$0.00	\$0.00	\$1,603.50	\$0.00	\$0.00	\$49.59

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates			EE	LIHEAP	GET	
						Base DAC	DAC	ISR				
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
(114)												
(115)												
(116)												
(117)												
(118)	50,411	\$45,545.15	\$45,352.84	\$192.31	0.4%	\$0.00	\$0.00	\$0.00	\$186.54	\$0.00	\$0.00	\$5.77
(119)	55,841	\$50,216.75	\$50,003.77	\$212.98	0.4%	\$0.00	\$0.00	\$0.00	\$206.59	\$0.00	\$0.00	\$6.39
(120)	61,273	\$54,889.85	\$54,656.14	\$233.71	0.4%	\$0.00	\$0.00	\$0.00	\$226.70	\$0.00	\$0.00	\$7.01
(121)	66,699	\$59,558.38	\$59,303.94	\$254.43	0.4%	\$0.00	\$0.00	\$0.00	\$246.80	\$0.00	\$0.00	\$7.63
(122)	72,129	\$64,229.95	\$63,954.83	\$275.11	0.4%	\$0.00	\$0.00	\$0.00	\$266.86	\$0.00	\$0.00	\$8.25
(123)	77,558	\$68,900.73	\$68,604.88	\$295.86	0.4%	\$0.00	\$0.00	\$0.00	\$286.98	\$0.00	\$0.00	\$8.88
(124)	82,989	\$73,572.36	\$73,255.80	\$316.56	0.4%	\$0.00	\$0.00	\$0.00	\$307.06	\$0.00	\$0.00	\$9.50
(125)	88,416	\$78,241.62	\$77,904.35	\$337.27	0.4%	\$0.00	\$0.00	\$0.00	\$327.15	\$0.00	\$0.00	\$10.12
(126)	93,847	\$82,913.99	\$82,556.01	\$357.98	0.4%	\$0.00	\$0.00	\$0.00	\$347.24	\$0.00	\$0.00	\$10.74
(127)	99,275	\$87,584.02	\$87,205.54	\$378.68	0.4%	\$0.00	\$0.00	\$0.00	\$367.52	\$0.00	\$0.00	\$11.36
(128)	104,705	\$92,255.64	\$91,856.25	\$399.39	0.4%	\$0.00	\$0.00	\$0.00	\$387.41	\$0.00	\$0.00	\$11.98

Note: Bill Impacts are based on rates approved and currently in effect as of January 11, 2018.

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

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates						
						Base DAC	DAC	ISR	EE	LIHEAP	GET	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
(129)												
(130)												
(131)												
(132)												
(133)												
(134)												
(135)	174,357	\$140,093.58	\$139,158.89	\$934.69	0.7%	\$0.00	\$0.00	\$0.00	\$906.65	\$0.00	\$0.00	\$28.04
(136)	193,136	\$154,614.50	\$153,579.15	\$1,035.35	0.7%	\$0.00	\$0.00	\$0.00	\$1,004.29	\$0.00	\$0.00	\$31.06
(137)	211,912	\$169,133.50	\$167,997.47	\$1,136.03	0.7%	\$0.00	\$0.00	\$0.00	\$1,101.95	\$0.00	\$0.00	\$34.08
(138)	230,688	\$183,652.99	\$182,416.28	\$1,236.71	0.7%	\$0.00	\$0.00	\$0.00	\$1,199.61	\$0.00	\$0.00	\$37.10
(139)	249,466	\$198,173.25	\$196,835.92	\$1,337.33	0.7%	\$0.00	\$0.00	\$0.00	\$1,297.21	\$0.00	\$0.00	\$40.12
(140)	268,243	\$212,692.75	\$211,254.75	\$1,438.00	0.7%	\$0.00	\$0.00	\$0.00	\$1,394.86	\$0.00	\$0.00	\$43.14
(141)	287,018	\$227,211.09	\$225,672.45	\$1,538.64	0.7%	\$0.00	\$0.00	\$0.00	\$1,492.48	\$0.00	\$0.00	\$46.16
(142)	305,796	\$241,731.98	\$240,092.67	\$1,639.31	0.7%	\$0.00	\$0.00	\$0.00	\$1,590.13	\$0.00	\$0.00	\$49.18
(143)	324,573	\$256,251.62	\$254,511.64	\$1,739.98	0.7%	\$0.00	\$0.00	\$0.00	\$1,687.78	\$0.00	\$0.00	\$52.20
(144)	343,350	\$270,771.15	\$268,930.54	\$1,840.61	0.7%	\$0.00	\$0.00	\$0.00	\$1,785.39	\$0.00	\$0.00	\$55.22
(145)	362,127	\$285,290.75	\$283,349.47	\$1,941.28	0.7%	\$0.00	\$0.00	\$0.00	\$1,883.04	\$0.00	\$0.00	\$58.24

C & I LLF Extra-Large:

	Annual Consumption (Therms)	Proposed Rates	Current Rates	Difference	% Chg	Base Rates						
						Base DAC	DAC	ISR	EE	LIHEAP	GET	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
(146)												
(147)												
(148)												
(149)												
(150)	447,421	\$317,970.77	\$316,171.85	\$1,798.92	0.6%	\$0.00	\$0.00	\$0.00	\$1,744.95	\$0.00	\$0.00	\$53.97
(151)	495,605	\$351,646.30	\$349,653.65	\$1,992.65	0.6%	\$0.00	\$0.00	\$0.00	\$1,932.87	\$0.00	\$0.00	\$59.78
(152)	543,789	\$385,322.64	\$383,136.26	\$2,186.38	0.6%	\$0.00	\$0.00	\$0.00	\$2,120.79	\$0.00	\$0.00	\$65.59
(153)	591,972	\$418,997.48	\$416,617.40	\$2,380.08	0.6%	\$0.00	\$0.00	\$0.00	\$2,308.68	\$0.00	\$0.00	\$71.40
(154)	640,155	\$452,672.44	\$450,098.59	\$2,573.86	0.6%	\$0.00	\$0.00	\$0.00	\$2,496.64	\$0.00	\$0.00	\$77.22
(155)	688,340	\$486,349.10	\$483,581.51	\$2,767.59	0.6%	\$0.00	\$0.00	\$0.00	\$2,684.56	\$0.00	\$0.00	\$83.03
(156)	736,523	\$520,024.25	\$517,062.98	\$2,961.27	0.6%	\$0.00	\$0.00	\$0.00	\$2,872.43	\$0.00	\$0.00	\$88.84
(157)	784,708	\$553,700.45	\$550,545.44	\$3,155.01	0.6%	\$0.00	\$0.00	\$0.00	\$3,060.36	\$0.00	\$0.00	\$94.65
(158)	832,891	\$587,376.12	\$584,027.39	\$3,348.73	0.6%	\$0.00	\$0.00	\$0.00	\$3,248.27	\$0.00	\$0.00	\$100.46
(159)	881,074	\$621,051.06	\$617,508.61	\$3,542.45	0.6%	\$0.00	\$0.00	\$0.00	\$3,436.18	\$0.00	\$0.00	\$106.27
(160)	929,259	\$654,728.00	\$650,991.82	\$3,736.18	0.6%	\$0.00	\$0.00	\$0.00	\$3,624.09	\$0.00	\$0.00	\$112.09

C & I HLF Extra-Large:

Note: Bill Impacts are based on rates approved and currently in effect as of January 11, 2018.

The Narragansett Electric Company
d/b/a National Grid

**Gas Infrastructure,
Safety, and Reliability Plan
FY 2019 Proposal (Revised)**

~~December 19, 2017~~ February 21, 2018

Submitted to:
Rhode Island Public Utilities Commission

nationalgrid

The Narragansett Electric Company

d/b/a National Grid

FY 2019 Gas Infrastructure, Safety, and Reliability Plan [\(Revised\)](#)

Section 1: Introduction and Summary

Section 1

Introduction and Summary

FY 2019 Proposal [\(Revised\)](#)

Introduction and Summary FY 2019 Proposal

In consultation with the Rhode Island Division of Public Utilities and Carriers (Division), National Grid¹ has developed the following proposed fiscal year (FY) 2019² 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 \$106.717.58 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 Discretionary⁵ and Non-Discretionary⁶ 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. [The revenue requirement at Section 3 of the Plan takes into account the recent changes as a result of the federal Tax Cuts and Jobs Act of 2017.](#)

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 [\\$24.96](#)~~\$30.34~~, or [2.5%](#)~~2.0%~~.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan [\(Revised\)](#)
Section 2: Gas Capital Investment Plan

Section 2
Gas Capital Investment Plan
FY 2019 Proposal [\(Revised\)](#)

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.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 2 of 265

invest a total of \$106.717-58 million of Plan investments, including \$40.90-03 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 \$106.7617-58 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
- \$98.77-64 million for Special Projects, including final site restoration of the Cumberland liquefied natural gas (LNG) tank facility, a gas expansion projects, the Allens Avenue Main Replacement project, and the Veterans Memorial Main Replacement project.

⁸ For FY 2019, the Company plans to spend \$1365.3276-14 million of total capital investment. Of that total amount, \$28.569-06 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 \$9.648.77 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.~~

2.1. Gas Expansion Projects – 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 [liquefied natural gas \(LNG\) facility in 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. [A permanent solution is required to supplement the 24,000 Dth, which has been secured for a period of 20 years. This will likely require infrastructure enhancements to deliver supply to the Cumberland citygate.](#) ~~In addition, peak day customer requirements are expected to increase by an~~

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.

~~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 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 ~~permanent solution, including the and timing of implementation for the permanent solution, for timing of initiating construction for~~ Northern Rhode Island is currently under review.

3.2. 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.

[4.3. 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.~~0390~~ million for ~~n~~Non-~~d~~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 at 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.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 23 of 256

Table 1
Narragansett Gas FY 2019
(\$000)

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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 24 of 256

	Budget	Total
NON-DISCRETIONARY		
Public Works		
<i>CSC/Public Works - Non-Reimbursable</i>	\$11,084	
<i>CSC/Public Works - Reimbursable</i>	\$1,354	
<i>CSC/Public Works - Reimbursements</i>	-\$1,354	
Public Works Total		\$11,084
Mandated Programs		
<i>Corrosion</i>	\$1,144	
<i>Purchase Meters (Replacements)</i>	\$4,371	
<i>Main Replacement (Reactive) - Maintenance (incl Water Intrusion)</i>	\$670	
<i>Main Replacement (Reactive) - CI Joint Encapsulation</i>	\$4,012	
<i>Service Replacement (Reactive) - Leaks</i>	\$7,146	
<i>Service Replacements (Reactive) - Non-Leaks/Other</i>	\$2,331	
<i>Pipeline Integrity IVP (Integrity Verification Program)</i>	\$252	
Mandated Total		\$19,925
Damage / Failure (Reactive)		
Damage / Failure Total	\$250	\$250
Special Project		
<i>Gas Expansion Plan</i>	\$1,500	
<i>Pipeline Integrity IVP - Allens Ave 200 psig main replacement due to weld issue</i>	\$4,735	
<i>Pipeline Integrity IVP - Veterans Memorial Drive 200 psig main replacement</i>	\$2,533	
Special Project Total		\$8,768
NON-DISCRETIONARY TOTAL		\$40,027
DISCRETIONARY		
Proactive Main Replacement		
<i>Main Replacement (Proactive) - Leak Prone Pipe</i>	\$52,802	
Proactive Main Replacement Total		\$52,802
Reliability		
<i>Gas System Control</i>	\$550	
<i>Valve Installation/Replacement</i>	\$159	
<i>System Automation</i>	\$1,033	
<i>Heater Program</i>	\$800	
<i>Pressure Regulating Facilities</i>	\$2,666	
<i>Allens Ave Multi Station Rebuild</i>	\$2,970	
<i>Take Stations</i>	\$1,000	
<i>Gas System Reliability - Gas Planning</i>	\$1,472	
<i>I&R - Reactive</i>	\$1,202	
<i>LNG</i>	\$903	
<i>Replace Pipe on Bridges</i>	\$100	
<i>Access Protection Remediation</i>	\$100	
<i>Tools & Equipment</i>	\$427	
Reliability Total		\$13,382
DISCRETIONARY TOTAL		\$66,184
Capital Spending Total		\$106,212
O&M		\$502
Gas ISR Plan Total		\$106,714

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 2: Gas Capital Investment Plan
Page 25 of 256

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	\$ 8,768	\$ -	\$ -	\$ -	\$ -	\$ 8,768
NON-DISCRETIONARY TOTAL	\$ 40,027	\$ 32,655	\$ 33,341	\$ 34,042	\$ 34,507	\$ 174,572
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)	\$ 106,212	\$ 117,889	\$ 129,558	\$ 128,017	\$ 128,098	\$ 584,145
O&M Total	\$ 502					\$ 502
GAS ISR TOTAL	\$ 106,714	\$ 117,889	\$ 129,558	\$ 128,017	\$ 128,098	\$ 584,647

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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan ([Revised](#))
Section 2: Gas Capital Investment Plan
Page 26 of [256](#)

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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan [\(Revised\)](#)
Section 3: Revenue Requirement

Section 3

Revenue Requirement
FY 2019 Proposal [\(Revised\)](#)

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 1S, Page 1, Column (b), the Company's Gas ISR Plan cumulative revenue requirement totals ~~\$45,776,892~~43,994,856, which is an incremental ~~\$9,225,940~~7,443,904 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~~\$4,353,572 on- FY 2019 proposed non-growth ISR capital investment of ~~\$107,079,000~~\$106,212,400, as calculated on Attachment 1S, 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~~29,619,486; and (3) property tax expenses of ~~\$9,546,263~~\$9,519,797, as shown on Attachment 1S, 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 FYs 2012 through 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 [1S](#), 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 [1S](#), 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, was 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 ISR Plans, excluding investments reflected in rate base in Docket No. 4323 for FY 2012 through FY 2014.

Attachment [1S](#), 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 1S, 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. 3943,¹ 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

¹ 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.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan ([Revised](#))
Section 3: Revenue Requirement
Page 4 of 12

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 [of 21%](#), 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 [calculated on Page 31 and](#) 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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 3: Revenue Requirement
Page 5 of 12

~~\$45,776,892~~\$43,994,856, as shown on Page 1, Line 13. This represents a ~~\$9,225,940~~\$7,443,904 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 1S, 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.² In addition, plant additions not subject to the capital repairs deduction may be subject to bonus depreciation for vintage FY 2012 through FY 2018, 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 (2010 Tax Act), which provided for an extension of bonus depreciation. Specifically, the 2010 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,

² 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.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 3: Revenue Requirement
Page 6 of 12

2017 via the Protecting Americans From Tax Hikes (PATH) Act. The PATH Act also extended bonus depreciation through 2019, with the rate phasing down to 40% in 2018 and 30% in 2019.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (2017 Tax Act) was signed into law by the President, which, among other things, eliminated bonus depreciation for certain capital investments, including ISR-eligible investments, effective September 28, 2017. Consequently, no bonus depreciation has been calculated related to vintage FY 2019 capital investment. 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.

Tax Cuts and Jobs Act of 2017 (2017 Tax Act)

The 2017- Tax Act has many elements, but two particular aspects of the new law have an impact on the Gas ISR revenue requirement. The first is the reduction of the federal income tax rate from 35% to 21% commencing January 1, 2018. The second 2017 Tax Act element

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 3: Revenue Requirement
Page 7 of 12

affecting the Gas ISR revenue requirement involves the elimination of bonus depreciation, effective September 28, 2017, affecting ISR capital investment as described above.

The decrease in the federal income tax rate from 35% to 21% reduces the amount of income tax to be recovered from customers on the return on equity component of each Gas ISR vintage year revenue requirement. The return on rate base in each revenue requirement is calculated by multiplying the Gas ISR rate base by the weighted average cost of capital (WACC). The equity component of the return on rate base is the taxable component of the Gas ISR revenue requirement. The federal income taxes that the Company must recover from customers are derived by grossing up the WACC to a pre-tax rate of return. The calculation of the pre-tax WACC is shown on Attachment 1S, Page 31. The pre-tax WACC approved in Docket No. 4323 was 10.05% at the 35% tax rate, as shown, on Page 31. The new pre-tax WACC at the 21% tax rate, which became effective January 1, 2018, is 8.78%. This new pre-tax WACC is in effect for the entirety of the FY 2019 revenue requirement since the effective date of the federal income tax rate change occurred prior to the start of FY 2019. However, the Company used a blended WACC of 9.73% to calculate the return on rate base on the FY 2018 column of each vintage year revenue requirement calculation, as the 35% federal income tax was in effect for nine months of FY 2018 (April to December) and the 21% federal income tax rate will be in effect for three months of FY 2018 (January to March).

As a consequence of the reduction in the federal income tax rate from 35% to 21%, the Company must restate all of its deferred tax balances based on the new 21% federal income tax rate because the Company will be paying income taxes as the book/tax timing differences reverse

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 3: Revenue Requirement
Page 8 of 12

at that 21% federal income tax rate. However, because deferred taxes are an offset to rate base in the Gas ISR revenue requirement, reducing the deferred tax balances based on the 21% federal income tax rate has the effect of artificially increasing rate base. To counteract this artificial increase to rate base, a new line item called Excess Deferred Income Taxes has been added to each vintage year's revenue requirement calculation reflecting the value of the decrease to ISR rate base as of December 31, 2017. These excess deferred income taxes represent the net benefit as of December 31, 2017 that will eventually be earned by the Company through reduced future income taxes, and ultimately passed back to customers through base distribution rates, along with non-ISR embedded plant-related excess deferred taxes and non-plant excess deferred taxes. The period of time during which the pass back of the depreciation related excess deferred taxes to customers will take place over the average remaining book life of the Company's plant assets, in accordance with the normalization deferred tax provisions of the 2017 Tax Act. Other unprotected excess deferred tax balances will be returned to customers over a period of time agreed with the PUC. The Company is currently in the process of calculating the amount of excess deferred taxes and the period of time to return that amount to customers in connection with the Company's pending general distribution rate case, in Docket No. 4770. The restatement of the Gas ISR deferred tax balances at the new 21% tax rate, and the addition of the new line item for excess deferred taxes to counteract its effect, resulted in a very small change to the amount of total FY 2019 revenue requirement.

The excess deferred income taxes are calculated on Attachment 1S, Page 30. The Company derived the excess deferred income tax amounts by calculating the balance of ISR

deferred taxes as of December 31, 2017 by vintage fiscal year, and multiplying that amount by the 14% change in the tax rate (35% minus 21%). Although calculated on Page 30, ISR deferred taxes for vintage FY 2012 and FY 2014 are fully offset by tax net operating loss deferred tax assets. Therefore, the adjustment to re-set deferred taxes based on the 21% federal income tax rate had no impact on ISR rate base, and therefore no excess deferred tax offset was necessary in the revenue requirement calculation for those vintage years.

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, t~~The Company ~~will be filing~~ filed its FY 2017 federal income tax return in December 2017. ~~At this time, t~~The Company's ~~estimates that tax~~ deductions ~~will did~~ not exceed taxable income in FY 2017, meaning that the Company ~~will earned~~ 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[a and 25b](#), Page 26[a and 26b](#), and Page 27[a and 27b](#), respectively, the effects of which are included in each year's respective revenue requirement. [Proration adjustment amounts are shown on these pages for vintage FY 2012 and FY 2014, but no proration adjustment has been reflected on their respective revenue requirement calculations, as ISR deferred taxes for those years are fully offset by net operating loss deferred tax assets.](#)

Property Tax Recovery Adjustment

The Property Tax Recovery Adjustment is set forth on Attachment 1S, 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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan ([Revised](#))
Section 3: Revenue Requirement
Page 12 of 12

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~~[\\$9,519,797](#) for the Net Property Tax Recovery Adjustment.

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan ([Revised](#))
Section 4: Rate Design and Bill Impacts

Section 4
Rate Design and Bill Impacts
FY 2019 Proposal ([Revised](#))

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

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan (Revised)
Section 4: Rate Design and Bill Impacts
Page 2 of 32

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~~4227 per therm³, which is an increase of \$~~0.26~~24 per therm, or ~~140~~130%, over the currently effective capital component of the FY 2018 ISR factor, resulting in a total bill increase of ~~13~~12%. 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~~4378 per therm⁴ to \$~~0.1569~~1507 per therm⁵, or \$~~0.2987~~2871 per therm lower, while resulting in a slightly higher FY 2019 ISR factor for Residential Heating customers of \$~~0.1569~~07 per therm compared to \$~~0.1510~~1451 per therm⁶ under the current formula, or \$~~0.0059~~0056 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

³ See Section 4: Attachment 1S, Page 3, Line 3, Column (g).

⁴ See Section 4: Attachment 1S, Page 3, Line 3, Column (k).

⁵ See Section 4: Attachment 1S, Page 1, Line 1, Column (k).

⁶ See Section 4: Attachment 1S, Page 3, Line 4, Column (k).

The Narragansett Electric Company
d/b/a National Grid
FY 2019 Gas Infrastructure, Safety, and Reliability Plan ([Revised](#))
Section 4: Rate Design and Bill Impacts
Page 3 of [32](#)

proposed ISR factors by rate class. Attachment 2 of this section provides the Plan's bill impact⁷ 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~~[24.96](#), or ~~2.50~~[%](#).

⁷ Bill impacts are provided using rates approved and currently in effect as of ~~November 1, 2017~~ [January 11, 2018](#).

**THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 4781
RE: FY 2019 GAS INFRASTRUCTURE,
SAFETY, AND RELIABILITY PLAN (REVISED)
WITNESSES: WILLIAM R. RICHER AND PAMELA D. BUSHMICH**

SUPPLEMENTAL DIRECT TESTIMONY

OF

WILLIAM R. RICHER

AND

PAMELA D. BUSHMICH

February 21, 2018

Table of Contents

I. INTRODUCTION 1

II. REVISED ISR PLAN REVENUE REQUIREMENT 3

III. CONCLUSION 13

1 **I. INTRODUCTION**

2 **William R. Richer**

3 **Q. Mr. Richer, please state your full name and business address.**

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

6
7 **Q. Have you previously testified in this docket?**

8 A. Yes. On December 19, 2017, I submitted pre-filed direct testimony in The Narragansett
9 Electric Company d/b/a National Grid's (the Company) annual Gas Infrastructure, Safety,
10 and Reliability (ISR) Plan for Fiscal Year (FY) 2019 (Initial ISR Filing) regarding the
11 calculation of the Company's proposed FY 2019 ISR Plan revenue requirement.

12

13 **Pamela D. Bushmich**

14 **Q. Ms. Bushmich, please state your full name and business address.**

15 A. My name is Pamela D. Bushmich, and my business address is 40 Sylvan Road, Waltham,
16 Massachusetts 02451.

17

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

19 A. I am the Director of Income Tax – Massachusetts Jurisdiction, for the National Grid USA
20 Service Company (Service Company), where I provide services to the Service Company
21 for both its gas and electric businesses in New England, including the Company. One of

1 my functional responsibilities is to coordinate the process of providing income tax
2 information in regulatory filings for all National Grid affiliated utility companies,
3 including the Company.

4
5 **Q. Please describe your education and your professional experience.**

6 A. I have a Bachelor of Science in Business Administration with majors in Accounting and
7 Finance from Nichols College and a Master of Science in Taxation from Bentley
8 University. From 1996 to 2000, I worked at Bay State Gas Company as a senior tax
9 analyst. I started at National Grid in 2000 as a senior tax analyst and progressed through
10 various levels in the income tax department to my present position of Director.

11
12 **Q. Have you previously filed testimony or testified before the Rhode Island Public**
13 **Utilities Commission (PUC) or any other state regulatory commission?**

14 A. No, I have not.

15
16 **Q. What is the purpose of this supplemental testimony?**

17 A. The purpose of this supplemental testimony is to revise Section 3 of the FY 2019 Gas
18 ISR Plan, which describes the calculation of the proposed FY 2019 ISR revenue
19 requirement as a result of the January 1, 2018 reduction in the corporate federal income
20 tax rate as well as a revision to FY 2019 Plan capital investment.

21

1 On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (Tax Act) went into effect
2 after the Company's Initial ISR Filing. This supplemental testimony describes the
3 changes to the FY 2019 Gas ISR revenue requirement calculation provided in the revised
4 FY 2019 Gas ISR Plan (Revised Plan) at Section 3, Attachment 1S. In addition, our
5 testimony describes the change made to FY 2019 Gas ISR investment that is described in
6 the pre-filed supplemental direct testimony of Company Witnesses John B. Currie,
7 Steven P. Greco, and Kathleen A. Sullivan.

8
9 **II. REVISED ISR PLAN REVENUE REQUIREMENT**

10 **Q. What updates has the Company made to the revenue requirement contained in the**
11 **Initial ISR Filing?**

12 A. The Company is proposing two updates to the revenue requirement included in the Initial
13 ISR Filing. The first update reflects the changes associated with the Tax Act. The
14 second update is the removal of the costs associated with the former liquefied natural gas
15 (LNG) facility located in Cumberland, Rhode Island, (Cumberland LNG) that the
16 Company will no longer be incurring in FY 2019. These updates have resulted in a
17 revised total FY 2019 Gas ISR revenue requirement of \$43,994,856, which is a
18 \$1,782,036 decrease from the revenue requirement reflected in the Initial ISR Filing
19 (\$1,725,331 attributable to the Tax Act and \$56,705 related to removing Cumberland
20 LNG costs).

1 **Q. What changes did the Company make associated with the Tax Act?**

2 A. The Tax Act has many elements, but two particular aspects of the new law have an
3 impact on the Gas ISR revenue requirement. The first is the reduction of the federal
4 income tax rate from 35 percent to 21 percent commencing January 1, 2018. This change
5 has the effect of decreasing the Gas ISR revenue requirement. The second Tax Act
6 element affecting the Gas ISR revenue requirement is changes to the bonus depreciation
7 rules eliminating bonus depreciation for certain capital investments, including ISR-
8 eligible investments, effective September 28, 2017. The change in the bonus
9 depreciation rules specifically impacts the tax depreciation that the Company calculated
10 in the Initial ISR Filing for the vintage FY 2018 and 2019 revenue requirement
11 calculations. Unlike the reduction to the Company's revenue requirement for the
12 decrease in the federal income tax rate, the change to the bonus depreciation rules has an
13 opposite effect of increasing the Gas ISR revenue requirement, which we discuss later in
14 our testimony.

15

16 **Q. How did the Company revise the Gas ISR revenue requirement for the change in**
17 **the federal income tax rate from 35 percent to 21 percent?**

18 A. The decrease in the federal income tax rate from 35 percent to 21 percent reduced the
19 amount of income tax to be recovered from customers on the return on equity component
20 of each Gas ISR vintage year revenue requirement. The return on rate base in each
21 revenue requirement is calculated by multiplying the Gas ISR rate base by the weighted

1 average cost of capital (WACC). The equity component of the return on rate base is the
2 taxable component of the Gas ISR revenue requirement. The federal income taxes that
3 the Company must recover from customers are derived by grossing up the WACC to a
4 pre-tax rate of return. Consequently, the Company revised the pre-tax WACC to reflect
5 the change in the federal income tax rate. The calculation of the revised pre-tax WACC
6 is shown in the Revised Plan at Section 3, Attachment 1S, page 31. This page was not
7 included in the Initial ISR Filing's Attachment 1, and was added for the purposes of this
8 Revised Plan filing. The pre-tax WACC approved in Docket No. 4323 was 10.05 percent
9 at the 35 percent tax rate, as shown on page 31. The new pre-tax WACC at the 21
10 percent tax rate, which became effective January 1, 2018, is 8.78 percent. This new pre-
11 tax WACC is in effect for the entirety of the FY 2019 revenue requirement since the
12 effective date of the federal income tax rate change occurred prior to the start of FY
13 2019. However, the Company used a blended WACC of 9.73 percent to calculate the
14 return on rate base on the FY 2018 column of each vintage year revenue requirement
15 calculation, as the 35 percent federal income tax was in effect for nine months of FY
16 2018 (April to December) and the 21 percent federal income tax rate will be in effect for
17 three months of FY 2018 (January to March).

18
19 **Q. Did the Company make any other revisions to the Gas ISR revenue requirement as**
20 **a result of the change in the federal income tax rate from 35 percent to 21 percent?**

21 **A.** Yes. Effective December 31, 2017, the Company must restate all of its deferred tax

1 balances based on the new 21 percent federal income tax rate because the Company will
2 be paying income taxes as the book/tax timing differences reverse at that 21 percent
3 federal income tax rate. However, because deferred taxes are an offset to rate base in the
4 Gas ISR revenue requirement, reducing the deferred tax balances based on the 21 percent
5 federal income tax rate has the effect of artificially increasing rate base. To counteract
6 this artificial increase to rate base, a new line item called Excess Deferred Income Taxes
7 has been added to each vintage year's revenue requirement calculation reflecting the
8 value of the decrease to ISR rate base as of December 31, 2017. These excess deferred
9 income taxes represent the net benefit as of December 31, 2017 that will eventually be
10 earned by the Company through reduced future income taxes, and ultimately passed back
11 to customers through base distribution rates, along with non-ISR embedded plant-related
12 excess deferred taxes and non-plant excess deferred taxes. The period of time during
13 which the pass back of the depreciation related excess deferred taxes to customers will
14 take place over the average remaining book life of the Company's plant assets, in
15 accordance with the normalization deferred tax provisions of the Tax Act. Other
16 unprotected excess deferred tax balances will be returned to customers over a period of
17 time agreed with the PUC. The Company is currently in the process of calculating the
18 amount of excess deferred taxes and the period of time to return that amount to customers
19 in connection with the Company's pending general distribution rate case in Docket No.
20 4770. The restatement of the Gas ISR deferred tax balances at the new 21 percent tax
21 rate, and the addition of the new line item for excess deferred taxes to counteract its

1 effect, resulted in a very small change to the amount of total FY 2019 revenue
2 requirement.

3
4 **Q. Please describe the calculation of the excess deferred income tax amounts.**

5 A. The excess deferred income taxes are calculated in the Revised Plan at Section 3,
6 Attachment 1S, Page 30. The Company derived the excess deferred income tax amounts
7 by calculating the balance of ISR deferred taxes as of December 31, 2017 by vintage
8 fiscal year, and multiplying that amount by the 14 percent change in the tax rate (35
9 percent minus 21 percent). Although calculated on page 30, ISR deferred taxes for
10 vintage FY 2012 and FY 2014 are fully offset by tax net operating loss deferred tax
11 assets. Therefore, the adjustment to re-set deferred taxes based on the 21 percent federal
12 income tax rate had no impact on ISR rate base, and therefore no excess deferred tax
13 offset was necessary in the revenue requirement calculation for those vintage years.
14 Similarly, proration adjustments that were reflected in the Initial ISR Filing's revenue
15 requirement calculation for vintage FY 2012 and FY 2014 have been set to \$0 in this
16 supplemental attachment.

17
18 **Q. How did the Company revise the Gas ISR revenue requirement for the change in
19 the bonus depreciation rules resulting from the Tax Act?**

20 A. Bonus depreciation, sometimes known as first year bonus depreciation, is an accelerated
21 tax depreciation method established first in 2002 as an economic stimulus to incent U.S.

1 corporations to increase capital investments. Bonus depreciation allows companies to
2 take an immediate tax deduction for some portion of certain qualified capital investments
3 based on the bonus depreciation rates in effect for that year of investment. Bonus
4 depreciation rates have ranged from a high of 100 percent in some years, to as low as 30
5 percent for calendar year 2019, as specified in the tax laws prior to the passage of the Tax
6 Act. Pursuant to those prior tax laws, bonus depreciation was set to expire at the end of
7 calendar year 2019. As described earlier in this testimony, the Tax Act changed the rules
8 for bonus depreciation by eliminating bonus depreciation for certain capital investments,
9 including ISR-eligible investments, effective September 28, 2017. Accordingly, tax
10 depreciation calculations in the Revised Plan at Section 3, Attachment 1S, pages 3 and 5
11 have been updated to modify the calculation of bonus depreciation on estimated vintage
12 FY 2019 and FY 2018 Gas ISR Plan capital investment, respectively. Bonus
13 depreciation for FY 2019 and FY 2018 in the Initial ISR Filing was based on bonus
14 depreciation rates of 50 percent, 40 percent, and 30 percent for calendar years 2017 to
15 2019, respectively; however, pursuant to the Tax Act, bonus depreciation is no longer an
16 eligible deduction as of September 28, 2017. Investment in vintage FY 2019 Gas ISR
17 capital projects will occur over the period April 1, 2018 through March 31, 2019. Since
18 this period of time extends beyond the September 28, 2017 effective date of the change to
19 the bonus depreciation rules, no portion of FY 2019 investment will be eligible for bonus
20 depreciation. The Company adjusted the calculation of vintage FY 2019 tax depreciation
21 on page 3 of Section 3, Attachment 1S to reflect no bonus depreciation. Investment in

1 vintage FY 2018 Gas ISR capital projects has been taking place since April 1, 2017 and
2 will continue through March 31, 2018. Since the September 28, 2017 effective date of
3 the change to the bonus depreciation rules occurred during FY 2018, the Company
4 adjusted the calculation of vintage FY 2018 tax depreciation on page 5 of Attachment 1S
5 to reflect bonus depreciation eligibility for only a portion of FY 2018.

6
7 **Q. You stated previously in your testimony that the change to the federal income tax**
8 **rate from 35 percent to 21 percent reduced the amount of revenue requirement**
9 **needed to be recovered from customers, but the change to the bonus depreciation**
10 **rules under the Tax Act has the opposite effect on the revenue requirement. How do**
11 **the bonus depreciation rule changes increase the revenue requirement?**

12 A. As described previously, bonus depreciation is a form of accelerated depreciation. This
13 means the Company is able to depreciate assets on its income tax returns faster than it
14 depreciates those assets on its books. The difference between tax depreciation and book
15 depreciation is referred to as book/tax timing differences. Deferred income taxes are
16 calculated by multiplying book/tax timing differences by the federal income tax rate.
17 ISR-related deferred income taxes are liabilities for income taxes that will eventually be
18 paid to the federal government when the underlying book/tax time difference reverses.
19 Deferred income taxes reflect the net cash benefit that the Company receives as a result
20 of accelerated tax depreciation, and this benefit is passed along to customers as a
21 reduction to rate base upon which the Company earns a return in the Gas ISR revenue

1 requirement calculation. Lower deferred taxes result in a lower reduction to rate base,
2 which results in an increase in rate base over the levels included in the Initial ISR Filing.

3 The change in the bonus depreciation rules pursuant to the Tax Act has reduced the
4 amount of bonus depreciation in the vintage FY 2018 and FY 2019 tax depreciation
5 calculations from the amount of bonus depreciation reflected in the Initial ISR Filing.

6 The reduction in bonus depreciation in the revised FY 2019 Gas ISR revenue requirement
7 has reduced the book/tax timing differences for vintage FY 2019 and FY 2018
8 investments, which results in lower deferred income taxes for those vintage years. This
9 lower level of deferred income taxes results in a reduced offset to Gas ISR rate base,
10 therefore increasing Gas ISR rate base, resulting in a corresponding increase in return on
11 rate base. The increase in the return on rate base in turn increases the revenue
12 requirement on vintage FY 2019 and 2018 Gas ISR investment, partially mitigating the
13 decrease in the revenue requirement for those years as a result of the decrease in the
14 federal income tax rate from 35 percent to 21 percent.

15
16 **Q. What changes did the Company make associated with the removal of the**
17 **Cumberland LNG costs?**

18 A. The Company has determined that the FY 2019 work associated with the Cumberland
19 LNG project is no longer needed, so the Company is removing the \$866,000 in costs
20 associated with such work from the Initial Plan Filing. As a result, the Company
21 modified the Revised Plan at Section 3, Attachment 1S, page 2 to reduce Line 7, Cost of

1 Removal, by \$866,000 to eliminate planned spending associated with the Cumberland
2 LNG facility.

3
4 **Q. What is the impact to the revenue requirement as a result of the changes to the Tax**
5 **Act and the removal of the Cumberland LNG costs?**

6 A. The overall change in the FY 2019 ISR revenue requirement is a decrease of \$1,782,036,
7 of which a decrease of \$1,725,331 is resulting from the federal income tax rate change,
8 and a decrease of \$56,705 is attributable to the removal of \$866,000 of Cumberland LNG
9 spending from the FY 2019 revenue requirement calculation.

10
11 **Q. Please summarize the revised revenue requirement for the Company's Revised**
12 **Plan.**

13 A. As demonstrated in the Revised Plan at Section 3, Attachment 1S,t page 1, Column (b),
14 the Company's Revised Plan revenue requirement amounts to \$43,994,856, or an
15 incremental \$7,443,904 over the amount currently being billed for the Gas ISR Plan. The
16 revenue requirement consists of the following elements: (1) \$502,000 of incremental
17 operation and maintenance (O&M) expense for the hiring, training, and supervision of
18 additional personnel to support the increase in leak-prone pipe replacement for FY 2019;
19 (2) a revenue requirement of \$4,353,572 comprised of the Company's return, taxes, and
20 depreciation expense associated with FY 2019 proposed non-growth ISR capital
21 investment in gas utility infrastructure of \$106,212,400, plus the FY 2019 revenue

1 requirement on incremental non-growth ISR capital investment for FY 2012 through FY
2 2018, totaling \$29,619,486; and (3) FY 2019 property tax expense of \$9,519,797, as
3 shown on Attachment 1S at page 21. Importantly, these amounts will be trued up to
4 actual O&M and capital investment activity after the conclusion of the Company's fiscal
5 year, with rate adjustments for the revenue requirement differences incorporated in future
6 ISR filings.

7
8 For illustration purposes only, Column (c) of page 1 of Attachment 1S provides the FY
9 2020 revenue requirement. A detailed description of the calculation of the Company's
10 revenue requirement for FY 2019 can be found in Section 3 of the Revised Plan.

11
12 **Q. Did the Company make any other modifications to Section 3, Attachment 1S?**

13 A. Yes, the Company made some changes to the format of Section 3, Attachment 1S to
14 improve the size of the print for many of the pages in the attachment. Specifically, the
15 Company reoriented pages 2 through 17 and page 23 from a portrait view to a landscape
16 format. The Company revised the Tax Depreciation schedules on the odd numbered
17 pages from pages 3 through 17 to present MACRS¹ Depreciation vertically rather than
18 horizontally. Also, for the vintage year revenue requirement calculations for FY 2012
19 through FY 2015, certain columns of information that have been presented for many
20 previous years were accumulated into a single column. Additionally, pages 25, 26, and

¹ Modified Accelerated Cost Recovery System, or MACRS, is a systematic accelerated depreciation methodology of the Internal Revenue Service.

1 27 of the Initial ISR Filing, which contain the calculation of deferred tax proration
2 adjustments, are now being presented as pages 25a and 25b, 26a and 26b, and 27a and
3 27b.

4

5 **III. CONCLUSION**

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

7 **A. Yes.**

**Suppl. Testimony of
Leary**

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

SUPPLEMENTAL DIRECT TESTIMONY

OF

ANN E. LEARY

February 21, 2018

TABLE OF CONTENTS

I. Introduction1
II. Rate Design1
III. ISR Rate Factors.....3
IV. Bill Impacts4

1 **I. INTRODUCTION**

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

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

5

6 **Q. Have you previously submitted testimony in this docket?**

7 A. Yes. On December 19, 2017, I submitted pre-filed direct testimony in The Narragansett
8 Electric Company d/b/a National Grid's (the Company) annual Gas Infrastructure, Safety,
9 and Reliability (ISR) Plan for Fiscal Year (FY) 2019 (Initial ISR Filing) regarding the
10 calculation of the Company's proposed FY 2019 ISR factors and resulting bill impacts
11 based on the proposed factors.

12

13 **Q. What is the purpose of your supplemental testimony?**

14 A. The purpose of my supplemental testimony is to revise Section 4 of the FY 2019 Gas ISR
15 Plan, which describes the calculation of the proposed FY 2019 ISR factors and the
16 customer bill impacts of the proposed ISR factors.

17

1 **II. RATE DESIGN**

2 **Q. Is the Company proposing any changes to the proposed FY2019 ISR factors?**

3 A. Yes, the Company has updated the revenue requirement associated with the capital
4 investment based on changes described in the pre-filed supplemental direct testimony of
5 William R. Richer and Pamela Bushmich.

6
7 **Q. Is the Company making any changes to its proposal to combine Residential Non-
8 Heating and Residential Heating FY 2019 ISR capital factors?**

9 A. No, the Company still believes it is appropriate to combine the FY 2019 ISR factors for
10 the Residential Non-Heating and Residential Heating rate classes. Without the revision
11 to the calculation of the residential ISR capital factor as proposed by the Company, the
12 capital component of the proposed FY 2019 Residential Non-Heating ISR factor would
13 be \$0.4227 per therm,¹ which would be \$0.24 per therm, or 130%, higher than the
14 currently effective capital component of the FY 2018 Residential Non-Heating ISR
15 factor. This would result in a total bill increase of 12% for this customer class. Thus, the
16 Company believes that combining the FY 2019 ISR factors for the Residential Non-
17 Heating and Residential Heating rate classes is in the best interest of the Residential Non-
18 Heating customers. The proposed change in the design of the capital component of the
19 ISR factor for residential customers will reduce the FY19 ISR factor for Residential Non-
20 Heating customers from what the Company would have proposed under the current

¹ See Section 4: Attachment 1S, Page 3, Line 3, Column (g).

1 formula of \$0.4378 per therm² to \$0.1507 per therm³ under the Company's proposal, or
2 \$0.2871 per therm lower, while resulting in a slightly higher FY19 ISR factor for
3 Residential Heating customers of \$0.1507 per therm compared to \$0.1451 per therm⁴
4 under the current formula, or \$0.0056 per therm higher. As a result of the Company's
5 proposal, all residential customers would be assessed a proposed FY19 ISR factor of
6 \$0.1507 per therm.

7

8 **III. ISR FACTORS**

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

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

13

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

³ See Section 4: Attachment 1S, Page 1, Line 3, Column (k).

⁴ See Section 4: Attachment 1S, Page 3, Line 4, Column (k).

Table 3-1 FY 2019 ISR factors per rate class

Rate Class	ISR Rate* (\$/therm)
Res-Non-Heating	\$0.1507
Res-Heating	\$0.1507
Small C&I	\$0.1499
Medium C&I	\$0.1119
Large LL	\$0.1034
Large HL	\$0.0845
XL-LL	\$0.0291
XL-HL	\$0.0256

*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 \$24.96, or 2.0 percent,⁵ as shown in the proposed Revised ISR Plan at Section 4, Attachment 2S. 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 proposed Revised ISR Plan.

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

- 1 **Q. Does this conclude your testimony?**
- 2 **A. Yes.**