

National Grid

The Narragansett Electric Company

FY 2016 Gas Infrastructure,
Safety and Reliability Plan

Annual Reconciliation

August 1, 2016

Docket No. 4540

Submitted to:
Rhode Island Public Utilities Commission

Submitted by:

nationalgrid

August 1, 2016

VIA HAND DELIVERY & ELECTRONIC MAIL

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

**RE: Docket 4540 - Gas Infrastructure, Safety, and Reliability Plan Fiscal Year 2016
Reconciliation Filing**

Dear Ms. Massaro:

On behalf of National Grid,¹ in accordance with tariff, RIPUC NG-Gas, No. 101, Section 3, Schedule A, Sheets 5-7, relating to the Company's Fiscal Year (FY) 2016 Gas Infrastructure, Safety, and Reliability (ISR) Plan, I have enclosed ten (10) copies of the Company's Gas ISR Reconciliation Filing. This filing provides an overview and description of the \$94.33 million of actual capital investment and Operation and Maintenance (O&M) spending by category as well as an explanation by category of major variances to the budget of \$76.83 million, as approved by the Rhode Island Public Utilities Commission (PUC) in Docket No. 4540.

The pre-filed direct testimonies of David G. Iseler and Melissa A. Little are enclosed with this filing. Mr. Iseler presents the Company's FY 2016 Gas ISR Plan Reconciliation Filing, including the actual spending for the period April 1, 2015 to March 31, 2016. Mr. Iseler also provides details concerning the major spending variances by specific ISR Plan categories for this time period. Ms. Little's testimony presents the updated FY 2016 ISR revenue requirement associated with actual FY 2016, FY 2015, FY 2014, FY 2013, and FY 2012 capital investment levels, actual tax deductibility percentages, and tax net operating loss (NOL) for FY 2015 capital additions, and updated O&M expenses. As explained in Ms. Little's testimony, actual tax deductibility percentages and NOL for FY 2016 capital investment will not be known until the Company files its FY 2016 income tax return in December of 2016. However, the Company has included estimated tax assumptions, including estimated FY 2016 NOL, in its FY 2016 Gas ISR revenue requirement on FY 2016 capital investment. Consequently, the actual tax deductibility percentages and NOL for FY 2016 capital investment will be reflected in the Company's FY 2017 Gas ISR Reconciliation filing next year and will generate a true-up adjustment in that filing. The updated FY 2016 revenue requirement also includes an adjustment associated with the ISR property tax recovery formula approved in Docket No. 4323. As further explained in Ms. Little's testimony, the updated FY 2016 revenue requirement associated with the

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

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aforementioned items totals \$22,642,848, which consists of \$463,665 in operation & maintenance expenses and \$22,179,183 of capital-related revenue requirement. This includes the full-year revenue requirement on vintage FY 2016, FY 2015, FY 2014, FY 2013 and FY 2012 ISR capital investments above or below the level of capital investment reflected in base distribution rates, and the property tax component. This compares to the approved FY 2016 ISR revenue requirement of \$16,169,762, which went into effect on April 1, 2015.

Please note that the Gas ISR reconciliation has been included in the calculation of the Gas ISR factor contained in the Company's annual Distribution Adjustment Clause (DAC) filing, which the Company filed with the PUC today under separate cover. The DAC filing includes a reconciliation of forecasted collections to actual collections.

Thank you for your attention to this filing. If you have any questions, please contact me at 401-784-7288.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Jennifer Brooks Hutchinson", with a long horizontal flourish extending to the right.

Jennifer Brooks Hutchinson

Enclosures

cc: Docket 4540 Service List
LeoWold, Esq.
Steve Scialabba, Division
James Lanni, Division
Al Contente, Division

**Testimony of
David G. Iseler**

DIRECT TESTIMONY

OF

DAVID G. ISELER

August 1, 2016

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1 **I. INTRODUCTION**

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

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

13
14 **Q. Please describe your educational background and professional experience.**

15 A. I earned a B.S. in Electrical Engineering from the University of Massachusetts at
16 Amherst in 1986 and an M.B.A with a concentration in finance from Boston College in
17 1991. I have worked for National Grid and/or its predecessor companies for the past 29
18 years. My experience during that time includes working in field operation roles along
19 with various engineering positions associated with the gas distribution system. In 2007, I
20 was the Manager of Reliability Engineering and Planning for New England, and in 2008,
21 I was promoted to Director of Gas Reliability for National Grid. In 2010, I worked as the

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

8
9 **Q. Have you previously testified or appeared before the Rhode Island Public Utilities**
10 **Commission (PUC)?**

11 A. Yes. I have represented the Company in negotiations with the Division of Public Utilities
12 and Carriers (Division) on the Rhode Island FY 2015, FY 2016, FY 2017 Gas ISR Plans
13 and testified in support of those filings in Docket No. 4474, Docket No. 4540, and
14 Docket No. 4590, respectively. In addition, in 2014, I also submitted testimony with the
15 Massachusetts Department of Public Utilities in support of the Boston Gas Company
16 (Boston Gas) and Colonial Gas Company (Colonial Gas), each d/b/a National Grid's
17 leak-prone pipe replacement plan, which was enacted by legislation and designed to
18 implement a gas system enhancement plan focused on the replacement of proactive mains
19 and services. I testified in support of Boston Gas and Colonial Gas regarding their
20 respective Calendar Year 2013 and 2014 Targeted Infrastructure Recovery Factor

1 filings in D.P.U. 14-76 and D.P.U. 15-46, and the Companies' 2015 and 2016 Gas
2 System Enhancement Program plan filings in D.P.U. 14-132 and D.P.U. 15-GSEP-03.

3
4 **II. PURPOSE OF TESTIMONY**

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

6 A. The purpose of this testimony is to present the Company's FY 2016 Annual Report and
7 Reconciliation filing for Gas ISR Plan, including the actual spending for the period
8 April 1, 2015 to March 31, 2016. As part of this filing, I also provide detailed
9 information on the major spending variances by specific ISR Plan categories for this time
10 period. As discussed in her testimony, Ms. Melissa A. Little uses this actual spending
11 information to calculate the FY 2016 Gas ISR Plan revenue requirement, which is then
12 reconciled with the Company's actual ISR Plan revenues for FY 2016. The
13 reconciliation balance will then be included in the Company's annual Distribution
14 Adjustment Clause (DAC) filing, which will be reflected in rates effective November 1,
15 2016.

16
17 **III. FY 2016 GAS ISR PLAN ANNUAL REPORT AND ACTUAL SPENDING**

18 **Q. Please summarize the results of the Company's Gas ISR Plan actual spending for**
19 **FY 2016 to the FY 2016 budget.**

20 A. Attachment-DGI-1 to my testimony is the Company's FY 2016 Gas ISR Plan Annual
21 Report and actual spending for the period April 1, 2015 to March 31, 2016. As set forth

1 in Table 1 of that attachment, for FY 2016, the Company spent \$94.33 million for capital
2 investment and Operation and Maintenance expense (O&M) under the Gas ISR Plan.

3 This amount represents a variance of approximately \$17.50 million more than the annual
4 approved Gas ISR Plan budget of \$76.83 million. The \$17.50 over-budget variance for
5 the year is discussed below in more detail for each specific category of the Gas ISR plan.

6 A total of 60.5 miles of leak prone pipe (LPP) was abandoned under all ISR categories,
7 which is a 5.5 mile increase over the prior year results. Elimination of cast and wrought
8 iron and unprotected steel pipe (i.e., LPP) remains a key element of the Company's ISR
9 plan and provides for further enhanced safety and reliability of the gas distribution
10 system through removal of leak prone pipe. These materials have been identified in the
11 Company's Distribution Integrity Management Plan (DIMP) as riskier assets and have
12 been targeted for replacement through a twenty-year replacement plan. The DIMP
13 provides a structured approach to identification, evaluation, and mitigation of risks
14 associated with the gas distribution system. Over 150 gas leaks have been eliminated
15 through abandonment of the 60.5 miles of leak prone gas main.
16

17 **Q. What were the primary drivers for the \$17.50 million over-budget variance in FY**
18 **2016?**

19 A. As shown on Table 1, the primary drivers that contributed to the \$17.50 million over-
20 budget variance in FY 2016 were the over-budget variance of \$6.79 million in the Non-
21 Discretionary category: increased spending of \$1.29 million for the Service Replacement

1 Program, increased spending of \$3.14 million for the Public Works Program, increased
2 spending of \$0.05 million for the Reactive Main Replacement, and increased spending of
3 \$2.31 million for Mandated Programs, as well as the over-budget variance of \$10.81
4 million in the Discretionary category: increased spending of \$12.25 million for the
5 Proactive Main Replacement Program, under-spending of \$1.30 million for Reliability,
6 and under-spending of \$0.14 million for Special Projects.

7
8 **A. NON-DISCRETIONARY WORK**

9 **Q. Please explain the over-budget variance of \$1.29 million for the Service**
10 **Replacement Program in FY 2016.**

11 A. The key driver of the FY 2016 over-budget variance of \$1.29 million for the Service
12 Replacement Program in FY 2016 was that the Company had anticipated 200 services in
13 its original plan for FY 2016; however, as a result of the harsh winter conditions
14 experienced during the prior winter in FY 2015, which limited construction, the
15 Company replaced an additional 127 services carried over from the prior year, for a total
16 of 327 service replacements in FY 2016. In addition, the services remaining in this
17 program from the thousands originally identified were some of the most difficult and
18 costly to replace. As of fiscal year-end, the Company has completed the replacement of
19 all services targeted under this program.

1 **Q. Please explain the over-budget variance of \$3.14 million for the Public Works**
2 **Program in FY 2016.**

3 A. The key drivers of the FY 2016 over-budget variance of \$3.14 million for the Public
4 Works category were mainly driven by higher replacement costs associated with a more
5 challenging mix of projects performed in coordination with state and municipal entities,
6 along with field construction contract renewal and expansion and implementation of
7 enhanced safety practices. For FY 2016, the Company installed 7.2 miles of new gas
8 main and abandoned 8.9 miles of LPP as part of the Public Works projects. Main
9 abandonment exceeds the original plan of 8 miles as a result of work initiated in FY 2015
10 and completed in FY 2016 in conjunction with state and city construction schedules.
11 Significant projects completed during FY 2016 include: Kickemuit Road, Warren;
12 Division Street, Providence; Orchard Avenue, Providence; and Reservoir Avenue,
13 Cranston.

15 **Q. Please explain the over-budget variance of \$0.05 million for the Reactive Main**
16 **Replacement Program in FY 2016.**

17 A. The Reactive Main Replacement Program was established to address unplanned gas main
18 work in need of immediate replacement. In FY 2016, a complex main and valve
19 replacement was required at Brown Street in Warren due to damage to gas facilities at
20 this site, resulting in a slight over-spending variance of \$0.05 million.

1 **Q. Please explain the over-budget variance of \$2.31 million for the Mandated Programs**
2 **category in FY 2016.**

3 A. The primary drivers of the \$2.31 million over-budget variance for the Mandated
4 Programs were the \$2.11 million over-spending for a combination of service leaks and
5 cast iron joint encapsulation, \$0.50 million over-spending in the non-leak/other category,
6 an under-spending variance of \$0.91 million for meter purchases and replacements, and
7 \$0.61 million over-spending for corrosion/cathodic protection work. In the area of
8 service leaks and cast iron joint encapsulation, the Company repaired, sealed or replaced
9 approximately 700 services and cast iron joints during FY 2016. Spending in these
10 categories was higher than anticipated as a result of certain carryover work (e.g., paving)
11 because of the excessive snow accumulation during the prior winter.
12 In addition, there was an over-spending of \$0.50 million in the non-leak/other category as
13 a result of an increase in curb valve installations over the prior year to address long-term
14 estimated reads and collection accounts. The Company has completed a total of 154 curb
15 valves in this program.

16
17 There was also an under-spending variance of \$0.91 million in meter purchases for
18 replacements as a result of the fact that the Company purchased 8,106 meters, which was
19 approximately 3,340 meters less than the forecast of 11,446 meters for the fiscal period as
20 a result of the need for fewer meter changes.

1 Finally, there was an over-spending of \$0.61 million for corrosion/cathodic protection
2 work as a result of the higher than anticipated mandated work associated with the
3 Company's compliance program.
4

5 **B. DISCRETIONARY WORK**

6 **Q. Please explain the over-budget variance of \$12.25 million for the Proactive Main**
7 **Replacement Program in FY 2016.**

8 A. The primary drivers for the \$12.25 million over-budget variance for the Proactive Main
9 Replacement Program for FY 2016 were the increased costs associated with the
10 installation of mains and services, which were the result of a higher complexity of
11 projects within the program, renewal of field construction contracts at the start of the
12 year, and enhanced safety practices. Consistent with the work performed in FY 2015,
13 and as noted in the Company's FY 2015 Annual Reconciliation Filing, there was a
14 continued need for the replacement of more cast-iron main in FY 2016, as well as the
15 installation of additional services in higher cost urban areas. In FY 2016, the Company
16 installed 50.7 miles of new main and abandoned 50.1 miles of leak prone pipe, which
17 represents completion of 90% of main abandonment against the total annual FY 2016
18 plan of 56 miles of gas main replacement. In addition, the Company renewed and
19 expanded its field construction contracts with two primary vendors and instituted safety-
20 related facility verification practices to reduce the occurrence of facility damage.

1 Regarding higher unit costs, in general, the replacement of more cast-iron main segments
2 in urban areas, such as in the City of Providence, required the replacement of more
3 difficult main and a greater number of services than in more sparsely populated areas.
4 Urban areas include more multi-unit dwellings that typically require main and service
5 replacement up to the gas meter. In addition, the Company is required to take additional
6 safety measures in highly populated urban areas to locate, verify, and protect other utility
7 facilities. Also, restoration requirements in more urban areas are greater due to the need
8 for both sidewalk and street repaving. Finally, because of the higher traffic and public
9 presence in more urban areas, the time and cost to obtain permits and the need for
10 increased traffic control for purposes of public and employee safety, are also increased
11 when compared to work in suburban or rural areas.

12
13 All of these factors contributed to the higher unit costs and the \$12.25 million over-
14 spending variance for the Proactive Main Replacement Program for FY 2016. The main
15 replacement projects along Pawtucket Avenue in East Providence are one example of
16 these higher cost drivers, which resulted in approximately \$4 million in program
17 spending for 1.6 miles of main replacement, or \$2.5 million/mile as compared to an
18 average of \$1.2 million/mile for the overall program. These factors, resulting in higher
19 unit costs, have been incorporated into the budgeting and project cost estimating
20 processes and tools used in the development and support of capital programs and
21 projects.

1 **Q. Please explain the FY 2016 \$1.30 million under-budget variance for the Reliability**
2 **Programs category.**

3 A. The FY 2016 under-budget variance of \$1.30 million for the Reliability Programs
4 category was primarily driven by an under-spending variance of \$0.69 million for Gas
5 Reliability Planning (i.e., Manchester Street Station) and an under-spending variance of
6 \$0.85 million for the Allens Avenue project. The primary driver for the \$0.69 million
7 under-spending variance for the Manchester Street Station is the result of adjustments to
8 the project schedule to accommodate the development and approval of station agreements
9 with Spectra Energy. The primary driver for the \$0.85 million under-spending variance
10 for the Allens Avenue project is the result of modifications to the project schedule to
11 provide for additional time for site investigation, station and piping design, and
12 development and equipment procurement. The actual spending on these programs was
13 offset by an over-spending variance of \$0.84 million associated with the pressure
14 regulation facilities program and related to the continuation of site modification at the
15 Company's Tiverton Take Station initiated in FY 2015 and carrying over into FY 2016.

16
17 **Q. Please explain the FY 2016 \$0.14 million under-budget variance for Special**
18 **Projects.**

19 A. For the Special Projects category in FY 2016, the Company spent approximately \$1.19
20 million of a fiscal year budget of \$1.33 million, resulting in an under-spending variance
21 of \$0.14 million for all FY 2016 special projects. The Company spent approximately

1 \$1.08 million for the Gas Pilot Expansion Pilot and \$0.11 million for completion of the
2 Exeter Boil-Off Compressor project. As part of the Gas Expansion Pilot, the Company
3 has completed seven projects, which included the installation of approximately 8,170 feet
4 of new gas main and 43 new services with the potential to serve a total of 101 customers.
5 The Company has installed a total of approximately 6.2 miles of main and 140 services
6 with the potential to serve an additional 471 customers over the life of the Gas Expansion
7 Pilot.

8
9 **IV. ANNUAL RECONCILIATION**

10 **Q. What is the amount of FY 2016 capital spending that the Company is seeking to**
11 **reconcile in this filing?**

12 A. The Company is seeking to reconcile FY 2016 actual capital spending of \$93.87 million
13 in this filing. As noted in prior ISR Plan filings, in implementing the Gas ISR Plan in any
14 fiscal year, the circumstances encountered during the year may require reasonable
15 deviations from the original Gas ISR Plan approved by the PUC.¹ The main drivers of
16 the \$17.60 million net capital over-spending variance for FY 2016 were the Proactive
17 Main Replacement Program, which accounted for \$12.25 million of the net over-spend,
18 and the Non-Discretionary Work category, which accounted for \$6.79 million of the net
19 over-spend.² As discussed above, the primary drivers for the \$12.25 million variance in

¹ See the FY 2012 Gas ISR Plan filed with the PUC on December 20, 2010 at Section 1, Page 3 of 6.

² Under-spending in two of the programs (i.e., Reliability and Special Projects) partially offset the capital over-spending in the other areas.

1 the Proactive Main Replacement Program were the fact that the Company continued to
2 replace more cast-iron main segments in urban areas, which resulted in higher unit costs
3 for the program, as well as contract renewals and safety practices. Non-Discretionary
4 programs include those required by legal, regulatory code and/or agreement with limited
5 exceptions. More than half of the over-spending variance in that category was the result
6 of the Public Works and Mandated Programs. The \$17.60 million net capital over
7 spending variance for FY 2016 is clearly consistent with the intent of the Gas ISR Plan to
8 maintain the overall safety and reliability of the Company's gas system and to ensure that
9 customers are only charged for the appropriate Gas ISR Plan costs in the Gas ISR Plan
10 Annual Reconciliation filing.

11
12 **Q. What is the amount of FY 2016 Operation and Maintenance (O&M) spending that**
13 **the Company is seeking to reconcile in this filing?**

14 A. The Company is seeking to reconcile approximately \$0.46 million of actual O&M
15 spending for FY 2016. In the FY 2016 Gas ISR Plan, the Company requested \$0.56
16 million of incremental O&M expense dollars to hire, train, and supervise an additional
17 five full time equivalent (FTE) personnel to support Main Replacement work for FY
18 2016 in addition to eleven previous hires. This increase was also driven, in part, by the
19 fact that the Company had proposed to increase the percentage of more expensive cast
20 iron main to be replaced. Similar to FY 2015, the Company also agreed to track and
21 reconcile the amount of actual O&M expense associated with these new hires for FY

1 2016. For FY 2016, the O&M expense associated with these sixteen FTE's required in
2 support of the expanded main replacement program totaled approximately \$0.46 million,
3 and an under-budget variance of \$0.1 million.

4
5 **V. CONCLUSION**

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

7 **A. Yes, it does.**

Gas Infrastructure, Safety, and Reliability Plan

Fiscal Year 2016 Reconciliation Filing

EXECUTIVE SUMMARY

In accordance with tariff, RIPUC NG-Gas, No. 101, Section 3, Schedule A, Sheets 5-7, The Narragansett Electric Company d/b/a/ National Grid (Company) submits this Annual Report, and Annual Reconciliation filing for the fiscal year 2016 (FY 2016) Gas Infrastructure, Safety and Reliability (ISR) Plan, which the Rhode Island Public Utilities Commission (PUC) approved in Docket No. 4540. This filing provides an overview and description of the \$94.33 million of actual capital investment and Operation and Maintenance (O&M) spending by category as well as an explanation by category of major variances to the budget of \$76.83 million, as approved in Docket No. 4540.

FY 2016 Actual Results

As set forth in Table 1 below, in fiscal year (FY) 2016, the Company spent \$26.38 million for non-discretionary capital work (i.e., work required by legal, regulatory code and/or agreement with limited exception), \$67.49 million for discretionary capital work and \$0.46 million for O&M expense under the Gas ISR Plan. This amount was approximately \$6.79 million more than planned on non-discretionary work and \$10.81 million more than planned on discretionary compared to the annual approved Gas ISR capital budget of \$19.59 for non-discretionary and \$56.68 million for discretionary, and \$0.10 million less than the O&M budget of \$0.56 million approved in Docket No. 4540. A total of 60.5 miles of leak prone pipe was abandoned from all ISR categories which is a 5.5 mile increase over the prior year results. Over 150 gas leaks have been eliminated through abandonment of this leak prone gas main. The variances by category of work are shown in Table 1 with the key drivers discussed in greater detail below. Additional details of each sub-category are provided in Table 2.

Table 1

Narragansett Gas			
FY 2016			
in Millions			
Category	Budget	Actual	Variance
NON-DISCRETIONARY			
Service Replacement Program	\$0.50	\$1.79	\$1.29
Public Works*	\$4.59	\$7.73	\$3.14
Reactive Main Replacement	\$0.20	\$0.25	\$0.05
Mandated Programs	\$14.30	\$16.61	\$2.31
NON-DISCRETIONARY SUB-TOTAL	\$19.59	\$26.38	\$6.79
DISCRETIONARY			
Proactive Main Replacement	\$46.14	\$58.39	\$12.25
Reliability	\$9.21	\$7.91	(\$1.30)
Special Projects	\$1.33	\$1.19	(\$0.14)
DISCRETIONARY SUB-TOTAL	\$56.68	\$67.49	\$10.81
Capital Total	\$76.27	\$93.87	\$17.60
O&M	\$0.56	\$0.46	(\$0.10)
TOTAL	\$76.83	\$94.33	\$17.50
*Public works includes reimbursements			

Non-Discretionary Work¹

Service Replacement Program - \$1.29 million over-budget variance

For FY 2016, the Company spent approximately \$1.79 million of a fiscal year budget of \$0.50 million, resulting in a fiscal year over-spending variance of approximately \$1.29 million.

¹ Non-Discretionary programs include those required by legal, regulatory code and/or agreement with limited exceptions.

Under the Service Replacement Program, the Company has replaced 327 services of the targeted high-pressure unprotected steel services with inside meter sets. The Company had anticipated 200 services in its original plan; however, because of the harsh winter conditions experienced the prior winter (FY15) which limited construction, there were an additional 127 services carried over from the prior year. The service replacements completed in FY 2016 were typically the most difficult to schedule and the most complex to replace, resulting in higher unit costs. The remaining population included challenging commercial and industrial customers with larger service lines and multi-meter connections. As of fiscal year end, the Company has completed the replacement of all services targeted under this program.

Public Works Program - \$3.14 million over-budget variance

For FY 2016, the Company incurred net spending of \$7.73M against a plan of \$4.59 million resulting in over-spending variance of \$3.14 million. This program includes total spend of approximately \$8.72 million against a fiscal year budget of \$5.92 million and reimbursement of \$0.99 million against a reimbursement budget of \$1.33 million. The Public Works spending reflects the coordination of gas replacement and/or relocation work with state and municipal entities. The key drivers for this over-spending were mainly driven by higher replacement costs associated with a more challenging mix of projects performed in coordination with state and municipal entities, along with field construction contract renewal and expansion and implementation of enhanced safety practices. For FY 2016, the Company installed 7.2 miles of new gas main and abandoned 8.9 miles of leak prone pipe². Main abandonment exceeds the original plan of 8 miles as a result of work initiated in FY2015 and completed in FY2016 in conjunction with State and City construction schedules. Significant projects completed during the year include: Kickemuit Road, Warren; Division Street, Providence; Orchard Avenue, Providence; and Reservoir Avenue, Cranston.

Reactive Main Replacement Program - \$0.05 million over-budget variance

For FY 2016, the Company spent approximately \$0.25 million for Reactive Main Replacements compared to a fiscal year budget of \$0.20 million, which resulted in a fiscal year over-spending variance of approximately \$0.05 million. The Reactive Main Replacement Program was established to address unplanned gas main work in need of immediate repair or replacement. In FY 2016, a complex main and valve replacement was required at Brown Street in Warren due to damage to gas facilities at this site, resulting in a slight over-spending variance

² Gas main installation and abandonment footage are reconciled through data validation process as work is completed in the field and subsequently as-built.

of \$0.05 million. As noted in the FY 2016 Gas ISR Plan, the Company's aggressive spending in the Proactive Main Replacement Program will lessen the need for future reactive main replacements.

Mandated Programs – \$2.31 million over-budget variance

The Mandated Programs spending was \$2.31 million over-budget for FY 2016. This variance was driven primarily by spending in the following categories:

- Service Leaks and Cast Iron Joint Encapsulation – For FY 2016, actual spending for these two categories was \$11.16 million, which was approximately \$2.11 million over the budget of \$9.05 million. The Company experienced higher costs in this area as a result of carryover work (e.g., paving) resulting from the prior winter excessive snow accumulation. The Company repaired, sealed or replaced approximately 700 services and cast iron joints during the fiscal year.
- Non-leak / Other – For FY 2016, actual spending in the Non-Leaks /Other category of work was \$2.55 million, which was \$0.50 million over the budget of \$2.05 million, as a result of incremental work units. Curb valve installations under this program were increased over prior year to address long term estimated reads and collection accounts. A total of 154 curb valves were completed associated with these programs.
- Meter Purchases (Replacements) – For FY 2016, actual spending for meter purchases changes and replacements was \$1.79 million, which was \$0.91 million less than the budget of \$2.70 million. This variance was due to the need for fewer meter changes and the fact that the Company had purchased 8,106 meters, which was approximately 3,340 meters less than the Company's forecast of 11,446 meters for FY 2016.
- Corrosion/Cathodic Protection – Actual spending for FY 2016 was approximately \$1.11, as compared to a budget of \$0.50 million resulting in an over-spending variance of approximately \$0.61 million for the fiscal year due to higher than anticipated mandated work associated with the Company's compliance program.

Discretionary Work³

Proactive Main Replacement Program – \$12.25 million over-budget variance

For FY 2016, the Company spent approximately \$58.39 million of a fiscal year budget of \$46.14 million, resulting in an over-spending variance of \$12.25 million. The primary drivers associated with the \$12.25 million over-spending variance are increased costs associated with the installation of mains and services, which were driven by a higher complexity of projects contained within the program, renewal of field construction contracts at the start of the year, and enhanced safety practices. Consistent with the work performed in FY 2015 (and as noted in the FY 2015 Annual Reconciliation Filing), the Company continued to replace more cast-iron main segments in urban areas, such as in the City of Providence, in FY 2016 which has resulted in higher costs for the program. In addition, the Company renewed and expanded its field construction contracts with two primary vendors providing for expanded resource capabilities in execution of the ISR program in FY 2016 and has instituted safety-related facility verification practices to reduce the occurrence of facility damage. In FY2016, the Company installed 50.7 miles of new main and abandoned 50.1 miles of leak prone pipe within the pro-active main replacement program.⁴ This represents completion of 90% of main abandonment against the total annual FY 2016 plan of 56 miles of gas main replacement.

With respect to higher unit costs, in general, the replacement of more cast-iron main segments in urban areas, such as in the City of Providence, are more difficult and present more challenges than main and service replacements in more sparsely populated areas. This includes, in part, replacing more services due to a greater number of structures, replacing larger services due to prevalence of more multi-unit dwellings, and a greater number of service transfers due to higher overall customer counts. In addition, work in highly populated urban areas requires the Company to expend additional efforts to locate, verify, and construct around other active and abandon utility facilities which are often numerous. These facilities require greater amount of hand digging to identify and greater number of offsets to install gas main around other utilities. Moreover, restoration requirements for more urban areas are greater due to greater thickness and reinforcement of road base and the need for both sidewalk and street repaving. Finally, because of the higher traffic and public presence in urban areas, the time and cost to obtain permits (which may have work time restrictions) and the need for increased traffic control for purposes of public and employee safety, are greater. All of these factors contributed to the higher units costs and spending variance for the Proactive Main Replacement Program for FY 2016. One set

³ Discretionary programs are not required by legal, regulatory code or agreement with limited exceptions.

⁴ Gas main installation and abandonment footage are reconciled through data validation process as work is completed in the field and subsequently as-built.

of projects which clearly demonstrate these cost drivers are the main replacement projects along Pawtucket Avenue in East Providence, which alone resulted in approximately \$4 million in program spending for 1.6 miles of main replacement, or \$2.5M/mile, compared to an average of \$1.2M/mile for the overall program.

Gas System Reliability - \$1.30 million under-budget variance

In FY 2016, the Company spent approximately \$7.91 million of a fiscal year end budget of \$9.21 million on Gas System Reliability resulting in an under-spending variance of \$1.30 million. The primary drivers associated with the \$1.30 million under-spending variance were the lower than anticipated spending for Gas Reliability Planning (e.g., Manchester Street Station) and the Allens Avenue regulator replacement project as outlined below. This was offset in part by higher than anticipated spend in the Pressure Regulation Facilities category.

- Gas Planning – For FY2016 actual spending was \$0.81 million against a plan of \$1.50 million resulting in an under-spending variance of \$0.69 million. Modifications of the Manchester Street Station are being performed in conjunction with Spectra Energy to provide for increased system resiliency and reliability. The project schedule was adjusted and extended to accommodate the development and approval of station agreements resulting in reduced spending during FY2016. Site work is currently underway and anticipated to be completed prior to year end FY2017. In addition, 1.5miles of leak-prone pipe abandonment was completed on reliability projects under this program.
- Allens Avenue – Actual spending for FY2016 was \$1.0 million against a plan of \$1.85 million resulting in an under-spending variance of \$0.85 million. The Allens Avenue project is a multi-year project consisting of rebuilding and replacing multiple regulator stations, piping and appurtenances both at the current site as well as within the local distribution system. The project schedule has been modified to provide for additional time for site investigation, station and piping design and development and equipment procurement. Site work is progressing with the installation of structures which will house the site regulator equipment and data acquisition and control.
- Pressure Regulation Facilities – Actual spending for FY2016 was \$2.77 million against a budget of \$1.93 million resulting in an over-spending variance of \$0.84 million. The primary reason for the variance in this program is the continuation of site modification at the Company's Tiverton Take Station initiated in FY2015 and carrying over to FY 2016. The Tiverton project consists of installation of gas odorant equipment and facilities along with associated site modifications and enhancements.

Special Projects (Gas Expansion Pilot & Exeter Compressor) - \$0.14 million under-budget variance

For FY 2016, the Company spent approximately \$1.19 million of a fiscal year budget of \$1.33 million, resulting in an under-spending variance of \$0.14 million. The Company spent \$1.08 million for the Gas Expansion Pilot and \$0.11 million for completion of the Exeter Boil-Off Compressor project. As part of the Gas Expansion pilot the Company has completed seven projects which included the installation of approximately 8,170 feet of new gas main. In addition, 43 new customer connections have been completed associated with these projects and 101 additional potential customers reside along the route of the installed main.

In total, the Company has installed approximately 6.2 miles of main and 140 services with the potential to serve an additional 471 customers over the life of the Gas Expansion Pilot Program.

Table 2

Category	Budget	Actual	Variance
NON-DISCRETIONARY			
Service Replacement Program			
Sub-Total	\$0.60	\$1.70	\$1.20
Public Works			
Civilian Construction - Non-Reimbursable	\$1.50	\$7.30	\$2.80
Civilian Construction - Reimbursable	\$7.80	\$7.80	\$0.00
Civilian Construction - Reimbursements	(\$7.30)	(\$0.00)	\$0.70
Sub-Total	\$1.60	\$7.70	\$0.14
Reserve Main Replacement			
Sub-Total	\$0.20	\$0.20	\$0.00
Miscellaneous Programs			
Corrosion	\$0.00	\$1.11	\$0.61
CCTV Joint Inspection	\$0.00	\$0.47	\$0.00
Meters (Revisions, Changes, and Replacements)	\$2.70	\$1.70	(\$0.81)
Leads	\$6.00	\$7.40	\$1.40
Non-Leads Other	\$2.00	\$2.55	\$0.50
Sub-Total	\$14.30	\$16.41	\$2.31
NON-DISCRETIONARY SUBTOTAL	\$17.69	\$20.00	\$0.77
DISCRETIONARY			
Preventive Main Replacement			
Sub-Total	\$46.14	\$0.00	\$12.20
Reliability			
Gas System Control	\$0.10	\$0.00	(\$0.10)
Gas Flowing	\$1.50	\$0.00	(\$0.60)
Master Program	\$0.00	\$0.00	\$0.00
LAR Reserve CNG Programs	\$1.00	\$1.00	\$0.00
LNG	\$0.70	\$0.30	(\$0.50)
Pressure Regulating Facilities	\$1.00	\$2.77	\$0.00
Valve Installation Replacements	\$0.00	\$0.00	(\$0.10)
Water Injection	\$0.00	\$0.17	(\$0.00)
Control Line Integrity Program	\$0.00	\$0.00	\$0.00
System Automation	\$1.00	\$0.00	(\$0.20)
Replacements Capital Equipment and Tools	\$0.00	\$0.20	(\$0.20)
Allen Ave	\$1.00	\$1.00	(\$0.00)
Sub-Total	\$9.31	\$5.07	(\$1.00)
Special Projects			
Energy Efficiency Construction	\$0.00	\$0.11	\$0.11
Gas Expansion Program	\$1.00	\$1.00	(\$0.20)
Sub-Total	\$1.00	\$1.10	(\$0.10)
DISCRETIONARY SUBTOTAL	\$56.45	\$07.17	\$10.01
Capital Total	\$76.17	\$08.07	\$17.00
CRM	\$0.00	\$0.10	(\$0.10)
TOTAL	\$76.00	\$08.00	\$17.00

DIRECT TESTIMONY

OF

MELISSA A. LITTLE

August 1, 2016

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 4540
FY 2016 GAS INFRASTRUCTURE, SAFETY, AND RELIABILITY PLAN
RECONCILIATION FILING
WITNESS: MELISSA A. LITTLE

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1 **I. INTRODUCTION**

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

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

6 **Q. Please state your position.**

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

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

16 A. In 2000, I earned a Bachelor of Science degree in Accounting Information Systems from
17 Bentley University in Waltham, Massachusetts. In September 2000, I joined
18 PricewaterhouseCoopers LLP in Boston, Massachusetts where I worked in the Assurance
19 practice. In November 2004, I joined National Grid in the Service Company as an
20 analyst in the general accounting group. After the merger of National Grid and KeySpan
21 in 2007, I joined the Regulation and Pricing department as a senior analyst in the

1 Regulatory Accounting function, also supporting the Niagara Mohawk Power
2 Corporation revenue requirement team. I was promoted to my current position in July
3 2011.

4
5 **Q. Have you previously testified before the Rhode Island Public Utilities Commission**
6 **(PUC)?**

7 A. Yes. I provided pre-filed testimony in the Company's Revenue Decoupling Adjustment
8 filing in Docket No. 4514 in regards to the revenue requirement on growth capital
9 investment. I also testified before the PUC in Docket Nos. 4540 and 4590 in regards to
10 the revenue requirements included in the Company's FY 2016 and FY 2017 Gas ISR
11 Plan Proposals.

12
13 **Q. What is the purpose of your testimony?**

14 A. In this docket, the PUC approved a new Gas Infrastructure, Safety and Reliability (ISR)
15 factor which went into effect April 1, 2015. That factor was based on a projected FY
16 2016 ISR revenue requirement of \$16,169,761 associated with estimated ISR capital
17 investment during the Company's Fiscal Years (FY) ended March 31, 2016, 2015, 2014,
18 2013, and 2012 that were incremental to the levels reflected in rate base in the
19 Company's last base rate case (Docket No. 4323), and an estimate of operating &
20 maintenance (O&M) expenses associated with additional personnel to support main
21 replacement work for FY 2016. The purpose of my testimony is to present an updated

1 FY 2016 ISR revenue requirement associated with actual FY 2016, FY 2015, FY 2014,
2 FY 2013 and FY 2012 capital investment levels, actual tax deductibility percentages and
3 tax net operating loss (NOL) for FY 2015 capital additions, and updated O&M expenses.
4 Actual tax deductibility percentages and actual NOL for FY 2016 capital investment will
5 not be known until the Company files its FY 2016 income tax return in December of this
6 year. Consequently, the actual tax deductibility percentages and actual NOL for FY 2016
7 capital investment will be reflected in the Company's FY 2017 Gas ISR Reconciliation
8 filing next year and will generate a true up adjustment in that filing. The updated FY
9 2016 revenue requirement also includes an adjustment associated with the ISR property
10 tax recovery formula that was approved in Docket No. 4323. The ISR property tax
11 recovery adjustment became effective for periods subsequent to the rate year in Docket
12 No. 4323 that ended on January 31, 2014. Consequently, the ISR property tax recovery
13 adjustment covers only the months of February and March of 2014, the twelve months
14 ended March 31, 2015, and the twelve months ended March 31, 2016.

15
16 My testimony will also address the NOL issue raised in the FY 2016 Gas ISR Proposal
17 under Docket No. 4540 and the resulting increase in the FY 2016 revenue requirement
18 related to vintage FY 2015 investment, as well as the catch-up adjustment related to the
19 increase in FY 2012 through FY 2014 revenue requirements on vintage FY 2012 through
20 FY 2014 investment, which the Company began recovering over a period of three years
21 starting November 1, 2015 in accordance with the PUC's October 30, 2015 Open

1 Meeting decision in Docket No. 4474. The tax NOL adjustment is the result of tax
2 deductions reflected on National Grid's income tax returns that exceed the amount of
3 taxable income it has generated during FY 2012 through FY 2015, along with an estimate
4 of the FY 2016 tax NOL that the Company expects to generate when National Grid files
5 its FY 2016 income tax return during December 2016. Guidance in recent years from the
6 Internal Revenue Service and recent economic tax incentives made available through
7 federal income tax legislation (namely bonus tax depreciation) has provided National
8 Grid with more tax deductions than taxable income with which to offset the deductions.
9 National Grid's tax NOLs are unrealized tax deductions that can be used in the future to
10 offset taxable income.

11
12 As shown on Attachment MAL-1 on Page 1 at Line 12, the updated FY 2016 ISR
13 revenue requirement collectible through the Company's ISR factor for the FY 2016
14 period, including the catch-up adjustment related to the NOL impact on prior fiscal years'
15 revenue requirements, amounts to \$22,642,848, an increase of \$6,473,086 from the
16 projected FY 2016 gas ISR revenue requirement of \$16,169,762 previously approved by
17 the PUC. Approximately 26 percent, or \$1.7 million, of this increase is related to
18 increased spending on actual capital investments versus the capital plan budgets.
19 Approximately 63 percent of this increase, or \$4.1 million, is related to prior investment
20 years' NOL, which were not included in the projected FY 2016 revenue requirement.
21 Approximately \$1.2 million of the \$4.1 million tax NOL adjustment is a true up for one –

1 third of the understated Gas ISR Reconciliation filings in FY 2012 to FY 2014, as
2 described above. \$1.9 million and \$1.0 million, respectively, are the FY 2016 and FY
3 2015 revenue requirement effect of the NOLs related to vintage FY 2015 investment.

4
5 Beginning with this filing, the Company has included an estimate of NOL on FY 2016
6 investment in its calculation of the FY 2016 ISR revenue requirement. Prior ISR
7 reconciliations only reflected NOLs based on actual tax return filings; however, National
8 Grid's income tax returns for each fiscal year are not filed until mid-December following
9 the end of the fiscal year, and which occurs after the August 1 due date for each fiscal
10 year's ISR reconciliation filing to the PUC. However, the Company's Tax Department
11 calculated an estimated tax NOL when the Company closed its books for FY 2016, which
12 has formed the basis for the tax NOL estimate in this reconciliation. The Company will
13 true up this estimated tax NOL to the NOL that is ultimately reflected in National Grid's
14 FY 2016 income tax returns in its FY 2017 Gas ISR Reconciliation filing. The estimated
15 FY 2016 NOL accounts for \$0.7 million in additional revenue requirement which was not
16 contemplated in the FY 2016 Plan Proposal. Finally, \$0.7 million of the total \$6.3
17 million increase in FY 2016 revenue requirement relates to the property tax adjustment
18 mechanism, driven by the increase in capital investment.

19
20 **Q. Are there any schedules attached to your testimony?**

21 **A.** Yes, I am sponsoring the following Attachment:

- 1 • Attachment MAL-1: Gas Infrastructure, Safety and Reliability Plan Revenue
2 Requirement Reconciliation
3

4 **II. ISR PLAN FY 2016 REVENUE REQUIREMENT**

5 **Q. Did the Company calculate the updated FY 2016 ISR revenue requirement in the**
6 **same fashion as calculated in the previous ISR Factor submissions and the August**
7 **2015 ISR factor reconciliation?**

8 A. Yes, with two exceptions. First as described earlier, this reconciliation reflects an
9 estimate of the Company's FY 2016 tax NOL, where previous ISR reconciliation filings
10 have not. Secondly, the Company submitted a filing with the Internal Revenue Service
11 (IRS) to apply for a change in accounting method regarding the treatment of gains or
12 losses on partial retirements for federal income tax purposes. This change is described
13 further in my testimony. Other than these changes, the updated FY 2016 ISR revenue
14 requirement calculation is nearly identical to the ISR revenue requirement used for
15 purposes of developing the approved ISR factors that were effective April 1, 2015, and as
16 described previously in my testimony in this proceeding but incorporating updated ISR
17 investment amounts, and known tax deductibility percentages. I will rely on my
18 testimony included in the Company's FY 2016 Plan Proposal for the detailed description
19 of the revenue requirement calculation, and will limit this testimony to summarizing the
20 revenue requirement, a description of the tax NOL impact, and the update for the known
21 tax deductibility percentages.
22

1 **Q. Please explain what is meant by NOLs?**

2 A. As discussed in Section I of my testimony, tax NOLs are generated when the Company
3 has tax deductions on its income tax returns that exceed its taxable income. This does not
4 mean that the Company is suffering losses in its financial statements; instead, the
5 Company's tax NOLs are the result of the significant tax deductions that have been
6 generated in recent years by the bonus depreciation and capital repairs tax deductions. In
7 addition to first-year bonus tax depreciation, the US tax code allows the Company to
8 classify certain costs as repairs expense which the Company takes as an immediate
9 deduction on its income tax return; however these costs are recorded as plant investment
10 on the Company's books. These significant bonus depreciation and capital repairs tax
11 deductions have exceeded the amount of taxable income reported in tax returns filed for
12 FY 2009 to FY 2015, with the exception of FY 2011. NOLs are recorded as non-cash
13 assets on the Company's balance sheet and represent a benefit that the Company and
14 customers will receive when the Company is able to realize actual cash savings when it
15 applies these NOLs against taxable income in the future.

16
17 Accumulated NOLs represent an offset to the Company's accumulated deferred income
18 taxes, which are included as a credit, or reduction, in the calculation of rate base.

19 Consequently, including accumulated NOLs in the revenue requirement calculations
20 reduces the amount of accumulated deferred taxes in the derivation of ISR rate base.

21 Deferred taxes are an offset, or reduction, to ISR rate base and are intended to represent

1 the amount of cash benefit generated by and associated with ISR investment related tax
2 deductions that the Company has reflected in its income tax returns
3

4 **Q. Has the Company included NOL in its vintage FY 2016 rate base calculation?**

5 A. Yes, the Company has included an estimate of FY 2016 NOL in its vintage FY 2016 rate
6 base calculation. This is a change compared to prior years' Gas ISR reconciliation
7 filings. Including an estimate of FY 2016 NOL would mirror the timing of other tax
8 assumptions included in the calculation of tax depreciation, particularly assumptions
9 around the bonus depreciation and the capital repairs deductions. The tax depreciation
10 calculation on vintage FY 2016 investment is an estimate until the Company files its FY
11 2016 tax return in December 2016. If the Company's actual FY 2016 NOL differs based
12 on its FY 2016 tax position as filed with the IRS, that adjustment will be reflected as a
13 prior period adjustment to the FY 2016 revenue requirement in the FY 2017 Gas ISR
14 reconciliation filing. Conversely, if the Company is able to utilize any of its currently
15 accumulated NOLs, that benefit will be flowed through to customers in its FY 2017 Gas
16 ISR reconciliation filing.
17

18 **Q. Are there any updates to the FY 2015 revenue requirement that are being trued up**
19 **in the FY 2016 Gas ISR Reconciliation?**

20 A. Yes. The Company filed its FY 2015 Gas ISR Reconciliation on August 1, 2015;
21 however, it had not filed its FY 2015 income tax return until later that year in the month

1 of December. As a result, it used an estimated capital repairs tax deduction. Also in
2 December 2015, the U.S. House and Senate signed the Protecting Americans from Tax
3 Hikes (PATH) Act into law, which extended accelerated bonus depreciation for tax
4 purposes at a rate of 50 percent through calendar year 2017, but then phases down to 40
5 percent for 2018 and 30 percent for 2019. Consequently, the Company has revised its FY
6 2015 revenue requirement to reflect an actual capital repairs deduction rate of 63.81
7 percent as shown on Page 5, Line 2 on Attachment MAL-1, and a 50 percent bonus
8 depreciation deduction as shown on Line 12 of Page 5 of that Attachment. Finally, the
9 IRS clarified its tangible property regulations , and as a result the Company submitted a
10 §481(a) election with the IRS to apply for a change in accounting method regarding the
11 treatment of gains or losses on asset retirements which are characterized as partial
12 retirements for tax purposes. This election was submitted to the PUC, as required under
13 IRS rules, on December 17, 2015. The late partial disposition election was made to
14 protect the Company's deduction of cost of removal (COR). Otherwise, the Company
15 would have been required to make a §481(a) adjustment to reverse all historical COR
16 deductions, resulting in a substantial reduction in deferred tax liabilities. Because the
17 Company made the election, COR remains 100% deductible.

18
19 The vintage FY 2015 tax depreciation calculation in this filing now includes two
20 additional tax deductions related to the change in accounting issue: (1) for the
21 cumulative FY 2009 through FY 2014 net tax deduction related to the change in

1 accounting under §481(a), and (2) the FY 2015 net tax deduction for losses on partial
2 retirements. The true up to the FY 2015 revenue requirement on FY 2015 capital
3 investment resulting from the update to the actual capital repairs and bonus depreciation
4 deductions plus the impact of the §481(a) filing and tax loss on partial retirements is a
5 reduction of \$117,841. This reduction plus a \$965,078 increase in the FY 2015 revenue
6 requirement on vintage FY 2015 investment related to FY 2015 NOL, totals a net
7 \$847,237 increase to the FY 2015 revenue requirement as calculated on Page 12 of
8 Attachment MAL-1 and carried forward to Line 8 of Page 1.

9
10 **Q. Please summarize the updated FY 2016 ISR revenue requirement.**

11 A. Certainly. As shown on Page 1, at Line 12 of Attachment MAL-1, the updated FY 2016
12 ISR revenue requirement amounts to \$22,642,848 which consists of \$463,665 in
13 operation & maintenance expenses and \$22,179,183 of capital related revenue
14 requirement. As previously described, it includes the full year revenue requirement on
15 vintage FY 2016, FY 2015, FY 2014, FY 2013 and FY 2012 ISR capital investments
16 above or below the level of capital investment reflected in base distribution rates, and the
17 property tax component.

18
19 **Q. Please describe how your Attachment MAL-1 is structured.**

20 A. Page 1 of Attachment MAL-1 summarizes the individual components of the updated FY
21 2016 ISR revenue requirement. Line 1 shows the operating & maintenance expenses

1 associated with an additional sixteen full time equivalent (FTE) personnel to support
2 Main Replacement work for FY 2016 as described in the testimony of Mr. Iseler. Lines 2
3 through 7 represent the full year 2016 ISR revenue requirements for the FY 2016 and FY
4 2015 ISR investments and incremental FY 2012, FY 2013 and FY 2014 ISR investments,
5 or those investments not included in the Company's base rates, and as supported with
6 detailed calculations on Pages 2, 4, 6, 8, and 10, respectively. Line 8 reflects the
7 reconciliation of the approved FY 2015 ISR revenue requirement for vintage FY 2015
8 investments with a revised vintage FY 2015 revenue requirement on those investments.
9 This reconciliation is necessary because the actual level of tax deductibility on FY 2015
10 investments was not known at the time of filing the FY 2015 ISR Reconciliation Factor
11 or the FY 2016 ISR Plan Proposal. The calculation of the reconciliation amounts is
12 shown on Page 12 and reflects the difference in the approved FY 2015 ISR revenue
13 requirement on FY 2015 investments and the updated revenue requirement for FY 2015
14 on FY 2015 ISR investments when incorporating the final tax deductibility levels.
15 Detailed calculations of the updated FY 2015 and FY 2016 revenue requirements on
16 vintage FY 2015 investments and the updated FY 2015 tax depreciation on vintage FY
17 2015 ISR investments are presented on Pages 4 and 5 of the Attachment, respectively.
18 Line 9 represents one-third of the FY 2012, FY 2013 and FY 2014 revenue requirement
19 impact of NOLs, of which FY 2016 is the second year in a three-year recovery period.
20 Line 10 represents the results of the FY 2016 property tax recovery adjustment, which is
21 supported by a detailed calculation on Page 14.

1 **Q. Has the Company provided support for the actual level of FY 2016 ISR eligible**
2 **plant investments?**

3 A. Yes. The description of the FY 2016 Gas ISR program and the amount of the
4 incremental non-growth capital investment eligible for inclusion in the ISR Mechanism
5 are supported by the direct testimony and supporting attachment of Company Witness
6 David G. Iseler. The ultimate revenue requirement on the incremental non-growth capital
7 investment equals the return on the investment (i.e. average rate base at the weighted
8 average cost of capital), plus depreciation expense and property taxes associated with the
9 investment. Incremental non-growth capital investment for this purpose is intended to
10 represent the net change in rate base for non-growth infrastructure investments since the
11 establishment of the Company's ISR mechanism effective April 1, 2012 and is defined as
12 capital additions plus cost of removal, less annual depreciation expense embedded in the
13 Company's rates, net of depreciation expense attributable to general plant. The actual
14 ISR eligible non-growth capital investment for FY 2016 amounts to \$90.1 million¹
15 associated with the Company's FY 2016 ISR Plan (non-growth infrastructure investment
16 net of general plant).

¹ Total ISR eligible capital investment for FY2016 of \$90.1 million plus total ISR eligible cost of removal of \$3.8 million reflects \$93.9 million of actual capital spending as referenced in the testimony of Mr. Iseler (Attachment DGI-1, Page 2, Table 1).

1 **Q. What is the updated revenue requirement associated with actual capital investment?**

2 A. The updated FY 2016 revenue requirement associated with the Company's actual FY
3 2016, FY 2015, FY 2014, FY 2013, and FY 2012 ISR eligible plant investments amounts
4 to \$22,179,183 and includes the updated FY 2016 revenue requirement on FY 2016
5 through FY 2012 investments; the reconciliation of the approved FY 2015 ISR revenue
6 requirement for vintage FY 2015 investments with the actual FY 2015 revenue
7 requirement on those vintage investments; the second year of a three-year recovery of the
8 true-up adjustment for the FY 2012, FY 2013 and FY 2014 ISR revenue requirements
9 related to NOLs generated on vintage FY 2012, FY 2013 and FY 2014 ISR eligible
10 investment; and finally, the inclusion of a property tax formula adjustment pursuant to the
11 rate case settlement agreement in Docket No. 4323.

12
13 **III. CONCLUSION**

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

15 A. Yes, it does.

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 4540
FY 2016 GAS INFRASTRUCTURE, SAFETY, AND RELIABILITY PLAN
RECONCILIATION FILING
WITNESS: MELISSA A. LITTLE

Index of Attachments

Attachment MAL-1 Gas Infrastructure, Safety and Reliability Plan Revenue Requirement
Calculation

**THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 4540
FY 2016 GAS INFRASTRUCTURE, SAFETY, AND RELIABILITY PLAN
RECONCILIATION FILING
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Attachment MAL-1

Gas Infrastructure, Safety, and Reliability Plan Revenue Requirement Calculation

**The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
Summary**

<u>Line No.</u>		FY 2016 Actuals (a)
1	FY 2016 Operation & Maintenance expense	<u>\$463,665</u>
2	FY 2016 Revenue Requirement on FY 2016 Actual Capital Investment	\$4,218,540
3	FY 2016 Revenue Requirement on FY 2015 Actual Capital Investment	\$6,988,714
4	FY 2016 Revenue Requirement on FY 2014 Actual Incremental Capital Investment	\$3,492,075
5	FY 2016 Revenue Requirement on FY 2013 Actual Incremental Capital Investment	\$290,997
6	FY 2016 Revenue Requirement on FY 2012 Actual Incremental Capital Investment	<u>\$1,092,079</u>
7	Subtotal- FY 2016 Revenue Requirement on Actual Capital Investment	\$16,082,405
8	True Up for Capital Repairs Rate, Bonus Depreciation, \$481(a), tax loss on retirements, and NOL in FY 2015 Revenue Requirement on FY 2015 Capital Investment in RIPUC Docket No. 4474	\$847,237
9	True Up for Net Operating Losses generated in FY 2012, FY 2013 and FY 2014 (Second Year of a Three-Year Recovery Period)	\$1,178,788
10	FY 2016 Property Tax recovery adjustment	<u>\$4,070,753</u>
11	Total FY 2016 Capital Component of Revenue Requirement	<u>\$22,179,183</u>
12	Total FY 2016 Revenue Requirement	<u>\$22,642,848</u>
13	FY 2016 Plan Revenue Requirement as filed on April 1, 2015	\$16,169,762
14	Increase in FY 2016 Revenue Requirement	\$6,473,086

Line Notes

- | | |
|----|--|
| 1 | From Attachment DGI-1, Page 2 of 7, Table 1 |
| 2 | From Page 2 of 19, Line 28 |
| 3 | From Page 4 of 19, Line 27 |
| 4 | From Page 6 of 19, Line 34 |
| 5 | From Page 8 of 19, Line 32 |
| 6 | From Page 10 of 19, Line 32 |
| 7 | Sum of Line 2 through Line 6 |
| 8 | From Page 12 of 19, Line 3 |
| 9 | Per Docket 4573 2015 Distribution Adjustment Charge (DAC) Compliance Filing, Schedule SLN-8C, Page 1, Line 6 |
| 10 | From Page 14 of 19, Line 62(k) |
| 11 | Sum of Lines 7 through 10 |
| 12 | Line 1 + Line 11 |
| 13 | Per Docket 4540 FY 2016 Gas ISR Plan Filing, Section 3: Attachment 1, Compliance Filing, Page 1, Line 9 |
| 14 | Line 12 - Line 13 |

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

Line No.		Fiscal Year <u>2016</u> (a)
<u>Depreciable Net Capital Included in ISR Rate Base</u>		
1	Total Allowed Capital Included in ISR Rate Base in Current Year	1/ \$90,072,473
2	Retirements	2/ \$3,177,067
3	Net Depreciable Capital Included in ISR Rate Base	Line 1 - Line 2 \$86,895,406
<u>Change in Net Capital Included in ISR Rate Base</u>		
4	Capital Included in ISR Rate Base	Line 1 \$90,072,473
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant \$24,356,183
6	Incremental Capital Amount	Line 4 - Line 5 \$65,716,291
7	Cost of Removal	1/ \$3,796,440
8	Net Plant Amount	Line 6 + Line 7 \$69,512,731
<u>Deferred Tax Calculation:</u>		
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323 3.38%
10	Tax Depreciation	Per Page 3 of 19, Line 21 \$81,151,010
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10 \$81,151,010
12	Book Depreciation	Line 3 * Line 9 * 50% \$1,468,532
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12 \$1,468,532
14	Cumulative Book / Tax Timer	Line 11 - Line 13 \$79,682,478
15	Effective Tax Rate	35.00%
16	Deferred Tax Reserve	Line 14 * Line 15 \$27,888,867
17	Less: FY 2016 Federal NOL	Per Page 16 of 19, Line 10 (\$14,571,198)
18	Net Deferred Tax Reserve	Line 16 + Line 17 \$13,317,669
<u>ISR Rate Base Calculation:</u>		
19	Cumulative Incremental Capital Included in ISR Rate Base	Line 8 \$69,512,731
20	Accumulated Depreciation	- Line 13 (\$1,468,532)
21	Deferred Tax Reserve	- Line 18 (\$13,317,669)
22	Year End Rate Base	Sum of Lines 19 through 21 \$54,726,529
<u>Revenue Requirement Calculation:</u>		
23	Average ISR Rate Base	Current Year Line 22 ÷ 2 \$27,363,265
24	Pre-Tax ROR	3/ 10.05%
25	Return and Taxes	Line 23 * Line 24 \$2,750,008
26	Book Depreciation	Line 12 \$1,468,532
27	Property Taxes	4/ \$0
28	Annual Revenue Requirement	Sum of Lines 25 through 27 \$4,218,540

1/ Total of Line 1 plus Line 7 agrees to Attachment DGI-1, Page 2 of 7, Table 1

2/ Actual FY 2016 retirements per Company's books

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

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

4/ Property taxes calculated on Page 14 of 20 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.

The Narragansett Electric Company
d/b/a National Grid
Calculation of Tax Depreciation and Repairs Deduction on FY 2016 Capital Investments

Line No.			Fiscal Year <u>2016</u> (a)
	<u>Capital Repairs Deduction</u>		
1	Plant Additions	Page 2 of 19, Line 1	\$90,072,473
2	Capital Repairs Deduction Rate	Per Tax Department 1/	70.11%
3	Capital Repairs Deduction	Line 2 * Line 3	\$63,149,811
	<u>Bonus Depreciation</u>		
4	Plant Additions	Line 1	\$90,072,473
5	Less Capital Repairs Deduction	Line 3	\$63,149,811
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	\$26,922,662
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	\$26,922,662
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	\$13,461,331
	<u>Remaining Tax Depreciation</u>		
13	Plant Additions	Line 1	\$90,072,473
14	Less Capital Repairs Deduction	Line 3	\$63,149,811
15	Less Bonus Depreciation	Line 12	\$13,461,331
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14- Line 15	\$13,461,331
17	20 YR MACRS Tax Depreciation Rates	IRS Publication 946	3.750%
18	Remaining Tax Depreciation	Line 16 * Line 17	\$504,800
19	FY16 tax (gain)/loss on retirements	Per Tax Department	\$238,628
20	Cost of Removal	Page 2 of 19, Line 7	\$3,796,440
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19 & 20	<u>\$81,151,010</u>

1/ Agrees to the FY 2016 Gas Plan Proposal in RIPUC Docket 4540. Capital Repairs percentage is based on a three-year average of FYs 2012, 2013 and 2014 capital repairs rates.

**The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
Computation of Revenue Requirement on FY 2015 Actual Incremental Gas Capital Investment**

Line No.			Fiscal Year 2015 (a)	Fiscal Year 2016 (b)
	<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 4474	\$74,915,000	\$0
2	Retirements		1/ \$5,566,546	\$0
3	Net Depreciable Capital Included in ISR Rate Base	Line 1 - Line 2	\$69,348,454	\$69,348,454
	<u>Change in Net Capital Included in ISR Rate Base</u>			
4	Capital Included in ISR Rate Base	Line 1	\$74,915,000	\$0
5	Depreciation Expense	Per Settlement Agreement Docket No. 4323, excluding General Plant	\$24,356,183	\$0
6	Incremental Capital Amount	Line 4 - Line 5	\$50,558,817	\$50,558,817
7	Cost of Removal		2/ \$2,425,000	\$2,425,000
8	Net Plant Amount	Line 6 + Line 7	\$52,983,817	\$52,983,817
	<u>Deferred Tax Calculation:</u>			
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943 & 4323	3.38%	3.38%
10	Tax Depreciation	Per Page 5 of 19, Line 22	\$69,364,000	\$983,394
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	\$69,364,000	\$70,347,394
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Column (b) = Line 3 * Line 9	\$1,171,989	\$2,343,978
13	Cumulative Book Depreciation	Prior Year Line 13 + Current Year Line 12	\$1,171,989	\$3,515,967
14	Cumulative Book / Tax Timer	Line 11 - Line 13	\$68,192,011	\$66,831,427
15	Effective Tax Rate		35.00%	35.00%
16	Deferred Tax Reserve	Line 14 * Line 15	\$23,867,204	\$23,391,000
17	Less: FY 2015 NOL	Per Page 16 of 19, Line 10	(\$19,205,538)	(\$19,205,538)
18	Net Deferred Tax Reserve	Line 16 + Line 17	\$4,661,666	\$4,185,462
	<u>ISR Rate Base Calculation:</u>			
19	Cumulative Incremental Capital Included in ISR Rate Base	Line 8	\$52,983,817	\$52,983,817
20	Accumulated Depreciation	- Line 13	(\$1,171,989)	(\$3,515,967)
21	Deferred Tax Reserve	- Line 18	(\$4,661,666)	(\$4,185,462)
22	Year End Rate Base	Sum of Lines 19 through 21	\$47,150,162	\$45,282,389
	<u>Revenue Requirement Calculation:</u>			
23	Average ISR Rate Base	Column (a) = Current Year Line 22 ÷ 2; Column (b) = (Prior Year Line 22 + Current Year Line 22) ÷ 2	\$23,575,081	\$46,216,275
24	Pre-Tax ROR		3/ 10.05%	10.05%
25	Return and Taxes	Line 23 * Line 24	\$2,369,296	\$4,644,736
26	Book Depreciation	Line 12	\$1,171,989	\$2,343,978
27	Property taxes		4/ \$0	\$0
27	Annual Revenue Requirement	Sum of Lines 25 through 27	\$3,541,285	\$6,988,714

1/ Actual FY 2015 retirements per Company's books

2/ Actual FY 2015 Cost of Removal per Company's books

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

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

4/ Property taxes calculated on Page 14 of 20 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.

**The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
Calculation of Tax Depreciation and Repairs Deduction on FY 2015 Capital Investments
Calculation of Tax Depreciation and Repairs Deduction**

Line No.			Fiscal Year 2015 (a)	Fiscal Year 2016 (b)
<u>Capital Repairs Deduction</u>				
1	Plant Additions	Per Page 4 of 19, Line 1	\$74,915,000	
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 63.81%	
3	Capital Repairs Deduction	Line 1 * Line 2	\$47,803,245	
<u>Bonus Depreciation</u>				
4	Plant Additions	Line 1	\$74,915,000	
5	Less Capital Repairs Deduction	Line 3	\$47,803,245	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	\$27,111,755	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	99.51%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	\$26,978,907	
9	Bonus Depreciation Rate (April 2014 - December 2014)	1 * 75% * 50%	37.50%	
10	Bonus Depreciation Rate (January 2015 - March 2015)	1 * 25% * 50%	12.50%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	50.00%	
12	Bonus Depreciation	Line 8 * Line 11	\$13,489,454	
<u>Remaining Tax Depreciation</u>				
13	Plant Additions	Line 1	\$74,915,000	
14	Less Capital Repairs Deduction	Line 3	\$47,803,245	
15	Less Bonus Depreciation	Line 12	\$13,489,454	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	\$13,622,301	\$13,622,301
17	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946	3.750%	7.219%
18	Remaining Tax Depreciation	Line 16 * Line 17	\$510,836	\$983,394
19	\$481(a) FY09- FY14 adjustment for tax (gain)/loss on retirements	Per Tax Department	\$4,311,849	
20	FY15 tax (gain)/loss on retirements	Per Tax Department	\$823,616	
21	Cost of Removal	Per Page 4 of 19, Line 7	\$2,425,000	
22	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, 20 & 21	\$69,364,000	\$983,394

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
FY 2016 Gas ISR Revenue Requirement Reconciliation
Computation of Revenue Requirement on FY 2014 Actual Incremental Gas Capital Investment

Line No.			Fiscal Year 2014 (a)	Fiscal Year 2015 (b)	Fiscal Year 2016 (c)
<u>Depreciable Net Capital Included in Rate Base</u>					
1	Total Allowed Capital Included in Rate Base in Current Year	Page 13 of 19, Line 3, Column (c)	\$22,483,868	\$0	\$0
2	Retirements	Page 13 of 19, Line 9, Column (c)	1/ 1,615,155	\$0	\$0
3	Net Depreciable Capital Included in Rate Base	Line 1 - Line 2	\$20,868,713	\$20,868,713	\$20,868,713
<u>Change in Net Capital Included in Rate Base</u>					
4	Capital Included in Rate Base	Line 1	\$22,483,868		
5	Depreciation expense	Per Compliance filing Docket No. 4323, excluding General Plant	2/ \$4,060,176		
6	Incremental Capital Amount	Line 4 - Line 5	\$18,423,692		
7	Cost of Removal	Page 13 of 19, Line 6, Column (c)	3/ (\$1,210,006)		
8	Net Plant Amount	Line 6 + Line 7	\$17,213,686	\$17,213,686	\$17,213,686
<u>Deferred Tax Calculation:</u>					
9	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 4323 and 3943	3.38%	3.38%	3.38%
10	Tax Depreciation	Page 7 of 19, Line 20	\$18,535,165	\$205,409	\$189,987
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	\$18,535,165	\$18,740,574	\$18,930,561
12	Book Depreciation	Column (a) = Line 3 * Line 9 * 50% ; Columns (b)&(c) = Line 3 *			
13	Cumulative Book Depreciation	Line 9	\$352,681	\$705,362	\$705,362
14	Cumulative Book / Tax Timer	Prior Year Line 13 + Current Year Line 12	\$352,681	\$1,058,044	\$1,763,406
15	Effective Tax Rate	Line 11 - Line 13	\$18,182,484	\$17,682,530	\$17,167,155
16	Deferred Tax Reserve	Line 14 * Line 15	35.00%	35.00%	35.000%
17	Less: FY 2014 Federal NOL	Line 14 * Line 15	\$6,363,869	\$6,188,886	\$6,008,504
18	Net Deferred Tax Reserve	Lessor of Line 16 or Page 16 of 19, Line 9	(\$6,363,869)	(\$6,188,886)	(\$6,008,504)
		Line 16 + Line 17	\$0	\$0	\$0
<u>Rate Base Calculation:</u>					
19	Cumulative Incremental Capital Included in Rate Base	Line 8	\$17,213,686	\$17,213,686	\$17,213,686
20	Accumulated Depreciation	- Line 13	(\$352,681)	(\$1,058,044)	(\$1,763,406)
21	Deferred Tax Reserve	- Line 18	\$0	\$0	\$0
22	Year End Rate Base	Sum of Lines 19 through 21	\$16,861,005	\$16,155,642	\$15,450,280
<u>Revenue Requirement Calculation:</u>					
23	Average Rate Base	Col (a) = Line 22 * Page 18, Line 16; Col (b)&(c) = (Prior Year Line 22 + Current Year Line 22) ÷ 2	\$5,452,494	\$16,508,324	\$15,802,961
24	Pre-Tax ROR		4/ 10.05%	10.05%	10.05%
25	Return and Taxes	Line 23 * Line 24	\$547,976	\$1,659,087	\$1,588,198
26	Book Depreciation	Line 12	\$352,681	\$705,362	\$705,362
27	Property Taxes		5/ \$0	\$0	\$0
28	Annual Revenue Requirement on Incremental FY14 Investment	Sum of Lines 25 through 27	\$900,657	\$2,364,449	\$2,293,560
29	Remaining FY14 NOL attributable to embedded rate base in RIPUC Docket 4323	Per Page 16 of 19, Line 10 less Line 17	\$11,660,349	\$11,835,333	\$12,015,714
30	Average Rate Base	Col (a) = Line 29 * Page 19, Line 15; Col (b)&(c) = (Prior Year Line 29 + Current Year Line 29) ÷ 2	\$6,801,870	\$11,747,841	\$11,925,523
31	Pre-Tax ROR		4/ 10.05%	10.05%	10.05%
32	Return and Taxes	Line 30 * Line 31	\$683,588	\$1,180,658	\$1,198,515
33	Annual Revenue Requirement adjustment to base rates relate	Line 32	\$683,588	\$1,180,658	\$1,198,515
34	Total Annual Revenue Requirement	Line 28 + Line 33	\$1,584,245	\$3,545,107	\$3,492,075

1/ Actual Incremental Retirements

2/ Depreciation expense has been prorated for two months (February - March 2014).

3/ Actual Incremental Cost of Removal

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

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

5/ Property taxes calculated on Page 14 of 20 for all vintage years commencing with FY14 and reflected in total on Page 1 at Line 10.

**The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
Computation of Revenue Requirement on FY 2014 Actual Incremental Gas Capital Investment
Calculation of Tax Depreciation and Repairs Deduction**

Line No.			Fiscal Year 2014 (a)	Fiscal Year 2015 (b)	Fiscal Year 2016 (c)
	<u>Capital Repairs Deduction</u>				
1	Plant Additions	Per Page 6 of 19, Line 1	\$22,483,868		
2	Capital Repairs Deduction Rate	Per Tax Department 1/	74.94%		
3	Capital Repairs Deduction	Line 1 * Line 2	\$16,849,411		
	<u>Bonus Depreciation</u>				
4	Plant Additions	Line 1	\$22,483,868		
5	Less Capital Repairs Deduction	Line 3	\$16,849,411		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	\$5,634,457		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	99.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	\$5,578,113		
9	Bonus Depreciation Rate (April 2013 - December 2013)	1 * 75% * 50%	37.50%		
10	Bonus Depreciation Rate (January 2014 - March 2014)	1 * 25% * 50%	12.50%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	50.00%		
12	Bonus Depreciation	Line 8 * Line 11	\$2,789,057		
	<u>Remaining Tax Depreciation</u>				
13	Plant Additions	Line 1	\$22,483,868		
14	Less Capital Repairs Deduction	Line 3	\$16,849,411		
15	Less Bonus Depreciation	Line 12	\$2,789,057		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15	\$2,845,400	\$2,845,400	\$2,845,400
17	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946	3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 16 * Line 17	\$106,703	\$205,409	\$189,987
19	Cost of Removal	Per Page 6 of 19, Line 7	(\$1,210,006)		
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19	\$18,535,165	\$205,409	\$189,987

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

The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
Computation of Revenue Requirement on FY2013 Actual Incremental Capital Investment

Line No.			Fiscal Year 2013 (a)	Fiscal Year 2014 (b)	Fiscal Year 2015 (c)	Fiscal Year 2016 (d)
<u>Depreciable Net Capital Included in Rate Base</u>						
1	Total Allowed Capital Included in Rate Base in Current Year	Page 13 of 19, Line 3, Column (b)	(\$768,090)	(\$768,090)	(\$768,090)	(\$768,090)
2	Retirements	Page 13 of 19, Line 9, Column (b)	1/ 3,276,842	3,276,842	3,276,842	3,276,842
3	Net Depreciable Capital Included in Rate Base	Line 1 - Line 2	(\$4,044,932)	(\$4,044,932)	(\$4,044,932)	(\$4,044,932)
<u>Change in Net Capital Included in Rate Base</u>						
4	Capital Included in Rate Base	Line 1	(\$768,090)			
5	Cost of Removal	Page 13 of 19, Line 6, Column (b)	2/ (\$1,548,831)			
6	Net Plant Amount	Line 4 + Line 5	(\$2,316,922)	(\$2,316,922)	(\$2,316,922)	(\$2,316,922)
<u>Deferred Tax Calculation:</u>						
7	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 4323 and 3943	3.38%	3.38%	3.38%	3.38%
8	Tax Depreciation	Page 9 of 19, Line 26	(\$2,205,170)	(\$8,382)	(\$7,752)	(\$7,172)
9	Cumulative Tax Depreciation	Col (a)= Current Yr Line 8; Col (b)-(d)= Prior Yr Line 9 + Current Yr Line 8	(\$2,205,170)	(\$2,213,552)	(\$2,221,305)	(\$2,228,477)
10	Book Depreciation	Column (a) = Line 3 * Line 7 * 50%; Column (b)-(d) = Line 3 * Line 7	(\$68,359)	(\$136,719)	(\$136,719)	(\$136,719)
11	Cumulative Book Depreciation	Col (a) = Current Yr Line 10; Col (b)-(d) = Prior Yr Line 9 + Current Yr Line 10	(\$68,359)	(\$205,078)	(\$341,797)	(\$478,515)
12	Cumulative Book / Tax Timer	Line 9 - Line 11	(\$2,136,811)	(\$2,008,474)	(\$1,879,508)	(\$1,749,961)
13	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%
14	Deferred Tax Reserve	Line 12 * Line 13	(\$747,884)	(\$702,966)	(\$657,828)	(\$612,486)
15	Less: FY 2013 Federal NOL	Per Page 16 of 19, Line 10	\$0	\$0	\$0	\$0
16	Net Deferred Tax Reserve	Line 14 - Line 15	(\$747,884)	(\$702,966)	(\$657,828)	(\$612,486)
<u>Rate Base Calculation:</u>						
17	Cumulative Incremental Capital Included in Rate Base	Line 6	(\$2,316,922)	(\$2,316,922)	(\$2,316,922)	(\$2,316,922)
18	Accumulated Depreciation	- Line 11	\$68,359	\$205,078	\$341,797	\$478,515
19	Deferred Tax Reserve	- Line 16	\$747,884	\$702,966	\$657,828	\$612,486
20	Year End Rate Base	Sum of Lines 17 through 19	(\$1,500,678)	(\$1,408,877)	(\$1,317,297)	(\$1,225,920)
<u>Revenue Requirement Calculation:</u>						
21	Average Rate Base	Col (a)= Current Yr Line 20 ÷ 2; Col (b)-(d) = (Prior Yr Line 20 + Current Yr Line 20) ÷ 2	(\$750,339)	(\$1,454,778)	(\$1,363,087)	(\$1,271,608)
22	Pre-Tax ROR		3/ 11.18%	10.05%	10.05%	10.05%
23	Return and Taxes	Line 21 * Line 22	(\$83,888)	(\$146,205)	(\$136,990)	(\$127,797)
24	Book Depreciation	Line 10	(\$68,359)	(\$136,719)	(\$136,719)	(\$136,719)
25	Property Taxes	\$0 in Year 1, then Prior Year (Line 6 - Line 11) * Property Tax Rate	4/ \$0	(\$75,327)	(\$63,989)	(\$61,208)
26	Annual Revenue Requirement on Incremental FY 2013 Investment	Sum of Lines 23 through 25	(\$152,247)	(\$358,251)	(\$337,698)	(\$325,723)
27	Remaining FY13 NOL attributable to embedded rate base in RIPUC Docket 4323	Per Page 16 of 19, Line 10 less Line 15	\$6,136,520	\$6,136,520	\$6,136,520	\$6,136,520
28	Average Rate Base	Col (a) = Line 27 * 50%; Col (b)-(d) = (Prior Year Line 27 + Current Year Line 27) ÷ 2	\$3,068,260	\$6,136,520	\$6,136,520	\$6,136,520
29	Pre-Tax ROR		5/ 11.18%	10.05%	10.05%	10.05%
30	Return and Taxes	Line 28 * Line 29	\$343,031	\$616,720	\$616,720	\$616,720
31	Annual Revenue Requirement adjustment to base rates related to NOL	Line 30	\$343,031	\$616,720	\$616,720	\$616,720
32	Total Annual Revenue Requirement	Line 24 + Line 29	\$190,784	\$258,470	\$279,022	\$290,997

1/ Actual Incremental Retirements
2/ Actual Incremental Cost of Removal

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

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

4/ FY 2016 effective property tax rate of 3.1% per Page 14 of 19 at Line 35(h).

5/ Col (a) - Per Page 17 of 19, Line 1; Cols (b)-(d) - Per Note 3 above

The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
Computation of Revenue Requirement on FY2013 Actual Incremental Capital Investment
Calculation of Tax Depreciation and Repairs Deduction

Line No.		Fiscal Year 2013 (a)	Fiscal Year 2014 (b)	Fiscal Year 2015 (c)	Fiscal Year 2016 (d)
<u>Capital Repairs Deduction</u>					
1	Plant Additions	Per Page 8 of 19, Line 1	(\$768,090)		
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 67.95%		
3	Capital Repairs Deduction	Line 1 * Line 2	(\$521,917)		
<u>Bonus Depreciation</u>					
4	Plant Additions	Line 1	(\$768,090)		
5	Less Capital Repairs Deduction	Line 3	(\$521,917)		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	(\$246,173)		
7	Percent of Plant Eligible for 100% Bonus Depreciation	Per Tax Department	2/ 5.67%		
8	Plant Eligible for 100% Bonus Depreciation	Line 6 * Line 7	(\$13,963)		
9	Bonus Depreciation Rate (April 2012 - December 2012)	1 * 75% * 100%	75.00%		
10	Bonus Depreciation Rate (January 2013 - March 2013)	1 * 25% * 100%	25.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	100.00%		
12	100% Bonus Depreciation	Line 8 * Line 11	(\$13,963)		
13	Plant Additions Net of Capital Repairs Deduction and 100% Bonus Depreciation	Line 6 - Line 12	(\$232,210)		
14	Plant Eligible for 50% Bonus Depreciation	Per Tax Department	100.00%		
15	Bonus Depreciation Rate (April 2012 - December 2012)	1 * 75% * 50%	37.50%		
16	Bonus Depreciation Rate (January 2013 - March 2013)	1 * 25% * 50%	12.50%		
17	Total Bonus Depreciation Rate	Line 9 + Line 10	50.00%		
18	50% Bonus Depreciation	Line 13 * Line 17	(\$116,105)		
<u>Remaining Tax Depreciation</u>					
19	Plant Additions	Line 1	(\$768,090)		
20	Less Capital Repairs Deduction	Line 3	(\$521,917)		
21	Less Bonus Depreciation	Line 12 + Line 18	(\$130,068)		
22	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 19 - 20 - 21	(\$116,105)	(\$116,105)	(\$116,105)
23	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946	3.750%	7.219%	6.677%
24	Remaining Tax Depreciation	Line 22 * Line 23	(\$4,354)	(\$8,382)	(\$7,752)
25	Cost of Removal	Per Page 8 of 19, Line 5	(\$1,548,831)		
26	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 24, & 25	(\$2,205,170)	(\$8,382)	(\$7,752)

1/ Capital Repairs percentage is based on the actual results of the FY 2013 tax return.

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

**The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
Computation of Revenue Requirement on FY 2012 Actual Incremental Capital Investment**

Line No.			Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)	Fiscal Year 2015 (d)	Fiscal Year 2016 (e)
<u>Depreciable Net Capital Included in Rate Base</u>							
1	Total Allowed Capital Included in Rate Base in Current Year	Page 13 of 19, Line 3, Column (a)	\$6,816,729	\$0	\$0	\$0	\$0
2	Retirements	Page 13 of 19, Line 9, Column (a)	1/ 2,292,446	\$0	\$0	\$0	\$0
3	Net Depreciable Capital Included in Rate Base	Column (a) = Line 1 - Line 2; Column (b)-(e) = Prior Year Line 3	\$4,524,283	\$4,524,283	\$4,524,283	\$4,524,283	\$4,524,283
<u>Change in Net Capital Included in Rate Base</u>							
4	Capital Included in Rate Base	Line 1	\$6,816,729				
5	Cost of Removal	Page 13 of 19, Line 6, Column (a)	2/ (\$3,171,476)				
6	Net Plant Amount	Line 4 + Line 5	\$3,645,253	\$3,645,253	\$3,645,253	\$3,645,253	\$3,645,253
<u>Deferred Tax Calculation:</u>							
7	Composite Book Depreciation Rate	As Approved in R.I.P.U.C. Docket No. 3943	3.38%	3.38%	3.38%	3.38%	3.38%
8	Tax Depreciation	Page 11 of 19, Line 20	\$3,097,659	\$41,071	\$37,987	\$35,143	\$32,503
9	Cumulative Tax Depreciation	Prior Year Line 9 + Current Year Line 8	\$3,097,659	\$3,138,730	\$3,176,717	\$3,211,860	\$3,244,363
10	Book Depreciation	Column (a) = Line 3 * Line 7 * 50%; Columns (b)-(e) = Line 3 * Line 7	\$76,460	\$152,921	\$152,921	\$152,921	\$152,921
11	Cumulative Book Depreciation	Prior Year Line 11 + Current Year Line 10	\$76,460	\$229,381	\$382,302	\$535,223	\$688,143
12	Cumulative Book / Tax Timer	Line 9 - Line 11	\$3,021,199	\$2,909,349	\$2,794,415	\$2,676,637	\$2,556,220
13	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%
14	Deferred Tax Reserve	Line 12 * Line 13	\$1,057,420	\$1,018,272	\$978,045	\$936,823	\$894,677
15	Less: FY 2012 Federal NOL	Per Page 16 of 19, Line 10	(\$1,057,420)	(\$1,018,272)	(\$978,045)	(\$936,823)	(\$894,677)
16	Net Deferred Tax Reserve	Line 14 + Line 15	\$0	\$0	\$0	\$0	\$0
<u>Rate Base Calculation:</u>							
17	Cumulative Incremental Capital Included in Rate Base	Line 6	\$3,645,253	\$3,645,253	\$3,645,253	\$3,645,253	\$3,645,253
18	Accumulated Depreciation	- Line 11	(\$76,460)	(\$229,381)	(\$382,302)	(\$535,223)	(\$688,143)
19	Deferred Tax Reserve	- Line 16	\$0	\$0	\$0	\$0	\$0
20	Year End Rate Base	Sum of Lines 17 through 19	\$3,568,792	\$3,415,872	\$3,262,951	\$3,110,030	\$2,957,109
<u>Revenue Requirement Calculation:</u>							
21	Average Rate Base	Column (a) = Current Yr Line 20 ÷ 2; Columns (b)-(e) = (Prior Yr Line 20 + Current Yr Line 20) ÷ 2	\$1,784,396	\$3,492,332	\$3,339,411	\$3,186,490	\$3,033,570
22	Pre-Tax ROR		3/ 11.41%	11.18%	10.05%	10.05%	10.05%
23	Return and Taxes	Line 21 * Line 22	\$203,600	\$390,443	\$335,611	\$320,242	\$304,874
24	Book Depreciation	Line 10	\$76,460	\$152,921	\$152,921	\$152,921	\$152,921
25	Property Taxes	\$0 in Year 1, then Prior Year (Line 6- Line 11) * Property Tax Rate	4/ \$0	\$48,144	\$114,432	\$98,867	\$96,377
26	Annual Revenue Requirement	Sum of Lines 23 through 25	\$280,060	\$591,507	\$602,963	\$572,030	\$554,172
27	Remaining FY12 NOL attributable to embedded rate base in RIPUC Docket 4323	Per Page 16 of 19, Line 10 less Line 15	\$5,210,642	\$5,249,789	\$5,290,016	\$5,331,238	\$5,373,385
28	Average Rate Base	Col (a) = Line 27 * 50%; Col (b)-(e) = (Prior Year Line 27 + Current Year Line 27) ÷ 2	\$2,605,321	\$5,230,216	\$5,269,903	\$5,310,627	\$5,352,311
29	Pre-Tax ROR		5/ 11.41%	11.18%	10.05%	10.05%	10.05%
30	Return and Taxes	Line 28 * Line 29	\$297,267	\$584,738	\$529,625	\$533,718	\$537,907
31	Annual Revenue Requirement adjustment to base rates related to NOL	Line 30	\$297,267	\$584,738	\$529,625	\$533,718	\$537,907
32	Total Annual Revenue Requirement	Line 26 + Line 31	\$577,327	\$1,176,246	\$1,132,588	\$1,105,748	\$1,092,079

1/ Actual Incremental Retirements

2/ Actual Incremental Cost of Removal

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

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

4/ FY 2016 effective property tax rate of 3.1% per Page 14 of 19 at Line 35(h).

5/ Cols (a) & (b) - Per Page 17 of 19, Line 1; Cols (c) & (d) - Per Note 3 above

The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
Computation of Revenue Requirement on FY 2012 Actual Incremental Capital Investment
Calculation of Tax Depreciation and Repairs Deduction

Line No.			Fiscal Year 2012 (a)	Fiscal Year 2013 (b)	Fiscal Year 2014 (c)	Fiscal Year 2015 (d)	Fiscal Year 2016 (e)
<u>Capital Repairs Deduction</u>							
1	Plant Additions	Per Page 10 of 19, Line 1	\$6,816,729				
2	Capital Repairs Deduction Rate	Per Tax Department	1/ 67.43%				
3	Capital Repairs Deduction	Line 1 * Line 2	\$4,596,520				
<u>Bonus Depreciation</u>							
4	Plant Additions	Line 1	\$6,816,729				
5	Less Capital Repairs Deduction	Line 3	\$4,596,520				
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	\$2,220,209				
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	2/ 85.00%				
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	\$1,887,177				
9	Bonus Depreciation Rate (April 2011 - December 2011)	1 * 75% * 100%	75.00%				
10	Bonus Depreciation Rate (January 2012 - March 2012)	1 * 25% * 50%	12.50%				
11	Total Bonus Depreciation Rate	Line 9 + Line 10	87.50%				
12	Bonus Depreciation	Line 8 * Line 11	\$1,651,280				
<u>Remaining Tax Depreciation</u>							
13	Plant Additions	Line 1	\$6,816,729				
14	Less Capital Repairs Deduction	Line 3	\$4,596,520				
15	Less Bonus Depreciation	Line 12	\$1,651,280				
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - 14 - 15	\$568,929	\$568,929	\$568,929	\$568,929	\$568,929
17	20 YR MACRS Tax Depreciation Rates	Per IRS Pub. 946	3.750%	7.219%	6.677%	6.177%	5.713%
18	Remaining Tax Depreciation	Line 16 * Line 17	\$21,335	\$41,071	\$37,987	\$35,143	\$32,503
19	Cost of Removal	Per Page 10 of 19, Line 5	(\$3,171,476)				
20	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19	\$3,097,659	\$41,071	\$37,987	\$35,143	\$32,503

- 1/ Capital Repairs percentage is based on the actual results of the FY 2012 tax return. Since growth is not included in the ISR, the percentage was derived by taking property qualifying for the repairs deduction as a percentage of the total annual plant additions in those categories that are considered as potentially qualifying for Capital Repairs deduction.
- 2/ Since not all property additions qualify for bonus depreciation and because a project must be started after the beginning of the bonus period, January 1, 2008, an estimate of 85% is used rather than 100%.

**The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
True-up for Capital Repairs, Bonus Depreciation Deduction, and NOL on FY 2015 Capital Investments**

<u>Line No.</u>	<u>Update Capital Repairs Rate, Bonus Depreciation, and NOL in FY 2015 Revenue Requirement on FY 2015 Capital Investment</u>	(a)
1	FY 2015 Revenue Requirement using estimated capital repairs deduction rate of 67.43%, estimated bonus depreciation rate of 37.50%, and no NOL per RIPUC Docket 4474	\$2,694,048
2	FY 2015 Revenue Requirement using actual capital repairs deduction rate of 63.81%, actual bonus depreciation rate of 50.00%, \$481(a) adjustment of \$4,311,849, tax loss on retirements of \$823,616 and NOL of \$19,205,538	<u>\$3,541,285</u>
3	Increase in revenue requirement	\$847,237

Line Notes

- | | |
|---|--|
| 1 | RIPUC Docket No. 4474, Attachment MAL-1 Supplemental, Page 1, Line 2 |
| 2 | From Page 4 of 19, Line 27(a) |
| 3 | Line 2 - Line 1 |

**The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
FY 2012 - FY 2014 Incremental Capital Investment Summary**

Line No.			Actual Fiscal Year 2012 (a)	Actual Fiscal Year 2013 (b)	Actual Fiscal Year 2014 (c)
<u>Capital Investment</u>					
1	ISR-eligible Capital Investment	Col (a) Docket No. 4219 FY 2012 ISR Reconciliation Filing less audit adjustment of \$203,902; Col (b) Docket No. 4306 FY 2013 ISR Reconciliation Filing less audit adjustment of \$44,855; Col (c) Docket No. 4380 FY 2014 ISR Reconciliation Filing less audit adjustment of \$266,685	\$ 54,477,445	\$56,416,101	\$70,137,361
2	ISR-eligible Capital Additions included in Rate Base per R.I.P.U.C. Docket No. 4323	Docket No. 4323 Schedule MDL-3-Gas Page 51, Line Notes 1(a), 2(b) and 3(e)	\$47,660,716	\$57,184,191	\$47,653,493
3	Incremental ISR Capital Investment	Line 1 - Line 2	\$6,816,729	(\$768,090)	\$22,483,868
<u>Cost of Removal</u>					
4	ISR-eligible Cost of Removal	Col (a) Docket No. 4219 FY 2012 ISR Reconciliation Filing; Col (b) Docket No. 4306 FY 2013 ISR Reconciliation Filing; Col (c) Actual FY 2014 ISR Gas Cost of Removal per Company's Books	\$2,583,612	\$3,152,565	\$2,707,824
5	ISR-eligible Cost of Removal in Rate Base per R.I.P.U.C. Docket No. 4323	Docket No. 4323, Workpaper MDL-19-GAS, Page 3	\$5,755,088	\$4,701,396	\$3,917,830
6	Incremental Cost of Removal	Line 4 - Line 5	(\$3,171,476)	(\$1,548,831)	(\$1,210,006)
<u>Retirements</u>					
7	ISR-eligible Retirements	Col (a) Docket No. 4219 FY 2012 ISR Reconciliation filing; Col (b) Docket No. 4306 FY 2013 ISR Reconciliation filing; Col (c) Actual FY 2014 ISR Gas Retirements	\$5,366,562	5,775,791	\$5,274,944
8	ISR-eligible Retirements per R.I.P.U.C. Docket No. 4323	Col (a) Docket No. 4219 Supplemental Testimony 2-17-2011; Col (b) Docket No. 4306 FY 2013 ISR Proposal Filing; Col (c)= Line 2(c) * 7.68% Retirement rate per Docket No. 4323 (Workpaper MDL-19-GAS p 4)	\$3,074,116	\$2,498,949	\$3,659,788
9	Incremental Retirements	Line 7- Line 8	\$2,292,446	\$3,276,842	\$1,615,155

The Narragansett Electric Company
d/b/a National Grid
FY 2016 Property Tax Recovery Adjustment
(\$000s)

Line	Effective Tax Rate Calculation	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
		<u>RY End</u>	<u>ISR Additions</u>	<u>Non-ISR Add's</u>	<u>Total Add's</u>	<u>Bk Depr</u>	<u>Retirements</u>	<u>COR</u>	<u>End of FY14</u> As filed
1	Plant In Service	\$805,721	\$11,690	\$994	\$12,683		(\$879)		\$817,524
2									
3	Accumulated Depr	\$347,664				\$4,691	(\$879)	(\$451)	\$351,025
4									
5	Net Plant	\$458,057							\$466,499
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		<u>End of FY14</u>	<u>ISR Additions</u>	<u>Non-ISR Add's</u>	<u>Total Add's</u>	<u>Bk Depr</u>	<u>Retirements</u>	<u>COR</u>	<u>End of FY15</u>
13									
14	Plant In Service	\$817,569	\$74,915	\$21,927	\$96,842		(\$7,969)		\$906,442
15									
16	Accumulated Depr	\$351,025				\$30,031	(\$7,969)	(\$2,425)	\$370,661
17									
18	Net Plant	\$466,544							\$535,781
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		<u>End of FY15</u>	<u>ISR Additions</u>	<u>Non-ISR Add's</u>	<u>Total Add's</u>	<u>Bk Depr</u>	<u>Retirements</u>	<u>COR</u>	<u>End of FY16</u>
26									
27	Plant In Service	\$906,442	\$90,072	\$27,135	\$117,208		(\$3,178)		\$1,020,472
28									
29	Accumulated Depr	\$370,661				\$33,460	(\$3,178)	(\$3,796)	\$397,147
30									
31	Net Plant	\$535,781							\$623,325
32									
33	Property Tax Expense	\$16,221							\$19,316
34									
35	Effective Prop tax Rate	3.03%							3.10%
36									
37									
38	Property Tax Recovery Calculation	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
39		<u>Cumulative Incremental ISR Property Tax for FY14</u>				<u>Cumulative Incremental ISR Property Tax for FY15</u>			(i)
40									(j)
41	ISR Additions		\$11,690				\$74,915		\$90,072
42	Book Depreciation: base allowance on ISR eligible plant		(\$4,060)				(\$24,356)		(\$24,356)
43	Book Depreciation: current year ISR additions		(\$631)				(\$1,172)		(\$1,469)
44	COR		<u>\$451</u>				<u>\$2,425</u>		<u>\$3,796</u>
45									
46	Net Plant Additions		\$7,449				\$51,812		\$68,044
47									
48	Rate Year Effective Tax Rate		3.06%				3.06%		3.06%
49	Property Tax Recovery on 2 mos FY14 vintage investment			\$228				\$235	\$224
50	Property Tax Recovery on FY15 vintage investment							\$1,583	\$1,514
51	Property Tax Recovery on FY16 vintage investment								\$2,079
52									
53	ISR Year Effective Tax Rate	3.35%				3.03%			3.10%
54	RY Effective Tax Rate & differential	3.06%	0.29%			3.06%	-0.03%		3.06%
55	RY Effective Tax Rate differential for 2 months FY 2014		0.05%						0.04%
56	RY Net Plant times Tax Rate differential	\$458,057	* 0.05%	\$225		\$458,057	* -0.03%	(\$116)	\$458,057
57	2 mos FY14 Net Adds times ISR Year Effective Tax rate	\$7,449	* 0.29%	<u>\$22</u>		\$7,685	* -0.03%	(\$2)	* 0.04%
58	FY15 Net Adds times ISR Year Effective Tax rate					\$51,812	* -0.03%	<u>(\$13)</u>	* 0.04%
59	FY16 Net Adds times ISR Year Effective Tax rate								* 0.04%
60	Total Property Tax related to rate differential			<u>\$247</u>				<u>(\$131)</u>	<u>\$254</u>
61									
62	Total ISR Property Tax Recovery			<u>\$475</u>				<u>\$1,687</u>	<u>\$4,071</u>

The Narragansett Electric Company
d/b/a National Grid
FY 2016 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, Attach. MAL-1 2nd Supp at Page 12 of 18
22(a) Line 9(h)
22(h) Line 20(h) ÷ Line 18(h)
27(a) Line 14(h)
27(b) Per Reliability Plan FY 2016 Proposal , Line 1
27(c) FY 2016 actual Growth investment of \$21,990k and General Plant of \$5,146k.
27(d) Line 27(b) + Line 27(c)
27(f) Actual FY 2016 retirements
27(h) Line 27(a) + Line 27(d) + Line 27(f)
29(a) Line 16(h)
29(e) Rate Year depn allowance of \$28,130k + (Line 1(d)+Line 1(f)* composite depn rate of 3.38%) + (Line 14(d)+Line 14(f)* composite depn rate of 3.38%) +(Line 27(d)+Line 27(f)* 3.38% * 50%)
29(f) Line 27(f)
29(g) Less Page 2 of 19, Line 7
29(h) Sum of Line 29(a) through 29(g)
31(a) Line 18(h)
31(h) Line 27(h) - Line 29(h)
33(a) Line 20(h)
33(h) FY 2016 actual property tax expense per Company's books.
35(a) Line 22(h)
35(h) Line 33(h) ÷ Line 31(h)
41(a) - 62(g) Per Docket 4474 FY 2015 Gas ISR Plan Reconciliation filing, Attach. MAL-1 2nd Supp at Page 12 of 18

Line Notes

41(j) Line 27(b)
42(j) Per Page 2 of 19, Line 5
43(j) Per Page 2 of 19, Line 12
44(j) Less Line 29(g)
46(j) Sum of Lines 41 through 44
48(j) Line 9(a)
49(k) $((\text{Lines } 41(b) + 42(b) + 44(b)) - ((\text{Line } 41(b) + \text{Line } 1(f)) * 3.38\% \text{ composite depn rate } * 50\% * 2/12) - ((\text{Line } 41(b) + \text{Line } 1(f)) * 3.38\% \text{ composite depn rate }) - ((\text{Line } 41(b) + \text{Line } 1(f)) * 3.38\% \text{ composite depn rate }) * \text{Line } 48(j))$
50(k) $((\text{Lines } 41(f) + 42(f) + 44(f)) - ((\text{Line } 41(f) + \text{Line } 14(f)) * 3.38\% \text{ composite depn rate } * 50\%) - ((\text{Line } 41(f) + \text{Line } 14(f)) * 3.38\% \text{ composite depn rate }) * \text{Line } 48(j))$
51(k) Line 46(j) * Line 48(j)
53(i) Line 35(h)
54(i) Line 9(a)
54(j) Line 53(i) - Line 54(i)
56(i) Line 5(a)
57(i) $((\text{Lines } 41(b) + 42(b) + 44(b)) - ((\text{Line } 41(b) + \text{Line } 1(f)) * 3.38\% \text{ composite depn rate } * 50\% * 2/12) - ((\text{Line } 41(b) + \text{Line } 1(f)) * 3.38\% \text{ composite depn rate }) - ((\text{Line } 41(b) + \text{Line } 1(f)) * 3.38\% \text{ composite depn rate })$
58(i) $((\text{Lines } 41(f) + 42(f) + 44(f)) - ((\text{Line } 41(f) + \text{Line } 14(f)) * 3.38\% \text{ composite depn rate } * 50\%) - ((\text{Line } 41(f) + \text{Line } 14(f)) * 3.38\% \text{ composite depn rate })$
59(i) Line 46(j)
56(j)-59(j) Line 54(j)
56(k)-59(k) Line 56(i)*Line 56(j); Line 57(i)*Line 57(j); Line 58(i)*Line 58(j); Line 59(i)*Line 59(j)
60(k) Sum of Lines 56 through 59
62(k) Sum of Lines 49(k) through 51(k) + Line 60(k)

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4540
FY 2016 Gas Infrastructure, Safety,
and Reliability Plan Reconciliation Filing
Attachment MAL-1
Page 16 of 19

The Narragansett Electric Company
d/b/a National Grid
FY 2016 Gas ISR Revenue Requirement Reconciliation
Deferred Income Tax ("DIT") Provisions and Net Operating Losses ("NOL")

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
						CY 2011	CY 2012	Jan-2013	Feb 13 - Jan 14	
1 Total Base Rate Plant DIT Provision						\$ 16,572,023	\$ 19,058,494	\$ 1,700,343	\$ 13,893,167	
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
2 Total Base Rate Plant DIT Provision						\$17,193,641	\$18,309,741	\$11,577,639	\$0	\$0
3 Incremental FY 12	\$1,121,846	\$1,080,717	\$1,038,476	\$936,823	\$894,677	\$1,121,846	(\$41,129)	(\$42,241)	(\$101,653)	(\$42,146)
4 Incremental FY 13	\$0	(\$734,732)	(\$690,174)	(\$657,828)	(\$612,486)	\$0	(\$734,732)	\$44,558	\$32,346	\$45,341
5 Incremental FY 14	\$0	\$0	\$6,444,262	\$6,188,886	\$6,008,504	\$0	\$0	\$6,444,262	(\$255,376)	(\$180,381)
6 FY 2015	\$0	\$0	\$0	\$23,867,204	\$23,391,000	\$0	\$0	\$0	\$23,867,204	(\$476,204)
7 FY 2016	\$0	\$0	\$0	\$0	\$27,888,867	\$0	\$0	\$0	\$0	\$27,888,867
8 TOTAL Plant DIT Provision	\$ 1,121,846	\$ 345,985	\$ 6,792,564	\$ 30,335,085	\$ 57,570,562	\$ 18,315,487	\$ 17,533,880	\$ 18,024,218	\$ 23,542,521	\$ 27,235,477
9 NOL						\$ 6,268,061	\$ 6,136,520	\$ 23,775,494	\$ 19,205,538	\$ 14,571,198
10 Lesser of NOL or DIT Provision						\$ 6,268,061	\$ 6,136,520	\$ 18,024,218	\$ 19,205,538	\$ 14,571,198

Line Notes:

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

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

	(a)	(b)	(c)	(d)	(e)
	Revenue Requirement Year				
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
1 Return on Rate Base	11.41%	11.18%	10.05%	10.05%	10.05%
	Vintage Capital Investment Year				
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
2 Lesser of NOL or DIT Provision	\$ 6,268,061	\$ 6,136,520	\$ 18,024,218	\$ 19,205,538	\$ 14,571,198
<u>Revenue Requirement Increase due to NOL</u>					
	Revenue Requirement Year				
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
3 FY 2012	\$ 357,593	\$ 700,769	\$ 629,940	\$ 629,940	\$ 629,940
4 FY 2013	\$ -	\$ 343,031	\$ 616,720	\$ 616,720	\$ 616,720
5 FY 2014	\$ -	\$ -	\$ 888,311	\$ 1,811,434	\$ 1,811,434
6 FY 2015	\$ -	\$ -	\$ -	\$ 965,078	\$ 1,930,157
7 FY 2016	\$ -	\$ -	\$ -	\$ -	\$ 732,203
8 TOTAL	<u>\$ 357,593</u>	<u>\$ 1,043,801</u>	<u>\$ 2,134,971</u>	<u>\$ 4,023,173</u>	<u>\$ 5,720,454</u>
9 Total FY 2012 through FY 2014 revenue requirement impact to be recovered over three years					\$ 3,536,365
10 Recovery period in years					3
11 Amount to be included in FY 2016 reconciliation					\$ 1,178,788

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 (e) - Weighted Average Cost of Capital per Settlement Agreement RIPUC Docket No. 4323
- 2 Per Page 16 of 19, Line 10
- 3 Line 2(a) * Line 1(a) * 50%; Line 2(a) * Line 1(b); Line 2(a) * Line 1(c); Line 2(a) * Line 1(d); Line 2(a) * Line 1(e)
- 4 Line 2(b) * Line 1(b) * 50%; Line 2(b) * Line 1(c); Line 2(b) * Line 1(d); Line 2(b) * Line 1(e)
- 5 Col (c) =

a) NOL applied to FY 2014 ISR DIT	\$ 6,444,262	Page 16 of 19 Line 2(h)
b) FY 2014 ISR weighted average additions rate	32.34%	Page 18 of 19 Line 16
c) FY 2014 ISR weighted average NOL	\$ 2,083,939	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	\$ 209,436	Line (c) * Line (d)
f) NOL applied to base rate deferred tax provision	\$ 11,579,956	Page 16 of 19 Line 8(h) less Line (a) above
g) FY 2014 weighted average base rate DIT rate	58.33%	Per Page 19 of 19 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	<u>\$ 888,311</u>	Line (e) + Line (j)
- 5 cont. Col (d) = Line 2(c) * Line 1(d); Col (e) = Line 2(c) * Line 1(e)
- 6 Col (d) = Line 1(d) * Line 2(d) * 50%; Col (e) = Line 1(d) * Line 2(d)
- 7 Col (e) = Line 1(e) * Line 2(e) * 50%
- 8 Sum of Lines 3 through 7
- 9 Line 6(a) + Line 6(b) + Line 6(c)
- 10 Three year recovery period as approved in Docket RIPUC 4474.
- 11 Line 9 ÷ Line 10

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4540
FY 2016 Gas Infrastructure, Safety,
and Reliability Plan Reconciliation Filing
Attachment MAL-1
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The Narragansett Electric Company
d/b/a National Grid
Weighted ISR Additions FY 2014
(\$000s)

<u>Line</u> <u>No.</u>	<u>Month</u> <u>No.</u>	<u>Month</u>	<u>FY 2014 ISR</u> <u>Additions</u> (a)	<u>In</u> <u>Rates</u> (b)	<u>Not In</u> <u>Rates</u> (c) = (a) - (b)	<u>Weight</u> (d)	<u>Weighted</u> <u>Average</u> (e) = (d) * (c)
1				\$57,184,191			
2	1	Apr-13	\$5,844,780	4,765,349	\$1,079,431	0.958	\$1,034,455
3	2	May-13	5,844,780	4,765,349	1,079,431	0.875	944,502
4	3	Jun-13	5,844,780	4,765,349	1,079,431	0.792	854,549
5	4	Jul-13	5,844,780	4,765,349	1,079,431	0.708	764,597
6	5	Aug-13	5,844,780	4,765,349	1,079,431	0.625	674,644
7	6	Sep-13	5,844,780	4,765,349	1,079,431	0.542	584,692
8	7	Oct-13	5,844,780	4,765,349	1,079,431	0.458	494,739
9	8	Nov-13	5,844,780	4,765,349	1,079,431	0.375	404,787
10	9	Dec-13	5,844,780	4,765,349	1,079,431	0.292	314,834
11	10	Jan-14	5,844,780	4,765,349	1,079,431	0.208	224,881
12	11	Feb-14	5,844,780	-	5,844,780	0.125	730,598
13	12	Mar-14	5,844,780	-	5,844,780	0.042	243,533
14	Total FY 2014		<u>\$70,137,361</u>	<u>\$47,653,493</u>	<u>\$22,483,868</u>		<u>\$7,270,810</u>
15	Total Additions February & March 2014				\$11,689,560		
16	FY 2014 Weighted Average Incremental Rate Base Percentage						32.34%

Column (a) = Page 13 of 19, Line 1(c)

Column (b) = Page 13 of 19, 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
RIPUC Docket No. 4540
FY 2016 Gas Infrastructure, Safety,
and Reliability Plan Reconciliation Filing
Attachment MAL-1
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The Narragansett Electric Company
d/b/a National Grid
Weighted ISR Deferred Tax Provision FY 2014
(\$000s)

<u>Line</u> <u>No.</u>	<u>Month</u> <u>No.</u>	<u>Month</u>	<u>FY 2014 ISR</u> <u>Deferred Tax</u> (a)	<u>In</u> <u>Rates</u> (b)	<u>Not In</u> <u>Rates</u> (c) = (a) - (b)	<u>Weight</u> (d)	<u>Weighted</u> <u>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 16 of 19, Line 1(i). Lines 2 through 11 = 1/12th of Line 1.

Column (d) = (12.5 - Month No.) ÷ 12

Line 15 = Line 14(e)/Line 14(c)