

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: THE NARRAGANSETT ELECTRIC :
COMPANY d/b/a NATIONAL GRID 2015 : DOCKET NO. 4474
GAS INFRASTRUCTURE, SAFETY AND :
RELIABILITY PLAN :

REPORT AND ORDER

I. National Grid's Filing

On December 20, 2013, The Narragansett Electric Company d/b/a National Grid (National Grid or Company) filed its proposed Gas Infrastructure, Safety and Reliability Plan (Gas ISR Plan) for FY 2015 pursuant to R.I. Gen. Laws §39-1-27.7.1.¹ The Gas ISR Plan set forth the Company's proposals which it identified as necessary to enhance the safety and reliability of the Company's natural gas delivery system. The Plan specifically provided for work in a number of areas including replacing leak-prone gas mains and services, upgrading the system's pressure regulating systems, responding to emergency leak situations, and addressing conflicts arising out of public works projects. The Company noted that the goal of the Plan is to provide for a safe and reliable system through coordinated and cost-effective work. In support of its Plan, the Company presented the joint prefiled testimony of Walter F. Fromm and Jackson M. Lehr. William R. Richer and Yi-An Chen also provided prefiled testimony.²

¹ Enacted in May of 2010, R.I. Gen. Laws §39-1-27.7.1 requires, in part, that a gas distribution company consult with the Division of Public Utilities and Carriers (Division) regarding its infrastructure, safety and reliability spending plan which shall address capital spending on utility infrastructure and all other costs related to maintaining safety and reliability that are mutually agreed upon with the Division. That plan must be submitted to the Commission for review and approval.

² The Gas ISR Plan is comprised of eleven parts: Filing Letter; Testimony of Fromm and Lehr; Five Sections of the Gas ISR Plan, including Section 1 – Introduction and Summary; Section 2 - Gas Capital Investment Plan; Section 3 – Revenue Requirement; Section 4 – Rate Design; Section 5 – Bill Impact; Redlined Gas Expansion Plan to show revisions; Clean copy of Gas Expansion Plan; Testimony of Richer;

Mr. Fromm is the Company's Director, Network Strategy – Gas, which includes capital investment strategy. Mr. Lehr is the Company's Director of Market Strategy in the Customer & Business Strategy Department, taking the lead in areas of gas conversion as well as electric-related areas. The joint testimony described the proposed Plan which was designed to proactively replace aging leak-prone pipes and services, upgrade the pressure regulating systems; respond to emergency leak situations; and address conflicts that arise with public works projects.³ In FY 2015, several changes were proposed to simplify the gas expansion pilot program which commenced in FY 2014.⁴ The joint testimony indicated that the Plan was prepared in consultation with the Division of Public Utilities and Carriers.

According to the joint testimony National Grid proposes \$71.7 million of capital investments to be included for recovery in the proposed Gas ISR Plan in Fiscal Year 2015. The budget is broken down as follows: \$38.0 million for proactive main and service replacement; \$0.2 million for reactive main replacement; \$3.9 million for public works programs plus an additional \$1.3 million in reimbursable work; \$14.1 million for mandated programs; \$10.4 million for gas system reliability; \$4.7 million for special projects; and \$0.4 million for incremental operation and maintenance expenses related to expansion of the leak-prone pipe replacement program. The joint testimony maintained that the Plan fulfills the safety and reliability requirements of the gas distribution system in Rhode Island.⁵

and Testimony of Chen. Collectively, this was marked as National Grid Exhibit 1 and can be found on the PUC's website at: [http://www.ripuc.org/eventsactions/docket/4474-NGrid-Gas-ISR-2015\(12-20-13\).pdf](http://www.ripuc.org/eventsactions/docket/4474-NGrid-Gas-ISR-2015(12-20-13).pdf).

³ National Grid Ex. 1, Gas Infrastructure Safety, and Reliability Plan FY 2015 Proposal (Test. of Fromm and Lehr) at 6 (Dec. 20, 2013).

⁴ *Id.* at 7.

⁵ *Id.* at 8-9.

National Grid proposed to invest a total of \$93.0 million, of which, \$71.7 million is included in the FY 2015 Gas ISR recovery mechanism. The remainder, or \$21.7 million, “will be for projected growth and allocated spending which is not included for recovery in the FY 2015 Gas ISR Plan.”⁶ The purpose of the proactive main and service replacement program is to replace leak-prone gas mains and services. In FY 2015, National Grid forecasts spending \$36.5 million to replace approximately 53 miles of leak-prone pipe, up from 50 miles in the FY 2014 Gas ISR Plan, and \$1.5 million to replace approximately 500 leak-prone services, a reduction from the FY 2014 Gas ISR Plan. In order to support the increased replacements, National Grid proposed including approximately \$400,000 for additional personnel to meet the goal.⁷

The work in the Reactive Main Replacement category consists of emergency main replacements due to leaks or other unplanned work where the condition of the main dictates immediate replacement. The Company has proposed a reduction from \$500,000 in FY 2014 to \$200,000 in FY 2015, citing “minimal requests” as a result of the recent increase in proactive main replacement.⁸

The purpose of the public works category is to coordinate with municipalities to improve the safety and reliability of the distribution system in conjunction with public works projects. National Grid stated that “[w]hile the primary purpose of [p]ublic [w]orks spending is to address direct conflicts between planned public works projects and existing gas infrastructure, [p]ublic [w]orks spending provides an opportunity to coordinate other system improvement work, such as replacement of leak-prone pipe, system reliability upgrades, elimination of redundant main, and regulator station

⁶ National Grid Ex. 1 (Section 2: Gas Capital Investment Plan) at 2.

⁷ *Id.* at 4-6.

⁸ *Id.* at 6.

upgrades.”⁹ Such coordination allows National Grid to save money on repaving costs.¹⁰ In FY 2015, the budget in this category will provide for replacement of approximately seven miles of leak prone pipe, an increase from the three miles in FY 2014.¹¹

The first of four mandated programs is the corrosion program which is the adding of cathodic protection to existing steel coated mains installed prior to 1971 to extend the service life of the pipe. It is a standardized program which has been mandated by the U.S. Department of Transportation since 1971 for all buried steel facilities. The second program, meter replacement, covers the capital costs related to the purchase of replacement meters. The third program, capital leak repairs addresses leaking gas services and extends the useful life of cast iron mains by encapsulating leaking cast iron joints. The final subcategory of “non-leak other” is associated with costs incurred for service relocations, meter protection, service abandonments, and the installation of curb valves. The proposed budget for the entire mandated programs category is \$14.1 million.¹²

There are six programs that comprise the gas system reliability category which has a total budget of \$10.4 million. The first of those programs is the system automation and control program, the purpose of which is to meet federal code requirements aimed at increasing system automation and control. The \$1 million allocated to this program will “provide AC power to 25 regulator stations and telemetry to 20 sites, and it would install remote controls at 20 locations.”¹³ Pressure regulating facilities that are designed to control system pressures and maintain continuity of supply is the second program in the

⁹ *Id.* at 7.

¹⁰ *Id.* at 6.

¹¹ *Id.* at 8.

¹² *Id.* at 8-9.

¹³ *Id.* at 10-11.

reliability category. The \$4.6 million budget is designed to address condition-based assessments and perform work at 9 facilities in FY 2015.¹⁴ The third program, the gas planning program, budgeted at \$1 million in FY 2015, identifies projects that support system reliability through standardization, simplification, integration, and new supply sources.¹⁵ The water intrusion program is the fourth program, budgeted at \$0.2 million, or half of the FY 2014 level, based on minimal requests over recent years, due to the proactive main replacement program obviating the need for the program in many areas. The fifth program, liquefied natural gas (LNG) facilities, budgeted at \$0.6 million in FY 2015, is intended to upgrade existing LNG facilities in Rhode Island, excluding the Providence facility. Finally, the valve installation/replacement program for installing or replacing new valves used to control the flow of gas will be expanded by \$0.3 million to \$0.8 million to provide additional public safety benefits and to improve meter reading and collections in areas where the Company has experienced difficulty in accessing the meters.¹⁶

Three special projects are included in the Gas ISR Plan. The first, budgeted at \$175,000, is completion of a project associated with the relocation of Interstate I-195 in the City of Providence. The second, budgeted at \$1.5 million, is replacement of the boil-off compressor located at the Exeter LNG facility, the design and procurement activities of which began in FY 2014.¹⁷ Finally, budgeted at \$3 million, is continuation of the gas expansion pilot program with several modifications in response to lessons learned from the initial program rollout in FY 2014. Noting that only two small projects were able to

¹⁴ *Id.* at 11-12.

¹⁵ *Id.* at 12.

¹⁶ *Id.* at 13-14.

¹⁷ *Id.* at 14-15.

move forward in FY 2014, the Company indicated that it received feedback indicating that the program needed to be simplified and more predictable, that the conversion costs needed to be lower, and finally, that there needed to be more flexibility for customers to respond to the Company's expansion proposal. In response to the feedback, the Company proposed to replace the contribution in aid of construction charged to customers with a fixed charge of \$150, with the difference between the fixed charge and contribution in aid of construction included in the reconciliation filing each year. The Company is also introducing a density test which will allow projects with a minimum density of 70 feet per main to be considered for expansion. Finally, the customer commitment requirements will be modified to require a minimum of 10% of prospective customers to commit to a proposed project. According to the Company, potential projects identified in FY 2014 that did not qualify under the old criteria will be eligible for consideration in FY 2015.¹⁸

Mr. Richer, Director of Revenue Requirements-Rhode Island for National Grid USA Service Company, Inc., provided testimony to describe the Company's revenue requirement calculation for FY 2015 in support of the Gas ISR Plan. He explained that the FY 2015 Gas ISR revenue requirement of 4,392,480 includes National Grid's return, depreciation expense and property tax expense associated with \$3,992,480 in capital investment plus \$400,000 of the operation and maintenance (personnel) expense related to the expansion of the proactive main replacement program.¹⁹ The total incremental fiscal year rate adjustment is \$3,727,972.²⁰

¹⁸ *Id.* 15-16; National Grid Ex. 1 (Section 5: Gas Expansion Plan) at 2-4.

¹⁹ National Grid Ex. 1 (Test. of Richer) at 3.

²⁰ National Grid Ex. 1 (Section 3: Revenue Requirement) at Attachment 1, 1.

Ms. Chen, Senior Analyst in Regulation and Pricing, provided testimony regarding how the rate design was established, how ISR rate factors were calculated and the resulting customer bill impacts. Ms. Chen noted that the starting point for developing the rate design was the rate base that was approved in Docket No. 4323 using the updated rate base allocator from the Amended Settlement Agreement. She described how the Company then compiled forecasted throughput data by rate class and allocated the incremental revenue requirement to each rate class based on the rate percentage allocations and the forecasted throughput to develop separate rate class ISR factors on a per therm basis. Finally, Ms. Chen explained that the incremental operation and maintenance expense was allocated to all rate classes based on the total forecasted throughput on a per therm basis. Ms. Chen identified each class' ISR rate factor which ranged from \$0.0028 to \$0.0222 per therm. She indicated that the ISR factors would become effective April 1, 2014. Ms. Smith noted that the bill impact for an average residential heating customer using 846 therms would result in an annual rate increase of \$10.82 or 0.9 percent.²¹

II. Division's Comments

On February 27, 2014, the Division filed comments in the form of a letter from Leo Wold, Special Assistant Attorney General.²² Mr. Wold explained that the Division had reviewed the budget and summarized the Division's positions on each of the six Gas ISR Plan categories. The Division supported the additional personnel expenses included

²¹ National Grid Ex. 1 (Test. of Chen) at 1-4.

²² Division Ex. 2 (Letter from Leo Wold, Assistant Attorney General to Luly Massaro (Feb. 25, 2014). <http://www.ripuc.org/eventsactions/docket/4474-DPU-Recommendation.pdf> The Division also filed testimony of David Effron, its consultant, to discuss a property tax adjustment National Grid made during the Division's review period in response to Mr. Effron's recommendation. Division Ex. 1 (Test. of Effron) at 3-4. <http://www.ripuc.org/eventsactions/docket/4474-DPU-Recommendation.pdf>

in the expansion of the proactive main replacement program, specifically noting that they would be subject to reconciliation. Citing a downward trend in emergency main breaks, such as those caused by homeowners or excavators, the Division supported the reduction in the reactive gas main replacement program.²³ The Division also supported the policy to coordinate infrastructure replacement with public works projects to reduce the paving costs, “by far the highest cost component of any gas main installation.”²⁴ The Division had no comments on the mandated programs, but did question the \$350,000 expense associated with the replacement of the Old Mill Lane regulator station, included in the reliability category, because the regulator station had already been replaced seven years earlier. The Division also requested the Company to provide further detail in support of the budget category.²⁵ Finally, the Division opined that the proposed modifications to the gas expansion pilot program should “produce better results in the FY15 period.”²⁶ Further, the Division supported the continued budget allocation of \$3.0 million.²⁷

III. Hearing

On March 20, 2014, the Commission conducted an Evidentiary Hearing at its offices.²⁸ One member of the public appeared to question National Grid’s cost estimates provided to residential customers in connection with gas conversions, indicating that she had received several vastly different quotes each time she inquired. The PUC requested

²³ Division Ex. 2 at 1-2.

²⁴ *Id.* at 2.

²⁵ *Id.* at 3.

²⁶ *Id.* at 4.

²⁷ *Id.*

²⁸ Raquel Webster, Esq. entered an appearance on behalf of National Grid while Leo Wold, Esq., Assistant Attorney General, entered an appearance on behalf of the Division and Cynthia G. Wilson-Frias, Senior Legal Counsel was PUC counsel on this matter.

that National Grid review the matter and provide an explanation in a response to a record request.²⁹

National Grid presented Mr. Fromm, Mr. Lehr, Mr. Richer and Ms. Chen for cross examination. Mr. Fromm presented a power point presentation outlining the FY 2015 Gas ISR Plan.³⁰ Mr. Fromm noted that in Rhode Island, there is approximately 3,180 miles of underground gas distribution mains with approximately 42% being considered leak-prone. Leak-prone pipe includes that which is non-cathodically protected steal, cast iron and wrought iron mains. The 53 miles of main slated for proactive replacement in FY 2015 has been prioritized because over the last ten years, there have been over 800 repairs on this inventory of main.³¹ He expounded on the prioritization by noting that the number of repairs is correlated to the nature and severity of leaks, the proximity to buildings and populated areas, activity in the area that may adversely affect the mains, and whether the field operators have provided any additional information that would warrant expedited replacement.³² In order to perform the proposed level of main replacement, including public works related projects, it became necessary to add an additional seven miles of main replacement in the FY 2015 Gas ISR Plan. National Grid also requested funding of an additional eleven full time employees who would be trained as meter service technicians to perform necessary work after the independent contractors install new mains and services.³³

Discussing leakage information, Mr. Fromm explained that the documentation that National Grid must submit to the Pipeline and Hazardous Materials Safety

²⁹ Tr. 3/20/14 at 5-9.

³⁰ See National Grid Ex. 2.

³¹ Tr. 3/20/14 at 23-24.

³² *Id.* at 29-30.

³³ *Id.* at 35-37.

Administration has a calculation to back out an estimated leakage level from the unaccounted for gas quantities. The calculation is based on a factor provided by the Environmental Protection Agency based on the type of pipe. The factor is multiplied by the miles of main made up of that particular material. Therefore, National Grid does not report lost and unaccounted for gas, as the assumed level of lost gas is not included. The report includes gas lost to third-party damage, purging operations, and the timing of billing and metering.³⁴

Addressing one project related to public works and categorized under special projects, Mr. Fromm stated that the proposed extension of 3,400 feet of new gas main in the area of the I-195 relocation, would serve parcels of land that are expected to be developed in the future. According to Mr. Lehr, National Grid does not generally anticipate receiving contributions for the extension from future owners of the property. While National Grid does not currently have information regarding the identity of the future gas customers, the Company concluded that extending the distribution system now, while the area is under construction, was logistically much simpler and less costly to ratepayers over the long term.³⁵

With regard to main replacement activity, the Company projects that cost of labor associated with the use of outside contractors is approximately 50-60%, while paving and

³⁴ *Id.* at 44-46. In response to a record request, National Grid stated that “According to the Company’s most recent annual PHMSA filing, the Company’s Net UFG (i.e. not including leakage) for 2013 was calculated to be 3.41%. The Gross UFG (i.e. including leakage) for 2013 was calculated to be 4.36%. National Grid’s Response to RR-5. [http://www.ripuc.org/eventsactions/docket/4474-NGrid-RR\(3-26-14\)\).pdf](http://www.ripuc.org/eventsactions/docket/4474-NGrid-RR(3-26-14)).pdf)

³⁵ Tr. 3/20/2014 at 83-86. In response to Record Request 13, National Grid further expounded on its rationale for extending the main now rather than later by stating that “if the Company were to install the new gas mains after the RIDOT’s final paving activities, the Company would be required to again excavate and subsequently install full-depth permanent roadway patch, as well as a full road width cold plane and overlay, which would be much more costly. National Grid Response to RR-13. [http://www.ripuc.org/eventsactions/docket/4474-NGrid-RR\(3-26-14\)\).pdf](http://www.ripuc.org/eventsactions/docket/4474-NGrid-RR(3-26-14)).pdf)

street restoration is approximately 20-30%, and traffic management is approximately 5-10%.³⁶ According to Mr. Fromm, when National Grid obtains a permit to do work in a municipality, the municipality will advise National Grid whether it will need a police detail along with the number of officers required. Mr. Fromm was not aware of any uniform standards related to the police detail requirements.³⁷ However, in order to more fully respond to the PUC's questions, National Grid presented Alfred Amaral, Director of Field Operations for Rhode Island. He explained that while the municipality does tell National Grid when, where, and the number of police officers or flaggers that will be required, he has been involved in discussions to resolve disagreements, sometimes resulting in fewer officers and in other cases, in more officers. The rate, however, is non-negotiable as it is set through labor contracts between the municipality and the police. He agreed that flaggers would be less costly than police detail.³⁸

Turning to the gas expansion pilot, Mr. Lehr stated that National Grid was planning to perform a more detailed analysis of the economic benefits derived from the investment in the gas expansion pilot program. He indicated that National Grid could perform a similar analysis for the remaining investments included in the Gas ISR plans.³⁹ Summarizing the proposed changes to the pilot, Mr. Lehr reiterated that the goal was to make the process less complex and more certain for customers.⁴⁰

Discussing leak detection, Mr. Amaral explained that during the winter of 2013/2014, National Grid increased the frequency of its leak detection activities in light of the cold winter. Starting in January, the cast iron pipe was surveyed on fifteen day

³⁶ Tr. 3/20/14 at 86-90.

³⁷ *Id.* at 91-93.

³⁸ *Id.* at 93-106.

³⁹ *Id.* at 124-25.

⁴⁰ *Id.* at 126-132.

cycles such that all six cycles would be completed by April 1, 2014. Additionally, because of the frost conditions, Mr. Amaral indicated that the Company reduced the time for checking grade 2 leaks in half. He noted, however, that “the public is [National Grid’s] greatest asset,” in terms of notifying the Company when detecting gas odors, he explained that that the leak surveys result in the detection of approximately 15% of leaks, whereas public notifications result in detection of 85% of leaks.⁴¹

IV. Commission Findings

At an open meeting held on March 27, 2014, the PUC approved the 2015 Gas ISR Plan finding it to be in compliance with statutory mandates. The PUC approved a budget of \$71,696,000 and a revenue requirement of \$4,392,480 which results in an incremental fiscal year rate adjustment of \$3,727,972. It also approved the proposed rates for each rate class. The impact on a residential heating customer using 846 therms per month is an increase of \$10.82 per year or 0.9%.

The PUC finds that National Grid’s proactive pipe replacement program is better than many other utilities due to its comprehensiveness. The PUC remains concerned with the risk related to the legacy cast iron and bare steel mains that will persist beyond the next 20 years at which point all of the vintage mains will have been replaced. The PUC recognizes there are financial and construction-related constraints that limit the ability to further accelerate the replacement schedule, but continues to urge the Company to take advantage of every opportunity to cost-effectively accelerate the replacement schedule. The PUC acknowledges that the 2015 Gas ISR Plan represents another ramp-up of replacement as the Company will target replacement of 70 miles per year, which would

⁴¹ *Id.* at 150-51. Grade 2 leaks are those which need to be monitored regularly, but not necessarily repaired immediately. *Id.* at 167.

reduce the time-frame for removal of leak prone pipe to approximately 20 years. This acceleration requires additional personnel and close coordination with communities' public works department to facilitate increased construction activity in those communities. The 2015 Gas ISR Plan accelerates the rate of pipe replacement by adding an additional seven miles of main and additional personnel. The cost of the additional seven miles alone is over \$4.5 million including the cost of replacing the main plus the additional O&M costs. The PUC believes that the acceleration of the replacements strikes the appropriate balance between cost and safety at this time given the logistical constraints on construction activities in roads and thoroughfares of the State and municipalities.

However, as with any rate increase, the PUC is also concerned with the impact of further increasing rates on businesses and residents in these economic times. In the proposed FY 2016 Gas ISR Plan, National Grid shall include an analysis of where efficiency gains may be achieved within the programs. For example, the PUC observes that the increasing costs of police details result in less funds being available to invest in system improvements. Testimony provided in the instant docket revealed that the gas operation appears to have more ability to manage these costs through better coordination with the municipalities. The PUC will continue to monitor increasing ancillary costs with the expectation that they are controlled while maintaining the mandatory programs.

On the issue of lost and unaccounted for gas, the PUC observes that this data is not only critical to assessing the integrity of the gas system, but would also provide insight into the economic value of the lost commodity. Lastly, the PUC notes that the environmental consequences of methane emissions are increasingly becoming the subject of contemplated federal mitigation policies. In this context, it is important that the Company collect the best available data on lost and unaccounted for gas, and the PUC will endeavor to take a closer examination of the issue in the next Gas ISR filing.

Accordingly, it is

(21779) ORDERED:

1. National Grid's proposed FY 2015 Gas Infrastructure, Safety and Reliability Plan is hereby approved.
2. In its Fiscal Year 2016 Gas Infrastructure, Safety, and Reliability Plan, National Grid shall include a 2014 System Integrity Report.
3. In its Fiscal Year 2016 Gas Infrastructure, Safety, and Reliability Plan, National Grid shall include an analysis of program cost reductions that may be achieved without sacrificing safety.
4. In its Fiscal Year 2016 Gas Infrastructure, Safety and Reliability Plan, National Grid shall include a proposal for how economic development benefits may be measured against the increased costs related to each area of investment.
5. National Grid shall comply with the reporting requirements and all other findings and directives contained in this Report and Order.

EFFECTIVE AT WARWICK, RHODE ISLAND ON APRIL 1, 2014
PURSUANT TO AN OPEN MEETING DECISION ON MARCH 27, 2014.
WRITTEN ORDER ISSUED DECEMBER 16, 2014.

PUBLIC UTILITIES COMMISSION



Margaret E. Curran

Margaret E. Curran, Chairperson

Paul J. Roberti

Paul J. Roberti, Commissioner

Herbert F. DeSimone, Jr.

Herbert F. DeSimone, Jr., Commissioner

Notice of Right of Appeal: Pursuant to R.I. Gen. Laws § 39-5-1, any person aggrieved by a decision or order of the PUC may, within 7 days from the date of the Order, petition the Supreme Court for a Writ of Certiorari to review the legality and reasonableness of the decision or Order.