

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION**

IN RE: NARRAGANSETT ELECTRIC :
COMPANY d/b/a NATIONAL GRID : **DOCKET NO. 4380**
2014 GAS INFRASTRUCTURE, :
SAFETY AND RELIABILITY PLAN :

REPORT AND ORDER

On December 28, 2012, the Narragansett Electric Company, d/b/a National Grid (“NGrid” or the “Company”) filed its proposed Gas Infrastructure, Safety and Reliability Plan (“Plan”) pursuant to R.I. Gen. Laws §39-1-27.7.1.¹ The 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 prefiled testimony of three witnesses: Walter F. Fromm, William R. Richer and Mariella C. Smith.

Mr. Fromm is the Manager of Network Strategy - Gas specifically responsible for being the Jurisdictional Lead in Rhode Island for all gas network strategies. He is also responsible for working with regulators on issues related to the gas system, developing strategies to support NGrid’s objectives regarding investment in the gas system and

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 that 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.

providing appropriate testimony in regulatory proceedings. The purpose of his testimony was to describe the proposed Plan which he identified 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. Mr. Fromm noted that the Plan was prepared in consultation with the Division of Public Utilities and Carriers (“Division”). He described how the ISR Plan includes the infrastructure safety and reliability work currently performed under the Accelerated Replacement Plan (“ARP”) as well as spending related to safety and reliability for public works, mandated programs and reliability programs.²

Mr. Fromm stated that for FY 2014, NGrid proposes \$65.3 million of capital investments to be included for recovery in the proposed ISR Plan. He identified each category of the plan and its proposed cost as: \$36.5 million for programs including proactive Main and Service Replacement; \$0.5 million for Reactive Main Replacement; \$1.8 million for Public Works programs; \$13.5 million for Mandated Programs; \$9.0 million for Gas System Reliability; and \$4.0 million for Special Projects. He opined that the Plan fulfills the safety and reliability requirements of the gas distribution system in Rhode Island. A copy of the Plan was attached to Mr. Fromm’s testimony and will be discussed in detail below.³

William R. 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 2014 in support of the ISR Plan. He explained that the FY2014 Gas ISR revenue requirement of \$664,509 is the total of \$204,781

² NGrid Exhibit 1a, Gas Infrastructure Safety, and Reliability Plan FY 2014 Proposal, Testimony of Walter F. Fromm, filed December 28, 2012 at 1-7.

³ *Id.* at 8-9, Exhibit 1-WFF, Sections 1-5.

proposed incremental non-growth ISR capital investment plus the FY 2014 revenue requirement proposed incremental non-growth ISR capital investment of \$0.00 and \$459,728 for FY2013 and FY2012 incremental investments. Mr. Richer discussed the recent rate case filed by the Company and the Settlement Agreement entered into between the Company, the Division and the Navy. He noted that the revenue requirement for the FY2014 ISR Plan recovery mechanism excludes amounts embedded in base rates in Docket No. 4323 for FY2012, FY2013 and FY2014 investments. He explained that there is no incremental non-growth capital investment for FY2013, because the amount of vintage year FY2013 non-growth capital investment in the rate case is equal to the amount of the FY2013 ISR investment. He pointed out that calculations for the FY2014 revenue requirement on incremental non-growth capital investment for vintage years FY2014 and FY2012, tax depreciation used to determine the deferred tax reserve component of rate base and the weighted average rate base of FY2014 investment are incorporated in the Plan. Finally, he noted that the revenue requirement for the FY2014 Gas ISR Plan was calculated based on the terms of the Amended Settlement Agreement in the rate case, Docket No. 4323.⁴

Mariella C. Smith, Lead Analyst in Gas Regulatory and Pricing, provided testimony regarding how the rate design was established, the calculation of the ISR rate factors and the customer bill impacts. Ms. Smith noted that the starting point for developing the rate design was with 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

⁴⁴ NGrid Exhibit 1b, Gas Infrastructure Safety, and Reliability Plan FY 2014 Proposal, Testimony of William R. Richer, filed December 28, 2012 at 1-5.

allocated the updated incremental revenue requirement of \$581,884 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. Ms. Smith identified each class' ISR rate factor which ranged from \$0.0005 to \$0.0045 per therm. She indicated that the ISR factors would become effective April 1, 2013. Ms. Smith noted that the bill impact for an average residential heating customer using 846 therms would result in an annual rate increase of \$2.09 or 0.2 percent.⁵

The Plan attached to Mr. Fromm's testimony was divided into five Sections. The first Section provided an Introduction to and Summary of Plan, the second outlined the capital investment plan, the third explained the proposed revenue requirement calculation, the fourth discussed the rate design and the fifth provided the bill impacts. Section 2 of the Plan attached to Mr. Fromm's testimony described each of the Plan categories. Attached to the Plan were Tables that contain a description of the proposed budget for the capital investment plan for FY2014, a five year Capital Forecast for FY2014 through FY2017 and the FY2013 Capital Budget filed in the FY2013 ISR Plan along with the FY2013 Forecast through Q2 2013. The Plan proposed to invest a total of \$77.2 million, \$65.3 million of which are either included in rate base or in the FY 2014 Gas ISR recovery mechanism. The Plan proposes to invest \$36.5 million for the Main and Service Replacement Programs, \$0.5 million on the Reactive Main Replacement category, \$1.8 million for Public Works Programs, \$13.5 million for Mandated Programs, \$9.0 million for Gas System Reliability and \$4.0 million for Special Projects. Excluded

⁵ NGrid Exhibit 1c, Gas Infrastructure Safety, and Reliability Plan FY 2014 Proposal, Testimony of Mariella C. Smith, filed December 28, 2012 at 1-5.

from this \$77.2 million is \$11.9 million for growth spending that the Company excluded from the 2014 Gas ISR Plan.⁶

The first Large Program is the Main and Service Replacement Program the purpose of which is to replace leak-prone gas main and services. For FY2014, NGrid forecasts spending a total of \$36.5 million for this program, \$33.4 million to replace approximately 50 miles of leak-prone pip and \$3.1 million to replace approximately 1,100 leak-prone services. 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 anticipates approximately 1.0 miles of emergency main replacements. 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. For FY2014, NGrid proposed a total of \$1.8 million for the Public Works category. Mandated Programs are the fourth category of programs and are comprised of four subcategories: 1) corrosion; 2) gas meter replacement; 3) capital leak repairs; and 4) non-leak other. The Plan described the Corrosion Program as adding cathodic protection to existing steel coated mains installed prior to 1971 and extending the service life of the pipe and has been mandated by the U.S. Department of Transportation since 1971 for all buried steel facilities. Capital costs for the Meter Replacement subcategory are required for the procurement of replacement meters. The capital leak repairs subcategory 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

⁶ NGrid Exhibit 1a, Gas Infrastructure Safety, and Reliability Plan FY 2012 Proposal, Testimony of Walter F. Fromm, Exhibit 1-WFF, Section 2 at 1-3.

relocations, meter protection, service abandonments and the installation of curb valves. The proposed budget for the Mandated Programs category is \$13.5 million.⁷

The Plan identified the six different programs that comprise the Gas System Reliability category and has a total budget of \$9.0 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. Pressure Regulating Facilities that are designed to control system pressures and maintain continuity of supply is the second program in the Reliability category. The third program, System Reliability Enhancement, includes enhancement of the system through standardization, simplification, integration and new supply sources. The Water Intrusion Program is the fourth program and it proposes to replace existing leak prone pipe to address outages that result from water intrusion into the low-pressure distribution system. The fifth program, LNG Facilities, is intended to upgrade existing LNG facilities in Rhode Island. Finally, the last program is the Valve Installation/Replacement program which will install or replace new valves which are used to control the flow of gas. The Plan includes a Special Projects category to address a project associated with the relocation of Interstate I-195 in the City of Providence, specifically necessary main replacement or relocation, a project to replace the boil-off compressor located at the Exeter LNG facility and a Gas Expansion Pilot Program. The Gas Expansion Pilot Program is intended to expand infrastructure that will allow for customers to take advantage of low gas prices by removing or reducing existing financial barriers. The amount allocated to this category is \$3.0 million.⁸

⁷ *Id.* at 3-6.

⁸ *Id.* 6-15.

On January 31, 2013, the Company filed the detailed plan for its proposed Gas Expansion Plan Pilot Program (“the Program”). The filing identified the three basic components of the Program, specifically, the Program budget and guidelines, the selection process and the progress reporting and evaluation protocols. The proposed \$3 million would allow the Company to expand its infrastructure thereby allowing it to offer gas service to customers who were prevented from connecting to the system primarily due to cost barriers. The Company identified two categories of customers: residential, to which it allotted \$500,000 of the \$3 million total, and all others, to which it allotted the remaining funds.⁹

To establish priority, the Company proposed two criteria. The first, Project Efficiency Ratio was weighted the greatest at 70 percent and would be measured as potential added load divided by project cost. Reliability benefit, which would account for the other 30 percent, would be determined qualitatively by the Company’s engineers who would determine the ability of the expansion to materially improve system reliability. In addition to the two criteria set forth above, NGrid would consider other public works projects and paving in order to minimize disruptions to a particular community, and those projects that may encounter obstacles could be removed from the Program at the Company’s discretion. The filing also specified guidelines detailing a customer’s financial responsibility beyond the costs borne by the Company as well as the selection process. Regarding the selection process, the Company identified two primary analytical methods: anchor point analysis and wide area analysis. Very simply, anchor point analysis identifies a large commercial or industrial customer that will have a large load and plots different routes to reach the customer allowing for customers along the chosen

⁹ NGrid Exhibit 2 Gas Expansion Plan Pilot Program, filed January 31, 2013 at 1-3.

route to connect to the system. Wide area analysis looks to possible expansion areas and the concentration of the area. The Program provides for quarterly reporting and semi-annual review.¹⁰

On March 1, 2013, the Division of Public Utilities and Carriers (“Division”) filed comments on the Plan through its attorney and comments from David Effron, a CPA from Berkshire Consulting, regarding the revenue requirement effects of the ISR filing. Mr. Effron noted one exception in the Company’s November 2012 submission¹¹ regarding the calculations of the capital investment revenue requirement which is associated with cumulative qualifying additions to plant service through fiscal year 2014.¹² He asserted that the addition to rate base is disproportionately weighted to the last two months of the fiscal year. He recalculated the increase on behalf of the Division and noted that the Company not only agreed that his calculations were appropriate but filed revised calculations in its December 2012 filing.¹³

The Division’s comments addressed each of the six categories of the Plan. Regarding the Gas Main and Gas Service Replacement category, the Division noted that since filing the Plan, the Company has replaced 38.7 miles of leak prone mains and appears to be on target to replace its proposed 50 miles for FY2013. However, the Division asserted that the Company has fallen behind on its goal of replacing all existing high-pressure bare steel inside services in five years. Of the 2,142 outstanding high pressure bare steel inside services that currently need replacing, NGrid proposed to

¹⁰ *Id.* at 3-12.

¹¹ On November 1, 2012, the Company submitted its proposed FY 2014 ISR Gas Plan to the Division. Subsequent to the submission, the Company and the Division met to review the Plan. After review and recommendation, the Company agreed to reduce its proposed budget. The Company and the Division met again after the Company’s December filing and agreed to final modifications of the budget resulting in a final budget of \$77.2 million.

¹² The fiscal year is the twelve months ending March 31.

¹³ Division Exhibit 1, Memorandum of David Effron, filed March 1, 2013.

replace only 1,100 in FY2014. The Division also pointed out that the Company has yet to begin replacing 2,000 to 3,000 additional services using a risk-based prioritization approach as it previously agreed.¹⁴

The Division noted that in 2012 almost 119 gas mains or services were damaged by homeowners or excavators and that this number represented a three year downward trend in the Reactive Gas Main Replacement category. The Division supported the continued practice of the Company working with municipalities through the Public Works Projects category to schedule underground construction with planned public works projects so to reduce paving costs that the Company would incur and pass on to its customers. In the Mandated Programs category, the Division reduced the Company's proposal by \$1 million based on a reduction in FY2013 spending levels. The Division supported the Company's proposed spending in the Reliability category noting that it provides additional reliability to the distribution system. Finally, in the Special Projects category, the Division expressed no concern over the DOT project but suggested that the Exeter LNG project be undertaken over the course of two years to which the Company agreed. Finally, the Division recommended that for 2014, the Gas Expansion Pilot Program be funded at \$3.0 million. The Division concluded its comments by recommending that the Commission approve the Company's FY2014 ISR Plan as filed.¹⁵

On March 18, 2013, the Company filed a modification to the Gas Expansion Plan Pilot Program after meeting with the Division. The original plan specified that customers would not be entitled to refunds when customers subsequently took service from the pilot segment and that those new customers would only be required to pay for their service line

¹⁴ Division Exhibit 2, Comments of the Division of Public Utilities and Carriers, filed March 1, 2013 at 1-2.

¹⁵ *Id.* at 3-5.

and not the capital costs associated with the expansion. The revision provided that subsequent customers who took service within two years after the pilot would be required to pay the same CIAC amount as the original participants and that amount would be set aside for future ISR budgets.¹⁶

On March 21, 2013, the Commission conducted a Technical Session. The following appearances were entered:

FOR NGRID:	Thomas Teehan, Esq.
FOR THE DIVISION:	Leo Wold, Esq. Assistant Attorney General
FOR THE COMMISSION:	Patricia S. Lucarelli Chief of Legal Services

Mr. Teehan introduced the Company's witnesses that were available to present the Plan and answer questions. He identified Walter Fromm, William Richer and Mariella Smith, all of whom submitted prefiled testimony, Amy Smith, director of Regulatory Reporting, Mark Harmon, a corrosion supervisor and engineer, Terry Sobolewski, vice president of the Sales and Program Operation, and John Isberg, director of Community and Customer Management. Mr. Teehan noted that the total revenue requirement for the 2014 Plan is \$664,509 which will result in an annual increase of \$2.09.¹⁷

Mr. Fromm provided details and described the costs associated with the Plan. He began by stating that the Plan implements a cost effective and coordinated work plan to enhance the safety, integrity and reliability of the gas distribution system. He testified that the \$65.3 million is divided between six categories and identified the categories and

¹⁶ NGrid Exhibit 3, Proposed 2014 Gas Expansion Pilot Program Update filed March 18, 2013 at 5.

¹⁷ Transcript of Hearing ("T."), March 21, 2013 at 4-7.

how much each was allotted. He explained that the Proactive Main and Service Replacement Program replaces leak-prone gas mains and services. He noted that leak-prone pipe is defined as non-cathodically protected or unprotected steel pipe, cast iron and wrought iron facilities. He pointed out that approximately 1,400 or the 3,100 miles of gas distribution main serving Rhode Island is considered leak-prone. The Company prioritizes replacement based on performance issues related to leaks and breaks on cast iron mains. The 2014 Plan provides for the replacement of a total of 50 miles of leak-prone gas main where the Company has repaired almost 900 leaks over the last ten years in nineteen different municipalities.¹⁸

He testified that the Service Replacement Program which was started several years ago has only 2,200 of 8,500 unprotected steel high pressure gas services with inside meters and regulators left to replace. These replacements will occur over the next two years with 1,100 being completed during fiscal year 2014. Additionally, he noted that over the course of four years, the Company replaced approximately 9,000 leak-prone services with new meters sets installed outside. He pointed out that the number of miles of main being replaced has increased from thirty miles to fifty miles since the program began, and it is the Company's intention to increase this replacement to sixty miles per year over the next few years.¹⁹

Mr. Fromm discussed the Reactive Main Replacement Program that he described as allowing for capital investment spending for emergency main replacement where there is a leak or the condition of the main dictates replacement. He surmised that as more leak-prone pipe is replaced on a pro-active basis, the need for reactive main replacement

¹⁸ *Id.* at 7-11.

¹⁹ *Id.* at 11-13.

will decrease. When questioned about why the leak rate in 2011 is close to the leak rate in 2004, Mr. Fromm explained that prior to the commencement of the Accelerator Replacement Program, the Company was replacing less than twelve miles of main each year. He noted that over the last four years, the Company has ramped up efforts from replacing 30 miles to 50 miles of main per year. He also stated that the Company takes into consideration the impact that construction activity will have on the community and described the Public Works Program and how the Company coordinates with municipalities to minimize the disruption that construction activities can cause.²⁰

Mr. Fromm explained that Mandated Programs allows for capital spending to replace meters, repair capital leaks, correct corrosion and perform other non-leak work. He noted that one of the Company's goals is to replace or protect the 500 miles of unprotected steel main in inventory. Responding to a question, he stated that the cathodic protection is working.²¹

Mr. Fromm deferred to Mr. Harmon to provide testimony regarding the cathodic protection process. Mr. Harmon testified that prior to the Company installing steel, he puts together a corrosion design for the steel to assure that it is electrically isolated, adequately coated and capable of being protected. After the pipe is installed, Mr. Harmon brings a crew of technicians into the field to check for ineffectiveness and imperfections in the coating of that pipe and then takes profiles and annual voltage readings to make sure the pipe meets the criteria of 850 millivolts polarized. If this criteria is met, the pipe is considered to be cathodically protected. When questioned about the decision to use steel versus plastic for new mains, Mr. Fromm offered that a number

²⁰ *Id.* at 13-20.

²¹ *Id.* at 20-23.

of design criteria are used to select which type of main the company will use including what other services are in close proximity.²²

Mr. Fromm next discussed the Meter Replacement Program which he stated was funded for the procurement of replacement meters to meet mandated meter testing requirements, load changes and customer concerns related to meters. He noted that there are six programs that are included in the Reliability Program and described a few including the System Automation and Control Program that allows for the installation of telemetry and remote control at the regulating stations so that the Company can monitor its distribution system. He testified that the Company intends to install this technology at approximately 40 stations in the upcoming fiscal year which equates to about 20 percent of its regulating stations. He identified the next category within the Reliability Program as Pressure Regulating Facilities which allows for the repair and replacement of existing gas distribution regulator facilities and work at tank stations. He stated that the Company intends to install vent poles at existing regulating stations. He also explained that System Reliability Enhancements are projects that help the Company ensure minimum distribution system pressures are met during extremely cold periods and that the Water Intrusion Projects allow the Company to replace additional leak-prone pipe after extreme weather and flooding has caused customers to experience outages.²³

Special Projects identified by Mr. Fromm consist of three specific projects: the RIDOT I-95 project, the Exeter LNG facilities work and the Gas Expansion Pilot Program. He deferred to Mr. Sobolewski to discuss the Gas Expansion Pilot Program. Mr. Sobolewski explained that through the Pilot Program, the Company will identify

²² *Id.* at 23-27.

²³ *Id.* at 27-29.

areas in Rhode Island where the distribution system could be expanded efficiently in terms of the number of potential customers and cost considerations. He testified that the Company would offer an incentive to offset the first 75 percent of the cost of the project for customers in a particular area so that the customer would only have to bear the cost of 25 percent of the cost of providing service to that particular customer. The cost of providing service would include the mains, services and meters but not the equipment in the customer's home. Mr. Sobolewski stated that communication to customers of this opportunity would be primarily door to door communication, and customers would be given an approximate cost range should they decide to participate. He explained that the benefits of the Gas Expansion Pilot Program would only be available to target areas that the Company identifies. He also testified that the 75 percent incentive is the maximum the Company will offer and that it may choose to offer less of a percentage in order to maximize the use of funds available for the incentive. He described a few other similar programs in other states and indicated that the Company looked at those other programs in the planning of its own.²⁴

Mr. Richer testified about the \$664,509 total revenue requirement. He stated that the expected FY15 revenue requirement on the FY14 investment is \$1.4 million. Mariella Smith testified that the total revenue requirement was allocated based on the rate base allocator percentages approved in Docket No. 4323 and divided by throughput expected for the Program year. This amount per rate class is then factored into the DAC rate. She pointed out that the annual impact on a residential heating customer using 846 therms is \$2.09 or approximately 0.2 percent.²⁵

²⁴ *Id.* at 29-44.

²⁵ *Id.* at 51-58.

At the conclusion of the testimony presented by the Company, the Division called Don Ledversis, its gas pipeline safety engineer to discuss the Plan. In response to the question of whether the pace of the program is adequate, he replied that the Company's existing workforce would not be able to handle a significant ramp-up of work on the system. He noted that after the winter, the system is more prone to leaks and stated that there are approximately 80 cast iron breaks annually due to frost heaves pushing up and stressing on the pipes. Mr. Teehan pointed out that the Company is moving forward to make sure that the system is safe and reliable.²⁶

On March 21, 2013, immediately following the hearing, the Commission approved NGrid's December 28, 2012 proposed Gas Infrastructure, Safety and Reliability Plan for FY 2014, finding it complied with the provisions of R.I.G.L. §39-1-27.7.1. The upgrades and improvements to NGrid's infrastructure will provide increased safety and will continue to minimize risk created by an aging system. The Commission further finds the Company's Gas Expansion Plan Pilot Program is a timely, progressive and appropriate policy that will allow more Rhode Islanders access to the environmental and economic benefits of natural gas service.

Accordingly, it is

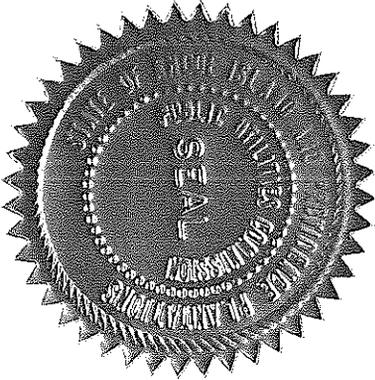
(21030) ORDERED:

1. That National Grid's proposed FY 2014 Gas Infrastructure, Safety and Reliability Plan is hereby approved.
2. That National Grid shall comply with the reporting requirements and all other findings and directives contained in this Report and Order.

²⁶ *Id.* at 58-68.

EFFECTIVE AT WARWICK, RHODE ISLAND ON APRIL 1, 2013
PURSUANT TO A BENCH DECISION ON MARCH 21, 2013. WRITTEN ORDER
ISSUED, MAY 3, 2013.

PUBLIC UTILITIES COMMISSION



Elia Germani, Chairman

Mary E. Bray, Commissioner

Paul J. Roberti, Commissioner