

January 22, 2015

BY HAND DELIVERY AND ELECTRONIC MAIL

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

RE: Docket 4540 – National Grid’s Proposed FY 2016 Gas Infrastructure, Safety, and Reliability Plan
Responses to Division Data Requests – Set 1

Dear Ms. Massaro:

I have enclosed ten (10) copies of National Grid’s¹ responses to the Division’s First Set of Data Requests issued in the above-referenced matter.

Thank you for your attention to this transmittal. If you have any questions, please contact me at (781) 907-2121.

Very truly yours,



Raquel J. Webster

Enclosures

cc: Docket 4540 Service List
Steve Scialabba
Leo Wold, Esq.
Jim Lanni
Don Ledversis

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

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

Copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and the Rhode Island Division of Public Utilities and Carriers.



Joanne M. Scanlon

January 22, 2015
Date

Docket No. 4540 - National Grid's FY 2016 Gas Infrastructure, Safety and Reliability (ISR) Plan - Service List 1/8/15

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Division 1-1

Request:

Please explain the reason for the incorrect charges evident on all of the projects selected for review. Under the ISR process, budgets are reconciled to actual costs in the ISR Reconciliation factor process and cost overruns are collected from customers via the ISR reconciliation factor. The ISR Plan review process and setting the ISR factor based on an ISR budget has limited effectiveness when project budgets and actual costs are at significant variance. Does National Grid recognize this as an issue to be addressed? If so, what has been done to address the cost overruns and project accounting issues?

Response:

In examining any Gas ISR project variance in a Gas ISR Reconciliation filing, it is important to recognize the following key factors that underlie the Gas ISR Reconciliation factor process and rates:

1. Although the Company takes great efforts to ensure that its actual costs are charged to the correct Gas ISR project, there are occasions when human errors or system issues result in "incorrect charges" or "charges to incorrect work orders", as in the four projects highlighted by the Division in this data request. However, because all of these projects were included in the Fiscal Year (FY) 2014 Gas ISR Plan and the Gas ISR Reconciliation factor is calculated on a total actual cost basis, there is no impact on the Gas ISR Reconciliation factor or customer rates. In this case, Gas ISR costs shift among projects or categories, and do not impact the actual total costs upon which the Gas ISR Reconciliation factor is calculated. Moreover, the Gas ISR Reconciliation process itself ensures that customers are protected because any corrections to the charges would be included in the next Gas ISR Reconciliation filing. Therefore, to the extent that customers are entitled to any adjustment due to incorrect charges, that adjustment would be credited to them in the next annual Gas ISR Plan Reconciliation filing. However, the Company recognizes that "incorrect charges" or "incorrect work order charges" to a Gas ISR Plan project impacts the Division's ability to review actual spending and variances for a specific Gas ISR Plan project. As such, since FY2014 the Company has put in place specific management work order review processes and implemented system changes to improve the Gas ISR Plan accounting by project and category.

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2. Because the Gas ISR Plan and associated revenue requirement is developed on a fiscal-year basis, the Gas ISR Reconciliation filing only reflects the actual spending for each project as of March 31 of that fiscal year. Actual cost spending on a project after March 31 is included in the following fiscal year's Gas ISR Reconciliation filing. Therefore, any variance analysis of a specific project must take into account the actual cost spending over the complete timeframe of the project, which may extend over multiple fiscal years. An example of this type of variance is the Governor Street project, which is addressed in the Company's response to Division 1-8.
3. The ultimate Gas ISR Reconciliation factor rate is based upon actual spending for a specific fiscal year end date, (March 31) for all eligible projects. Of the 166 projects for main replacement in FY 2014, 65%, or 108, of those projects had an under-spending variance, while 58 projects had an over-spending variance. Therefore, consideration must be given to all projects' cost variances to gauge the effectiveness of the Company's budgeting process.
4. All Gas ISR Plan project actual costs are impacted by a number of factors beyond the Company's control or over which the Company has limited control. This is a major reason why the ISR process includes an annual reconciliation of actual costs. Despite the Company's best efforts to estimate the specific budget costs for a Gas ISR Plan project, other factors such as the weather, local permitting processes, specific labor and contractor job requirements, unexpected job site issues like additional ledge or water and changes in material costs can accelerate or delay a budgeted Gas ISR Plan project. The Company has taken a number of actions to ensure the cost effectiveness of the Gas ISR Plan projects, such as updating costs based on recent project experience; competitive bidding for contractors and materials; and meeting with municipal officials and police to estimate the need for and the number of details for traffic control. Actual costs variances will not be known until the Company completes the project. For example, as shown on the Cost Variance Analysis for the Governor Street project in Providence, the original scope of that project estimated the installation of 4,414 feet of main. This was a very complex, two year project in a highly populated urban area of Providence with high vehicle and pedestrian traffic. However once work began on the project, and to ensure the safety of the Company's work force, contractors and the public, the Company was required to do the following: install an additional 221 feet of main (bringing the actual feet of main replaced on the project to 4,635 feet), dig into and repair sidewalks to install 298 services, drill 97 test holes to meet dig-safe requirements for the placement of other utility and municipal facilities, increase traffic control when necessary, and increase

Division 1-1, page 3

- the cost of removal due to the change in the project scope. This work contributed to the actual cost over-spending variance for the project. For another example of where the Company had to modify the scope of a project to meet municipal and OSHA requirements, please see the Company's response to Division 1-3.
5. The Company's Gas ISR Plan budgeting process is primarily driven by historical costs and unit costs that are modified for the type of asset and applicable cost changes for the fiscal year, and are not derived from any specific or type of project. For example, in the FY 2016 Gas ISR Plan filing, the Company used updated unit cost data in developing the main replacement budget which anticipates that for FY 2016 more miles of expensive cast iron main are being replaced in higher cost urban areas. These updated unit costs were then applied to increase in miles for FY 2016. These updated historical costs and unit cost serve as the basis of the annual Gas ISR filing the Company makes with the Rhode Island Division of Public Utilities and Carriers for review and discussion. The Company believes this budgeting process for the Gas ISR is more administratively efficient and cost effective to customers than attempting to develop a budget for each individual Gas ISR project. This use of "average" or unit costing, by design, results in individual project variances, but is intended to approximate actual conditions encountered in the field based on actual historical experience of different sets of circumstances and cost drivers for the overall investment program.

In summary, cost over-spending and cost under-spending variances for each Gas ISR Plan project are inherent within the Gas ISR Plan process. Each Gas ISR Plan project is impacted by factors beyond the control of the Company (ie; weather, permitting processes) or factors over which the Company has limited control. (ie: competitive bidding for services, traffic control public safety requirements) The Company's budget and project cost estimating process for Gas ISR Plan projects is reasonable, efficient and cost effective for customers, and represents the Company's best estimate at that time. While "incorrect charges" and "incorrect work order charges" do impact the cost variance for a specific Gas ISR Plan project, a variance analysis for single Gas ISR Plan project or a small number of Gas ISR projects, offers very limited information on the efficiency of the Company's budget process. More importantly, safeguards are built into the Gas ISR Plan process to protect customers because the Gas ISR Reconciliation factor is calculated on total actual spending which is not impacted by appropriate cost over-spending or under-spending within the same Gas ISR Plan fiscal year.

Division 1-1, page 4

Regarding the West Main Road project in Middletown, a clerical error of \$59,000 was charged to an incorrect work order. In addition, \$760,000 of main work orders were incorrectly charged resulting in duplicated charges for the project. Please see the Company's Responses to Division 1-3, Division 1-4 and Division 1-5 for additional detail about this project.

Regarding the Governor Street project in Providence, \$179,000 was incorrectly charged to the project that belonged to the Pitman Street project in Providence. Please see the Company's response to Division 1-7 for additional detail about this project.

Regarding the Wild Street project in Providence, a data entry error resulted in duplicate charges for traffic control being incorrectly charged to the project. Please see the Company's response to Division 1-6 for additional detail.

Regarding the Smith Street project in Providence, an accounting error of \$104,000 was reversed for an accrual that was incorrectly charged to the project. In addition, a clerical error of \$49,000 was adjusted for a pipe delivery that was incorrectly charged to the project. Please see the Company's response to Division 1-2 for additional information about this project.

With respect to these incorrect charges, all of which were the result of clerical, data entry, or accounting errors, it is important to note that these incorrect charges occurred during the time when the Company was undertaking the consolidation of its back office systems and Company personnel were being trained on the use of the new systems. The Company anticipates that a combination of system stabilization and enhancements and user familiarity should reduce the instances of data error in the future.

Division 1-2

Request:

Other areas of concern to the Division are the “Key Variances” or cost overruns associated with “Restoration”, “Traffic Control”, “Spoil Removal” and “Shoring”. Examples follow:

Smith Street, North Providence: A restoration charge of \$149,000 was not accounted for in the original budget. The reason the company stated in the Analysis was “concrete base State Road”. Provide an explanation as to how the Company, who has worked on Smith Street many times over the years, would be unaware of the existence of the concrete road base and not factor it into its project cost estimate?

Response:

The cost estimate for the Smith Street, North Providence project mistakenly did not account for the consideration of work in a state road with a concrete road base. The existence of the concrete road base should have been included in the project estimate.

Please see the Company's response to Division 1-1 (5), which describes the Company's Gas ISR Plan budget and project estimating processes. The estimate for this project was based on actual historical spending template which employs the use of “average” or unit costing based on its historical actual experience of different sets of circumstances and cost drivers for all projects and does not take into account all specific individual location factors. These input factors include: (1) main installation length by diameter, (2) the number of services within the range of the project (3) the count live gas main connections required and (4) other special costs considerations such as a concrete road. As indicated in the Company's response to Division 1-1 (5), the Company believes that this budgeting process is reasonable, efficient and cost effective for customers and provides for the best estimate at that time for the overall program. For this project, but for the omission, the actual project spending would have been consistent with the cost estimate.

Division 1-3

Request:

West Main Road, Middletown: A shoring charge of \$84,000 was assessed to the project.

Please provide a breakdown of how this amount was derived as the charge appears high for the type of work involved.

Response:

Before work began on this project, the Company held a site meeting with the state inspector for Middletown. In this meeting the Company was notified by state engineers, that in the near future, the state was planning to rebuild the drainage infrastructure in the area, and that the Company would be required to offset its new main under all existing infrastructure currently in the road. Based on this information, the Company determined that it was necessary to install the main for this project at a depth of four feet. To accomplish this, Company crews had to work in holes approximately six or seven-feet deep to get under the existing infrastructure. There were approximately 33 different locations on the project, where shoring boxes were used in compliance with OSHA regulations. The cubic footage of shoring used by the crews on this job came to approximately 7,422 cubic feet, which was higher than initially estimated.

The \$84,000 shoring charge is comprised of approximately \$44,200 of direct charges and \$39,800 of assigned overhead charges to the project.

Division 1-4

Request:

West Main Road, Middletown: A miscellaneous traffic control sign charge of \$13,000 was assessed to the project.

Please provide a breakdown of how this amount was derived.

Response:

Before work began on this project, the Company held a site meeting with the state inspector for Middletown. In this meeting the Company discussed public safety issues concerning the need for traffic control, including the need for arrow boards, the number of detail officers, and the need for an informational sign board for the traffic that uses this road. West Main Road in Middletown is a state four-lane road, with two lanes in each direction. Traffic on this road travels at speeds in excess of 35 miles-per-hour. An agreement was reached with the state inspector that all crews would adhere to the Company's work zone traffic control requirements for state highways that are designed to protect the Company's workers and the public. These requirements included the need for an arrow board, in addition to a police department cruiser. The Company used a traffic control sign board to notify traffic that construction was taking place and delays were possible. Similar public safety concerns were also present at East Main Road and the arrow board was utilized to protect the crews and the public. The Company's crews were actively working onsite for approximately 56 days and an arrow board was required at near the location where they were working. In addition, the informational sign board remained onsite for the entire job.

The breakdown of the \$13,000 is comprised of approximately \$3,000 of direct costs for the traffic control sign and additional miscellaneous charge costs of the project of approximately \$10,000.

Division 1-5

Request:

West Main Road, Middletown: A traffic control charge of \$86,000 was assessed to the project.

Please provide a breakdown of how this amount was calculated.

Response:

Please see the Company's response to Division 1-3. West Main Road in Middletown is a state four-lane road, with two lanes in each direction. Traffic on this road travels at speeds in excess of 35 miles-per-hour. Whenever a crew was required to work in a location, there needed to be an arrow board and a police department cruiser at the beginning and end of the work location, with a flagger in the middle so as to divert the traffic out of the lane being worked. Over the 56 days of work on this project, the Company was billed for 992.5 hours for police details and cruisers.

The breakdown of the \$86,000 is comprised of approximately \$46,000 of direct costs for traffic control and additional overhead allocated costs of approximately \$40,000.

Division 1-6

Request:

Wild Street, Providence: Please provide an explanation behind the \$767,000 overcharge associated with "service work order received incorrect charge (Traffic Control)".

Was this amount accounted for at another project? Was the cost for traffic control \$767,000?

Response:

The \$767,000 overcharge was an accounting error that was incorrectly charged to Wild Street, Providence project and has been reversed. These traffic control charges are being reviewed and will be charged to the appropriate accounts.

Division 1-7

Request:

Governor Street, Providence: Please provide an explanation behind the \$179,000 overcharge associated with "charges belonging to WO# 90000129372 – Pitman Street in Providence".

Should this amount have been charged for the Pitman Street project? Is there an equivalent offset in the Pitman street project? Please explain the project accounting process when charges for one project are incorrectly assessed to another project.

Response:

Work on the Governor Street project and the Pitman Street project completed during the same time period, and a contractor invoice for the Pitman Street project was incorrectly charged to the Governor Street project. When charges for one project are incorrectly assessed to another project, the Company uses a Work Order Life Cycle Error Remediation Process to correct errors. Under this process, if the work order is still open, a Plant Accounting clerk receives a transfer of charges request and then makes the change and assigns the appropriate debit or credit to the project. If the work order has been closed, the Plant Accounting Clerk would institute a supplemental work order for the project and then adds the appropriate debit or credit to the project. The same process would be followed to transfer charges or credits to all appropriate projects impacted by the error. In this case, the Governor Street project would be corrected and the \$179,000 charge would be transferred to the Pitman Street project. These types of modifications would then be reflected in the appropriate Gas ISR Reconciliation Plan filing.

Division 1-8

Request:

In consideration of the fact the Governor Street, Providence project only consisted of replacing 145 feet of gas main, please provide an explanation behind the \$119,000 restoration charge, or approximately \$820/ft.

Response:

Please see the Company's response to Division 1-1 (2). The Governor Street project in Providence was a two-year project which occurred across two fiscal years. As shown on the December 2, 2014 Governor Street Cost Variance Analysis Attachment that was provided to the Division, the actual feet of gas main replace for the Governor Street project in Providence was 4,635 feet of main, of which 145 feet of main, was installed in the second fiscal year. Therefore, since the completion of this project occurred across two fiscal years, the actual cost-per-foot should reflect the 4,635 feet of main replaced.

The actual cost-per foot for the \$119,000 restoration charge on this project was \$25.67 per foot ($\$119,000/4,635\text{ft}$). Restoration required on this project consisted of asphalt charges related to the installation of the main. Specifically, the asphalt was put back in the street after the trench has been dug and backfilled. In addition, this would also include restoration work for repairs where the existing street was very old and cracked and falling apart in order to ensure the integrity of an 18 or 24" wide trench for the pipe installation.

Division 1-9

Request:

In consideration of the fact the Governor Street, Providence project only consisted of replacing 145 feet of gas main, please provide an explanation behind the \$309,000 traffic control charge.

Response:

Please see the Company's response to Division 1-8 for an explanation of the actual number of feet of gas main replaced (4,635 feet) for the Governor Street, Providence project.

Site conditions on this project warranted a higher level of traffic control protection due to heavy pedestrian and vehicular traffic. The project consisted of installing gas main in 4,635 feet of main and extended for approximately 72 days. Traffic control for this project included the need for detours and sidewalk closings in order to protect the Company's crews and the public. At times, two police details and flaggers were required for certain work locations. Over that time, the Company was billed for 696 hours for police details for this project.

Division 1-10

Request:

In consideration of the fact the Governor Street, Providence project only consisted of replacing 145 feet of gas main, please provide an explanation behind the \$112,000 sidewalk repair charge.

Response:

Please see the Company's response to Division 1-8 for an explanation of the actual number of feet of gas main replaced (4,635 feet) for the Governor Street, Providence project.

The key cost driver for the \$112,000 sidewalk repair charge was the large number of services. For this project, a total of 3,010 square feet of concrete was replaced to tie-in approximately 298 services that required digging into concrete sidewalks for installation. On this project, each multi-family home with gas service needed to have a new valve placed in the concrete sidewalk. In addition any open cut excavations of services required concrete replacement of the sidewalk areas. This included areas which required the digging of concrete sidewalks to allow tie-in or abandonment of mains. When replacing the concrete, the contractor also would replace the entire flag of concrete in the side walk.

Division 1-11

Request:

In consideration of the fact the Governor Street, Providence project only consisted of replacing 145 feet of gas main, provide an explanation behind the "\$47,000 test hole" charge, a process the Division is unaware of.

Response:

Please see the Company's response to Division 1-8 for an explanation of the actual number of feet of gas main replaced (4,635 feet) for the Governor Street, Providence project.

"Test holes" or inspection holes are a tool the Company uses as part of a Dig-Safe safety requirement, in conjunction with low-dig technology to relay services on main work. It is a National Grid procedure to require crews to physically dig out and locate any existing infrastructure that the Company's assets or equipment will pass, in order to reduce the likelihood of damage to that infrastructure. Governor Street is a highly populated area of the city with all utilities buried under the ground. On the short side of the street, a crew would usually only need to dig one inspection hole. However, if a service was on the other side of the street away from the main (long side), each utility must dig out and identified it assets to minimize possible damage. This safety Dig-Safe process resulted in multiple inspection holes or "test holes" for the Governor Street project. For the Governor Street project, there were approximately 97 test holes dug while installing services. The holes were dug in either asphalt or concrete at an average depth of six feet.

Division 1-12

Request:

In consideration of the fact the Governor Street, Providence project only consisted of replacing 145 feet of gas main, please provide an explanation behind the \$169,000 miscellaneous charge to remove material from the job site.

Response:

Please see the Company's response to Division 1-8 for an explanation of the actual number of feet of gas main replaced (4,635 feet) for the Governor Street, Providence project.

These miscellaneous charges were for the replacement of the removed spoils from the trench, tie-in holes, and service connection holes for the project and the replacement of acceptable gravel, where needed. This area of the city was very rocky with areas of ledge which is unacceptable for backfill material. These miscellaneous charges also include the appropriate labor cost associated with these and other site activities.

Division 1-13

Request:

Since the Governor Street, Providence project only replaced 145 feet of leak prone gas main out of the 4,414 feet originally budgeted for, is there an economical plan to replace the remaining 4,269 feet of leak-prone pipe?

Response:

Please see the Company's response to Division 1-1 (4) and the Company's response to Division 1-8 for an explanation of the actual number of feet of gas main replaced (4,635 feet) for the Governor Street, Providence project.