

The Narragansett Electric Company
d/b/a National Grid

**Gas Infrastructure,
Safety, and Reliability Plan
FY 2025'Proposal**

**Responses to Division's Data
Requests**

Book 2 of 2

December 19, 2023

Docket No. 5432

Submitted to:
Rhode Island Public Utilities Commission

Submitted by:

nationalgrid

December 17, 2021

BY HAND DELIVERY & ELECTRONIC MAIL

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

**RE: National Grid's Proposed FY 2023 Gas Infrastructure, Safety and Reliability Plan
Docket No. 5210**

Dear Ms. Massaro:

In compliance with R.I. Gen. Laws § 39-1-27.7.1, I have enclosed 10 copies of National Grid's¹ proposed Gas Infrastructure, Safety and Reliability ("ISR") Plan ("Gas ISR Plan" or "Plan") for fiscal year ("FY") 2023. The Gas ISR Plan is designed to enhance the safety and reliability of National Grid's natural gas distribution system. As required by law, National Grid submitted the proposed Plan to the Division of Public Utilities and Carriers ("Division") for review. The Division undertook a comprehensive review of the initial plan, which included issuing numerous informal and formal discovery requests to the Company, review of responses to those requests, discussions with Company representatives and outside consultant review. After further discussions with the Company, the Division and the Company were able to mutually agree on the budget for the Plan.

The Gas ISR Plan is designed to protect and improve the gas delivery system through proactively replacing leak-prone pipe; upgrading the system's custody transfer stations, pressure regulating facilities, and peak shaving plants; responding to emergency leak situations; and addressing infrastructure conflicts that arise out of state, municipal, and third-party construction projects. The Plan is intended to achieve these safety and reliability goals through a cost-effective, coordinated work plan. The level of work that the Plan provides will sustain and enhance the safety and reliability of the Rhode Island gas distribution infrastructure and directly benefit all Rhode Island gas customers.

The Plan includes a description of the categories of work National Grid proposes to perform in FY 2023 and the proposed targeted spending levels for each work category. In addition to the Plan, this filing includes the pre-filed direct testimony of five witnesses. Amy S. Smith and Nathan Kocon introduce the Plan document and describes the program components of the Plan; Melissa A.

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

Luly Massaro, Commission Clerk
Docket 5210 – FY 2023 Gas ISR Plan
December 17, 2021
Page 2 of 2

Little describes the revenue requirement for the Plan; and Ryan Scheib describes the calculation of the Gas ISR factors proposed in the Plan and provides the bill impacts from the proposed rate changes.

For the average residential heating customer using 845 therms annually, the proposed 2023 ISR factors for the period of April 1, 2022 through March 31, 2023 will result in an annual bill increase of \$10.98 or 0.8 percent, as reflected in the proposed Gas ISR Plan at Section 4, Attachment 2.

For the PUC's convenience, the Company has also included copies of its responses to Division Data Requests Set 1. In connection with the Data Requests, this filing contains a Motion for Protective Treatment of Confidential Information in accordance with 810-RICR-00-00-1-1.3(H)(3) (Rule 1.3(H)) of the PUC's Rules of Practice and Procedure and R.I. Gen. Laws § 38-2-2(4)(B) and (4)(F). National Grid seeks protection from public disclosure of certain confidential and privileged information in its responses to Division 1-9, Attachments DIV 1-38 and 1-39. In compliance with Rule 1.3(H), National Grid has provided the PUC with one complete, unredacted copy of Attachment DIV 1-9 in an envelope marked, "**HIGHLY CONFIDENTIAL INFORMATION - DO NOT RELEASE!**"

The Gas ISR Plan presents an opportunity to facilitate and encourage investment in National Grid's gas utility infrastructure and enhance National Grid's ability to provide safe, reliable and efficient gas service to customers.

Thank you for your attention to this matter. If you have any questions, please contact me at 781-472-0531.

Very truly yours,



Raquel J. Webster

Enclosures

cc: Docket 5099 – Gas ISR FY2022 Service List
Leo Wold, Esq.
Al Mancini, Division
John Bell, Division
Rod Walker, Division

STATE OF RHODE ISLAND

RHODE ISLAND PUBLIC UTILITIES COMMISSION

)	
)	
FY 2023 Gas Infrastructure, Safety)	Docket No. 5210
and Reliability Plan)	
)	
)	

MOTION OF THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID FOR PROTECTIVE TREATMENT OF CONFIDENTIAL INFORMATION

National Grid¹ respectfully requests that the Rhode Island Public Utilities Commission (“PUC”) grant protection from public disclosure certain confidential, competitively sensitive, and proprietary information submitted in this proceeding, as well as certain critical energy infrastructure information as permitted by 810-RICR-00-00-1.3(H) (Rule 1.3(H)) of the PUC’s Rules of Practice and Procedure and R.I. Gen. Laws § 38-2-2(4)(B) and (4)(F). The Company also respectfully requests that, pending entry of that finding, the PUC preliminarily grant the Company’s request for confidential treatment pursuant to Rule 1.3(H)(2).

I. BACKGROUND

On December 17, 2021, the Company submitted its FY 2023 Gas Infrastructure, Safety and Reliability Plan (the “Plan” or “ISR Plan”) filing in the above-captioned docket. The ISR Plan filing includes the Company’s responses to sixty data requests propounded by the Division of Public Utilities and Carriers (the “Division”) in connection with its pre-filing review of the Plan. The Company’s responses to Division data requests 1-9, 1-38 and 1-39 (the “Confidential Responses”) contain information that is not subject to disclosure under Rhode Island’s Access to

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

Public Records Act. Specifically, the Confidential Responses contain critical energy infrastructure information (“CEII”) the disclosure of which could present a threat to public safety. The CEII contained in the Company’s Confidential Responses includes plans, descriptions, design standards and schematic drawings of natural gas transmission and distribution infrastructure. Additionally, the responses contain certain confidential commercial information related to the Company’s contracting for construction services including pricing, product descriptions and commercial terms included in construction, operation and maintenance agreements included in the Confidential Responses.

Therefore, the Company requests that, pursuant to Rule 1.3(H), the PUC afford confidential treatment to the CEII and confidential commercial information contained in the Confidential Responses

II. LEGAL STANDARD

Rule 1.3(H) provides that access to public records shall be granted in accordance with the Access to Public Records Act (APRA), R.I. Gen. Laws § 38-2-1, *et seq.* Under the APRA, all documents and materials submitted in connection with the transaction of official business by an agency is deemed to be a “public record,” unless the information contained in such documents and materials falls within one of the exceptions specifically identified in R.I. Gen. Laws § 38-2-2(4). To the extent that information provided to the PUC falls within one of the designated exceptions to the public records law, the PUC has the authority under the terms of APRA to deem such information as confidential and to protect that information from public disclosure.

In that regard, R.I. Gen. Laws § 38-2-2(4)(B) and (4)(F) provide that the following types of records shall not be deemed public:

(B) Trade secrets and commercial or financial information obtained from a person, firm, or corporation which is of a privileged or confidential nature...

(F) Scientific and technological secrets and the security plans of military and law enforcement agencies, the disclosure of which would endanger the public welfare and security.

With respect to the commercial information exception to the definition of “public record,” the Rhode Island Supreme Court has held that this confidential information exemption applies where the disclosure of information would be likely either (1) to impair the government’s ability to obtain necessary information in the future; or (2) to cause substantial harm to the competitive position of the person from whom the information was obtained. *Providence Journal v. Convention Ctr. Auth.*, 774 A.2d 40 (R.I. 2001). The first prong of the test is satisfied when information is provided to the governmental agency and that information is of a kind that would customarily not be released to the public by the person from whom it was obtained. *Providence Journal*, 774 A.2d at 47.

With respect to other exceptions to the definition of public record, the Rhode Island Supreme Court has held that the agencies making determinations as to the disclosure of information under APRA may apply the balancing test established by the Court in *Providence Journal v. Kane*, 577 A.2d 661 (R.I. 1990). Under this balancing test, the PUC may protect information from public disclosure if the benefit of such protection outweighs the public interest inherent in disclosure of information pending before regulatory agencies.

III. BASIS FOR CONFIDENTIALITY

The commercial information contained in the Company’s responses to Division data requests 1-38 and 1-39 is confidential and privileged information of the type that National Grid would not ordinarily make public. The information includes commercial terms such as pricing, the identities of vendors offering certain pricing and the names of certain products to which the

pricing terms apply. Public disclosure of such information could impair National Grid's ability to negotiate advantageous pricing or other terms in the future, thereby causing substantial competitive harm to the detriment of the Company and its customers. Accordingly, National Grid is providing the information on a voluntary basis to assist the PUC with its decision-making in this proceeding, but respectfully requests that the PUC provide confidential treatment to the information.

With respect to the CEII contained in the Company's Confidential Responses, CEII is defined by the Federal Energy Regulatory Commission ("FERC") as:

[S]pecific engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure that:

1. Relates details about the production, generation, transmission, or distribution of energy;
2. Could be useful to a person planning an attack on critical infrastructure;
3. Is exempt from mandatory disclosure under the [Federal] Freedom of Information Act, 5 U.S.C. § 552; and
4. Does not simply give the general location of the critical information.

18 CFR § 388.113(c)(2). In turn, "critical infrastructure" is defined as:

[E]xisting and proposed systems and assets, whether physical or virtual, the incapacity or destruction of which would negatively affect security, economic security, public health or safety, or any combination of those matters.

18 CFR § 388.113(c)(4). The design specifications, schematic drawings, product and project descriptions and related information contained in the Confidential Responses fall squarely within FERC's definition of CEII. Public dissemination of this information could pose a grave threat to public health and safety as it could be used to identify vulnerabilities in, and plan attacks against, natural gas transmission and distribution infrastructure. Under the Rhode Island Supreme Court's balancing test set forth in *Providence Journal v. Kane*, the public interest in access to this

information is far outweighed by the threat to the public's health and safety that could result from public dissemination of these technical details concerning natural gas infrastructure.

IV. CONCLUSION

For the foregoing reasons, National Grid respectfully requests that the PUC grant its Motion for Protective Treatment of the Confidential Responses. In accordance with Rule 1.3(H) the Company has submitted redacted versions of the Confidential Responses for the public file in this matter and unredacted confidential versions subject to this motion for protective treatment.

Respectfully submitted,

**THE NARRAGANSETT ELECTRIC
COMPANY d/b/a NATIONAL GRID**

By its attorney,



Raquel J. Webster (Bar #9064)
National Grid
40 Sylvan Road
Waltham, MA 02451
Tel. 781-907-2121
Raquel.webster@nationalgrid.com

Dated: December 17, 2021

November 9, 2021

BY ELECTRONIC MAIL

Rhode Island Division of Public Utilities and Carriers
c/o Luly Massaro
89 Jefferson Boulevard
Warwick, RI 02888

RE: National Grid's Proposed Fiscal Year 2023 Gas Infrastructure, Safety, and Reliability Plan Responses to Division Data Requests – Set 1 (Batch 1)

Dear Ms. Massaro:

I have enclosed the electronic version of National Grid's¹ first batch of responses to the Division's First Set of Data Requests in the above-referenced matter.

The Company's remaining responses are pending.

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

Very truly yours,



Raquel J. Webster

Enclosure

cc: Leo Wold, Esq.
John Bell, Division
Al Mancini, Division

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

November 22, 2021

BY ELECTRONIC MAIL

Rhode Island Division of Public Utilities and Carriers
c/o Luly Massaro
89 Jefferson Boulevard
Warwick, RI 02888

RE: National Grid's Proposed Fiscal Year 2023 Gas Infrastructure, Safety, and Reliability Plan Responses to Division Data Requests – Set 1 (Batch 2)

Dear Ms. Massaro:

I have enclosed the electronic version of National Grid's¹ second batch of responses to the Division's First Set of Data Requests in the above-referenced matter.

The Company's remaining responses are pending.

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

Very truly yours,



Raquel J. Webster

Enclosure

cc: Leo Wold, Esq.
John Bell, Division
Al Mancini, Division

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

November 23, 2021

BY ELECTRONIC MAIL

Rhode Island Division of Public Utilities and Carriers
c/o Luly Massaro
89 Jefferson Boulevard
Warwick, RI 02888

RE: National Grid's Proposed Fiscal Year 2023 Gas Infrastructure, Safety, and Reliability Plan Responses to Division Data Requests – Set 1 (Batch 3)

Dear Ms. Massaro:

I have enclosed the electronic version of National Grid's¹ third batch of responses to the Division's First Set of Data Requests in the above-referenced matter.

The Company's remaining responses, Division 1-9, 1-38, 1-39, are pending.

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

Very truly yours,



Raquel J. Webster

Enclosure

cc: Leo Wold, Esq.
John Bell, Division
Al Mancini, Division

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

December 3, 2021

BY ELECTRONIC MAIL

Rhode Island Division of Public Utilities and Carriers
c/o Luly Massaro
89 Jefferson Boulevard
Warwick, RI 02888

**RE: National Grid's Proposed Fiscal Year 2023 Gas Infrastructure, Safety and Reliability Plan
Responses to Division Data Requests – Set 1 (Batch 4)**

Dear Ms. Massaro:

I have enclosed the electronic version of National Grid's¹ fourth batch of responses to the Division's First Set of Data Requests in the above-referenced matter. This transmittal completes the Company's responses to the Division's first set of Data Requests.

The Company's enclosed responses to Division Data Requests 1-9, 1-38 and 1-39 (the "Confidential Responses") contain confidential information. Therefore, the Company is providing these responses to the Division subject to the Company's non-disclosure agreement ("NDA") with the Division applicable to the Company's Fiscal Year 2023 Gas Infrastructure Safety and Reliability ("ISR") Plan. The Company's response to DIV 1-9 contains Critical Energy Infrastructure Information, and the Company's response to DIV 1-38 and 1-39 contain confidential commercial information exempt from the definition of "public record" contained in the Access to Public Records Act. The Company has not included a motion for protective treatment with these responses since the Rhode Island Public Utilities Commission has not yet established a docket for the FY 2023 Gas ISR.

The Company will file an appropriate motion for protective treatment prior to when it files any confidential responses with the PUC. The Company requests that the Division maintain the Confidential Responses as confidential under the NDA until that time.

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

Very truly yours,



Raquel J. Webster

Enclosure

cc: Leo Wold, Esq.
John Bell, Division
Al Mancini, Division

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

Division 1-1

Request:

Explain the basis for National Grid's statement that paving and PE Stamp "costs have become standard costs and are incorporated directly into the applicable ISR categories that they impact" on Page 3 of the FY 2023 Gas ISR Plan when the Division and National Grid had "agreed" that the Company would "track and report all paving cost categories and PE Stamp costs separately" in Docket No. 4996 (DPUC Direct Testimony at 16, 18).

Response:

National Grid believes that tracking the incremental costs of paving and PE stamps was useful in the first two years of these programs to allow for the collection of actual data showing the impact of these new costs on ISR programs. Now that the Company has collected two full years of actual data on incremental paving and PE stamp costs, it believes it is no longer necessary to track the costs separately for estimating purposes. FY 2023 will be the third fiscal year for these requirements. Therefore, the Company no longer considers these costs to be incremental but rather, part of the standard costs used to estimate ISR spending.

The Company has been tracking PE Stamp costs and all paving costs (including incremental paving costs) directly within the project and category budgets and is now able to forecast FY 2023+ costs based on historical actuals and anticipated future costs. Therefore, the Company believes it is appropriate to include PE Stamp costs and all Paving costs (including incremental paving) directly in the category budgets, rather than in separate cost categories.

Division 1-2

Request:

Provide a breakdown by category of all estimated UFSRA paving and PE Stamp costs contained in Table 1 in the FY 2023 Gas ISR Plan.

Response:

The FY2023 costs for PE Stamps and Incremental Paving are as follows:

PE Stamps	\$2.446M
Incremental Paving	\$6.760M

Please see the response to Division 1-3 for details of these costs by category.

Division 1-3

Request:

Provide Table 1 of the FY 2023 Gas ISR Plan with and without paving and PE Stamp costs included in each category.

Response:

Below is a table that provides a view of Table 1 of the FY 2023 Gas ISR Plan with and without incremental paving and PE Stamps included.

This is the third fiscal year in which the projected cost impacts have been incorporated in the capital spending plan to demonstrate compliance with the Rhode Island Utility Fair Share Roadway Repair Act ("UFSRA") and PE Stamp statutory requirement. These costs have become standard costs; as such, they are incorporated directly into the applicable ISR categories for the FY 2023 plan and the five-year plan.

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-3, page 2

Table 1
Narragansett Gas - FY 2023
(\$000)

Categories	FY2023 ISR Budget with PE Stamp & Incremental Paving	PE Stamp	Incremental Paving	FY2023 ISR Budget without PE Stamp & Incremental Paving
NON-DISCRETIONARY				
Public Works				
<i>CSC/Public Works - Non-Reimbursable</i>	\$ 20,596	\$ 412		\$ 20,184
<i>CSC/Public Works - Reimbursable</i>	\$ 1,437	\$ 28		\$ 1,409
<i>CSC/Public Works - Reimbursements</i>	\$ (1,433)			\$ (1,433)
Public Works Total	\$ 20,600	\$ 440	\$ -	\$ 20,160
Mandated Programs				
<i>Corrosion</i>	\$ 1,305	\$ 67		\$ 1,238
<i>Purchase Meters (Replacement)</i>	\$ 5,248	\$ -	\$ -	\$ 5,248
<i>Reactive Leaks (CI Joint Encapsulation/Service Replacement)</i>	\$ 12,629	\$ -	\$ 656	\$ 11,973
<i>Service Replacements (Reactive) - Non-Leaks/Other</i>	\$ 2,067	\$ 19	\$ 105	\$ 1,943
<i>Main Replacement (Reactive) - Maintenance (incl Water Intrusion)</i>	\$ 3,000	\$ 33	\$ 62	\$ 2,905
<i>Low Pressure System Elimination (Proactive)</i>	\$ 2,000	\$ -	\$ -	\$ 2,000
<i>Transmission Station Integrity</i>	\$ 6,250	\$ -	\$ -	\$ 6,250
<i>Pipeline Integrity - IVP - Wampanoag Trail Pipeline Replacement</i>	\$ 500	\$ -	\$ -	\$ 500
Mandated Total	\$ 32,999	\$ 119	\$ 823	\$ 32,057
Damage / Failure (Reactive)				
<i>Damage / Failure (Reactive)</i>	\$ 255	\$ -	\$ -	\$ 255
NON-DISCRETIONARY TOTAL	\$ 53,854	\$ 559	\$ 823	\$ 52,472
DISCRETIONARY				
Proactive Main Replacement				
<i>Main Replacement (Proactive) - Leak Prone Pipe</i>	\$ 80,234	\$ 1,670	\$ 5,937	\$ 72,627
<i>Main Replacement (Proactive) - Large Diameter LPCI Program</i>	\$ 2,850	\$ 2	\$ -	\$ 2,848
<i>Atwells Avenue</i>	\$ 1,637	\$ -	\$ -	\$ 1,637
Proactive Main Replacement Total	\$ 84,721	\$ 1,672	\$ 5,937	\$ 77,112
Proactive Service Replacement				
Proactive Service Replacement Total	\$ 600	\$ -	\$ -	\$ 600
Reliability				
<i>Gas System Control</i>	\$ -	\$ -	\$ -	\$ -
<i>System Automation</i>	\$ 1,387	\$ -	\$ -	\$ 1,387
<i>Heater Installation Program</i>	\$ 1,242	\$ -	\$ -	\$ 1,242
<i>Wampanoag Trail & Tiverton GS - Heaters Replacement and Ownership Transfer</i>	\$ 9,241	\$ -	\$ -	\$ 9,241
<i>Take Station Refurbishment</i>	\$ 1,850	\$ -	\$ -	\$ 1,850
<i>Pressure Regulating Facilities</i>	\$ 7,585	\$ 50	\$ -	\$ 7,535
<i>Allens Ave Multi Station Rebuild</i>	\$ -	\$ -	\$ -	\$ -
<i>Valve Installation/Replacement - Primary Valve Program & Aquidneck Island Low Pressure Valves</i>	\$ 988	\$ 88	\$ -	\$ 900
<i>Gas System Reliability</i>	\$ 3,260	\$ 14	\$ -	\$ 3,246
<i>I&R - Reactive</i>	\$ 1,375	\$ -	\$ -	\$ 1,375
<i>Distribution Station Over Pressure Protection</i>	\$ 3,383	\$ -	\$ -	\$ 3,383
<i>LNG</i>	\$ 10,089	\$ -	\$ -	\$ 10,089
<i>Replace Pipe on Bridges</i>	\$ 2,000	\$ 7	\$ -	\$ 1,993
<i>Access Protection Remediation</i>	\$ 272	\$ 56	\$ -	\$ 216
<i>Smart Residential Methane Detector Program</i>	\$ -	\$ -	\$ -	\$ -
<i>Tools & Equipment</i>	\$ 824	\$ -	\$ -	\$ 824
Reliability Total	\$ 43,495	\$ 215	\$ -	\$ 43,280
SUBTOTAL DISCRETIONARY (Without Gas Expansion)	\$ 128,817	\$ 1,887	\$ 5,937	\$ 120,992
Southern RI Gas Expansion Project				
<i>Pipeline</i>	\$ 600	\$ -	\$ -	\$ 600
<i>Other Upgrades/Investments</i>	\$ 396	\$ -	\$ -	\$ 396
<i>Regulator Station Investment</i>	\$ 5,793	\$ -	\$ -	\$ 5,793
Southern RI Gas Expansion Project Total	\$ 6,789	\$ -	\$ -	\$ 6,789
DISCRETIONARY TOTAL (With Gas Expansion)	\$ 135,606	\$ 1,887	\$ 5,937	\$ 127,781
CAPITAL ISR TOTAL (Base Capital - Without Gas Expansion)	\$ 182,670	\$ 2,446	\$ 6,760	\$ 173,464
CAPITAL ISR TOTAL (With Gas Expansion)	\$ 189,459	\$ 2,446	\$ 6,760	\$ 180,253
Notable Capital Projects Not Currently Included in the ISR				
<i>Old Mill Lane</i>	\$ 1,000	\$ -	\$ -	\$ 1,000
<i>LNG - Cumberland Tank Replacement</i>	\$ 2,500	\$ -	\$ -	\$ 2,500
Total	\$ 3,500	\$ -	\$ -	\$ 3,500

Division 1-4

Request:

With regards to FY 2022 incremental paving costs, provide the following:

- (i) Total paving costs incurred in FY 2022 through Q2.
- (ii) Total forecasted costs through the end of FY 2022.
- (iii) Total associated volumes and distances completed (Sq. Yds or miles).
- (iv) List all municipalities requiring curb to curb.

Response:

- (i) The total paving costs incurred in FY 2022 through Q2 are \$8,348,137.
- (ii) The total paving forecast through the end of FY 2022 is approximately \$10,500,000.
- (iii) There have been approximately 1,400,000 square yards of paving completed year to date.
- (iv) Please see Attachment DIV 1-4 for a list of all municipalities that require curb-to-curb paving.

As of 10/22/2021 - Information is subject to change																		
Municipal	Pre July 11, 2019			Status Changes Pre/Post July 11, 2019			As of January 23, 2020			As of October 5, 2020			As of January 20, 2021			As of October 22, 2021		
	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	MAIN REPLACEMENT WORK	PATCH WORK	PATCH WORK*
	C2C or Full Lane Width	Standard 1' CB	No Change	No Change	Standard 1' CB	C2C or Full Lane Width	Standard 1' CB	C2C or Full Lane Width	Standard 1' CB	C2C or Full Lane Width	Standard 1' CB	C2C or Full Lane Width	Standard 1' CB	Standard 1' CB	C2C or Full Lane Width	Standard 1' CB	Standard 1' CB	Standard 1' CB
	Curb to Center	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	Curb to Center	ARB/Standard CB	Curb to Center	ARB/Standard CB	Curb to Center	ARB/Standard CB	Curb to Center	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	Curb to Trench 7' min	ARB/Standard CB	Adopting Curb-to-Curb	Adopting Curb-to-Curb	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	Follow RIDOT	Follow RIDOT	No Change	No Change	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT
	Curb to Center	ARB/Standard CB	Adopting Curb-to-Curb	Adopting Curb-to-Curb	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT
	Follow RIDOT	Follow RIDOT	No Change	No Change	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT
	C2C	ARB/Standard CB	Already Required Curb-to-Curb	Already Required Curb-to-Curb	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	Curb to Trench 7' min	Standard 1' CB	Adopting Curb-to-Curb	Adopting Curb-to-Curb	Standard 1' CB	C2C	Standard 1' CB	C2C	Standard 1' CB	C2C	Standard 1' CB	C2C	Standard 1' CB	Standard 1' CB	C2C	Standard 1' CB	Standard 1' CB	Standard 1' CB
	C2C	ARB/Standard CB	Already Required Curb-to-Curb	Already Required Curb-to-Curb	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	Curb to Trench 7'	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	minARB	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	ARB	ARB/Standard CB	ARB	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	Curb to Trench 7' min	ARB/Standard CB	Adopting Curb-to-Curb	Adopting Curb-to-Curb	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Follow RIDOT	Follow RIDOT	No Change	No Change	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Curb to Center	ARB/Standard CB	Adopting Curb-to-Curb	Adopting Curb-to-Curb	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	Curb to Center	ARB/Standard CB	Adopting Curb-to-Curb	Adopting Curb-to-Curb	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	Curb to Trench 7' min	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A
	Curb to Center	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	Curb to Center	ARB/Standard CB	Curb to Center	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A
	Curb to Trench 7' min	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A
	New Shoreham (Blog)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Curb to Center	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	Curb to Center	ARB/Standard CB	Curb to Center	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A
	Curb to Trench	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	Curb to Trench	ARB/Standard CB	Curb to Trench	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A
	Curb to Center	ARB/Standard CB	Adopting Curb-to-Curb	Adopting Curb-to-Curb	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB
	Curb to Trench 7' min	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	N/A
	C2C	Tack Coat & Infared	Already Required Curb-to-Curb	Already Required Curb-to-Curb	ARB/95% Compaction,	C2C	ARB/95% Compaction,	C2C	ARB/95% Compaction,	C2C	ARB/95% Compaction,	C2C	ARB/95% Compaction,	ARB/95% Compaction,	C2C	ARB/95% Compaction,	ARB/95% Compaction,	ARB/95% Compaction,
	Curb to Center	ARB/Standard CB	No Change - TBD	No Change - TBD	ARB/Standard CB	Curb to Center	ARB/Standard CB	Curb to Center	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	Tack Coat & Infared	C2C	ARB/Standard CB	Tack Coat & Infared	Tack Coat & Infared
	Curb to Trench 7' min	Standard 1' CB	No Change - TBD	No Change - TBD	Standard 1' CB	Curb to Trench 7' min	Standard 1' CB	Curb to Center	Standard 1' CB	C2C	Standard 1' CB	C2C	Standard 1' CB	ARB/Standard CB	C2C	Standard 1' CB	ARB/Standard CB	ARB/Standard CB
	Follow RIDOT	Follow RIDOT	No Change	No Change	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT
	Follow RIDOT	Follow RIDOT	No Change	No Change	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT
	Curb to Trench 7' min	ARB/Standard CB	No Change	No Change	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	N/A	ARB/Standard CB	N/A	ARB/Standard CB	ARB/Standard CB	C2C	ARB/Standard CB	ARB/Standard CB	ARB/Standard CB

Definitions Key
ARB/Standard CB = As Required by Permit
C2C = Curb to Curb Paving
CB = Cut back
Standard CB = Applies unless otherwise specified in the permit
Follow RIDOT = Gas primarily on State roads, generally follows RIDOT Guidelines
N/A = No gas in town
No Change - TBD = No known changes, but to be determined with municipality
Roadway Restoration Requirements per permits issued:

As of 10/22/2021 - Information is subject to change																
Definitions Key	Pre July 11, 2019				Status Changes Pre/Post July 11, 2019				As of January 23, 2020		As of October 5, 2020		As of January 20, 2021		As of October 22, 2021	
	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	PATCH WORK	MAIN REPLACEMENT WORK	PATCH WORK*
Municipal																
South Kingstown	Curb to Center	Standard 1' CB	No Change - TBD	No Change - TBD	Curb to Center	Standard 1' CB	No Change - TBD	Curb to Center	Standard 1' CB	Curb to Center	Standard 1' CB	C2C	Standard 1' CB	C2C (full depth restoration)	Standard 1' CB	
Tiverton	Curb to Trench 7' min	ARB/Standard CB	No Change - TBD	No Change - TBD	Curb to Trench 7' min	ARB/Standard CB	No Change - TBD	Curb to Trench 7' min	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	
Warren	Curb to Trench 7' min	ARB/Standard CB	No Change - TBD	No Change - TBD	Curb to Trench 7' min	ARB/Standard CB	No Change - TBD	Curb to Trench 7' min	ARB/Standard CB	Curb to Trench 7' min	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	
Warwick	Curb to Trench 7' min	Standard 1' CB	Curb-to-Curb	No Change	C2C	Standard 1' CB	No Change	C2C	Standard 1' CB	C2C	Standard 1' CB	C2C	Standard 1' CB	C2C	Standard 1' CB	
West Greenwich	Follow RIDOT	Follow RIDOT	No Change	No Change	Follow RIDOT	Follow RIDOT	No Change	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	Follow RIDOT	
West Warwick	C2C	ARB/Standard CB	Already Required Curb-to-Curb	No Change	C2C	ARB/Standard CB	No Change	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	C2C	ARB/Standard CB	
Westerly	Curb to Center	Standard 1' CB	No Change - TBD	No Change - TBD	Curb to Center	Standard 1' CB	No Change - TBD	Curb to Center	Standard 1' CB	Curb to Center	Standard 1' CB	C2C	Standard 1' CB	C2C	Standard 1' CB	
Woonsocket	Curb to Trench 7' min	ARB/Standard CB	Adopting Curb-to-Curb	Expanding Patching Requirements	C2C	Curb to Center x 1/2 Road (generally a square)	C2C	C2C	Curb to Center x 1/2 Road (generally a square)	C2C	Curb to Center x 1/2 Road (generally a square)	C2C	Curb to Center x 1/2 Road (generally a square)	C2C	Curb to Center x 1/2 Road (generally a square)	

*FY22 Note: Based on the Rhode Island Utility Fair Share Roadway Repair Act, Municipalities have been requiring a mill and pave for areas where patches are within 50 feet of each other.

Division 1-5

Request:

Have paving costs increased from FY 2021 to FY 2022? If so, what are the driving factors associated with the increase.

Response:

The unit cost for paving has increased in FY 2022 as compared to earlier periods due to a previously negotiated cost escalator of 3% for mill and pave work. However, this increase has been more than offset by lower than normal work volumes. This is primarily associated with lower volumes in patch work resulting from fewer projects completed by in-house maintenance crews.

Division 1-6

Request:

Has the Company addressed the dramatic increase in Ductile Iron leaks in 2020 from 2019? If yes, have any of the 13 miles of Ductile Iron pipe been included in the proposed list of FY 2023 proactive main replacement projects?

Response:

The Company prioritizes main segments for replacement based on risk. Please see Attachment DIV 1-6 for a copy of procedure **ENG04030: *Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement***. This procedure details the process the Company follows to prioritize main segments for replacement.

Based on the Company's existing process, 0.62 miles were prioritized to be replaced in FY 2022, and approximately one mile will be replaced in FY 2023,

nationalgrid	Gas Work Method Design of Mains and Distribution Systems	Doc.# ENG04030 Page 1 of 9
	Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	Revision 5 11/01/2021

Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement ENG04030

1. Purpose

This procedure describes and details the identification, evaluation, and prioritization of distribution main segments for replacement, and prescribes methods to be used for corrective action.

Potential areas of active corrosion are identified using leakage surveys in conjunction with an analysis of the corrosion and leak history records.

2. Responsibilities

Distribution Engineering or designee shall be responsible to:

- Serve as Process Owner / Lead Organization for this policy document
- Gather and evaluate gas facility and leak data, and determine required calculations.
- Determine qualification and prioritization procedure and remedial action for active corrosion, non-active continuing corrosion, and other systemic integrity issues.
- Identifying main segments for replacement and prioritizing them according to this procedure.

Corrosion Engineering or designee shall be responsible for:

- Evaluation and Reclassification of Pre-1971 Gas Piping with Cathodic Protection (CP)

3. Personal & Process Safety

All required PPE shall be worn or utilized in accordance with the current National Grid Safety Policy when performing tasks associated with this document.

4. Operator Qualification Required Tasks [Qualified or Directed & Observed]


None

5. Content

5.1 Identification of Main Segments for Replacement

- a. Main segment candidates are identified through four avenues:
 - 1) Field Requests, which will be reviewed throughout the year.
 - 2) Mains located in Public Improvement Job Areas, which will also be reviewed throughout the year, as requested by Field Operations and/or Public Works employees.
 - 3) Annual screenings by Main and Service Engineering, as deemed appropriate. Screenings will vary among the regions, based on the data and tools available for the systems.
 - 4) Lab failure analysis reports reviewed by Distribution Engineering for systemic issues.
- b. All identified main segment candidates shall be evaluated and prioritized by Distribution Engineering in accordance with the criteria set forth in this procedure. Minimum segment lengths for screening and engineering review will vary among the regions; however, no Engineering review is required for replacements up to 300 feet. Segments identified by Distribution Engineering for systemic integrity issues will be replaced and prioritized as determined appropriate.

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED.		© National Grid Gas plc 2021– All Rights Reserved
FOR THE LATEST AUTHORIZED VERSION PLEASE REFER TO THE APPROPRIATE DEPARTMENT WEBSITE OR DOCUMENTUM™.		
FILE: ENG04030 Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	ORIGINATING DEPARTMENT: STANDARDS, POLICIES AND CODES	REGIONS: ALL


	Gas Work Method Design of Mains and Distribution Systems	Doc.# ENG04030 Page 2 of 9
	Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	Revision 5 11/01/2021

- c. Where possible, the system should be upgraded to high pressure while retiring low pressure mains.
- d. Leak prone pipe replacement includes replacement of associated leak prone services listed below:
 - 1) All steel services except large diameter, industrial and commercial services with Cathodic Protection
**Note: Services that cannot be relayed should be transferred and follow corrosion policies. A test station sketch should be sent to corrosion department.
 - 2) Plastic
 - i. Pre-1985: Aldyl-A (usually pink or grey)
 - ii. Pre-1974: HDPE (black)
Note: Please send the removed portion of some services installed prior to 1974 to Material lab in Hicksville, NY to verify integrity performance
 - iii. Polybutylene (PB) - (tan or yellow)
 - 3) Copper
 - 4) Cast Iron
 - 5) Wrought Iron
- e. All identified main segment candidates shall be reviewed by Distribution Engineering with the Corrosion Engineering to ensure that none of the job or part of the job is pre 1971 protected main.

5.2 Evaluation/Prioritization of Steel Main Segments for Replacement

- a. Data Collection - Minimum Data Required:
 - 1) All Repaired Corrosion Leaks on Main Segment for the last 10 years
 - 2) All repaired corrosion leaks on services for last 10 years. (In order to consider service leaks in main prioritization calculation, there should be main leaks)
 - 3) All Open Leaks that are believed to be on the actual Main Segment
- b. For all applicable leaks, the following data is required:
 - 1) Leak Number
 - 2) Date (date found for open leaks, date repaired for repaired leaks)
 - 3) Leak Class (original class for open leaks, repaired class for repaired leaks)
 - 4) For repaired leaks, the following additional data is also required:
 - i. Number of Clamps Installed to Repair and specific clamp locations
 - ii. Condition of Main When Repaired
 - iii. Address Based Leak Location
 - iv. Length of segment exhibiting significant leak activity (i.e. from first leak to last leak).

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED.		© National Grid Gas plc 2021– All Rights Reserved	
FOR THE LATEST AUTHORIZED VERSION PLEASE REFER TO THE APPROPRIATE DEPARTMENT WEBSITE OR DOCUMENTUM™.			
FILE: ENG04030 Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	ORIGINATING DEPARTMENT: STANDARDS, POLICIES AND CODES	REGIONS: ALL	

	Gas Work Method Design of Mains and Distribution Systems	Doc.# ENG04030 Page 3 of 9
	Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	Revision 5 11/01/2021

v. Building Types in Area of Main Segment (None, Single Family Houses, Small Buildings, Public Buildings)

c. Calculate a main deterioration factor (“D”) using the formula:

$$D = N \times 500 / L_{(calc)}$$

Where:

$L_{(calc)}$ = Length of Segment exhibiting significant leak activity (i.e. first leak to last leak) or 500 ft whichever is larger. However, if the total length of the segment considered for replacement is less than 500 ft, L_{calc} shall be the length of the main considered,



The segment length used in calculations is not necessarily the total length being considered for replacement. “L” should be determined by the evaluating engineer as the length of the segment exhibiting significant leak activity. In no case should the length used for calculations extend beyond the locations of the leaks).

and

N = Repair Factor (within the defined “ L_{calc} ”).

- 1) If the leak was repaired with 1 clamp, by another method, is still open, or associated service corrosion leak repair, N=1
- 2) If the leak was repaired with 2-3 clamps, N=2
- 3) If the leak was repaired with 4-5 clamps, N=3
- 4) If the leak was repaired with 6-7 clamps, N=4
- 5) If the leak was repaired with >7 clamps, N=5
- 6) If the leak was repaired by replacing a section of a pipe less than 10’, N=7 and N=9 for replacement pipe 10’ or greater



THE SUM OF ALL THE “N”s FOR EACH LEAK IS PLUGGED INTO THE FORMULA

This method estimates the deterioration according to the actual number of physical repairs and normalizes it for the length of the segment.

d. Calculate an incident probability factor (“P”) using the formula:


$$P = \{[(\# \text{ Class1 Leaks}/0.5) + (\# \text{ Class2A Leaks}/1.5) + (\# \text{ Class2 Leaks}/2) + (\# \text{ Class3 Leaks}/3)] \times 500\} / L_{(calc)}$$

This method estimates public safety incident probability by weighting each leak based on how far the gas migrated toward buildings, again normalized according to the segment length. (Note – If leak class is unknown, Class 2A will be assumed).

e. Calculate a risk factor (“R”) using the formula:

$$R = P \times C$$

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED.		© National Grid Gas plc 2021– All Rights Reserved	
FOR THE LATEST AUTHORIZED VERSION PLEASE REFER TO THE APPROPRIATE DEPARTMENT WEBSITE OR DOCUMENTUM™.			
FILE: ENG04030 Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	ORIGINATING DEPARTMENT: STANDARDS, POLICIES AND CODES	REGIONS: ALL	

	Gas Work Method Design of Mains and Distribution Systems	Doc.# ENG04030 Page 4 of 9
	Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	Revision 5 11/01/2021

Where:

P = Probability Factor Calculated in previous step.
C = Consequence Factor

- 1) If there are no buildings in the area, C = 0
- 2) If there are only single family homes, C = 1
- 3) If there are small buildings (multi-family, strip mall, etc), C = 1.2
- 4) If there are public buildings (school, church, hospital, etc) C = 1.5

This is the standard Risk Analysis calculation where Risk is defined as the product of the likelihood of an event and the potential consequence of that event. Consequences increase with building size and number of people affected.

f. Calculate the preliminary prioritization factor ("Pr") using the formula:

$$Pr = D + R + IM$$

Where:

D = Deterioration Factor Calculated in "c".
R = Risk Factor Calculated in "e".
IM = DIMP factor as found in National Grid's Distribution Integrity Management Program (DIMP) listed in attachment 1

The prioritization calculation considers both the deterioration of the main and the risk to public safety.




IM factor is applied to help accelerate the attrition of mains which belong to an asset group, known to have a higher likelihood of incident or is of a high relative risk.

g. The following adjustments may be needed:

- 1) Before making a final determination and prioritization of a main segment replacement, the details of the job are reviewed and "engineering judgment" is applied where appropriate. This application may result in the following types of adjustments:
 - i. Changing the priority of the job
 - ii. Increasing or decreasing the job length/scope
 - iii. Breaking the job into smaller segments
 - iv. Merging several segments into one job
- 2) These adjustments may be made based on the following types of information, if available and applicable:
 - i. Analysis of the age of the leaks and any increasing frequency of leak occurrences
 - ii. Pipe vintage and service insert activity associated with the main
 - iii. Service leaks at the main connection due to corrosion
 - iv. Adjustments based on very long or very short segments
 - v. Observed pipe condition from leak repair data
 - vi. Observed pipe condition from recent field exposure

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED.		© National Grid Gas plc 2021– All Rights Reserved	
FOR THE LATEST AUTHORIZED VERSION PLEASE REFER TO THE APPROPRIATE DEPARTMENT WEBSITE OR DOCUMENTUM™.			
FILE: ENG04030 Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	ORIGINATING DEPARTMENT: STANDARDS, POLICIES AND CODES	REGIONS: ALL	

	Gas Work Method Design of Mains and Distribution Systems	Doc.# ENG04030 Page 5 of 9
	Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	Revision 5 11/01/2021

- vii. Clustering of repairs and/or clamps along the segment
- viii. Other replacement jobs in the vicinity
- ix. Cathodic protection systems in place
- x. Specific locations of intersections, fittings, material transitions, diameter transitions, etc.
- xi. Customer complaints, Executive complaints, Regulatory Agency complaints
- xii. Corporate good will
- xiii. Unusual hazards or exposure in the area
- xiv. Proximity to gas regulating equipment
- xv. Proximity to transmission main
- xvi. Unusual difficulty or expense of repairs
- xvii. Main location
- xviii. Identification of outdated construction methods or problematic materials or fittings
- xix. Depth of cover and soil conditions
- xx. High open leak counts
- xxi. Water intrusion or other geographic considerations
- xxii. Any special or unusual conditions or considerations identified by Field Operations
- xxiii. Any other safety, integrity, operational or economic factors that are available and deemed appropriate



Segments that qualify based on their preliminary prioritization calculation may not be disqualified by adjustments.

h. Qualification of job for replacement:


- 1) Jobs will be approved and prioritized based on the calculated Prioritization Factor “Pr” and applied adjustments. Enough jobs should be approved to accommodate the replacement levels determined by the model(s) in use at the time.



Some jobs will be mandatory to replace.

- 2) In general, a condition of “Active Corrosion” will be determined when the preliminary Prioritization Factor (“Pr”) calculation is greater than 20 ($Pr > 20$).
- 3) Any unprotected steel main identified as Active Corrosion must have cathodic protection engineered and installed within one year or be replaced within two years in NY and three years in MA - unless extenuating circumstances make it unfeasible to do so, in which case, other appropriate mitigative measures are to be taken (Conduct a leakage survey of the segment once a year as a minimum).
- 4) Any cathodically protected main containing “Active Corrosion” must be brought up to acceptable cathodic protection within one year or replaced within two years in NY and three years in MA - unless extenuating circumstances make it unfeasible to do so (An example of such a circumstance may be when a street is under guarantee or a

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED.		© National Grid Gas plc 2021– All Rights Reserved	
FOR THE LATEST AUTHORIZED VERSION PLEASE REFER TO THE APPROPRIATE DEPARTMENT WEBSITE OR DOCUMENTUM™.			
FILE: ENG04030 Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	ORIGINATING DEPARTMENT: STANDARDS, POLICIES AND CODES	REGIONS: ALL	

	Gas Work Method Design of Mains and Distribution Systems	Doc.# ENG04030 Page 6 of 9
	Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	Revision 5 11/01/2021

moratorium from excavation), in which case, other appropriate mitigative measures are to be taken. (Conduct a leakage survey of the segment once a year as a minimum).

- 5) Use the following labels for each job to provide a macro view as to the type of work to be performed throughout the year.
 - i. A "TS 300" label is associated with any steel job with a preliminary Prioritization Factor ("Pr") calculation of greater than 20 ($Pr > 20$), known as "Active Corrosion".
 - ii. A TS 900 label is given to any job which has received additional points from Public Works considerations (as described below).
 - iii. A TS 800 label is given to the remainder of the jobs.


i. Impact Identification:

- 1) Every approved job should be processed through the Strategic Asset and System Planning and Corrosion Engineering for:
 - i. Sizing (determining the appropriate replacement material and diameter).
 - ii. Determining if the replacement will have any impact on existing cathodic protection systems.
 - iii. Determining if abandonment is an appropriate option over replacement.
 - iv. Determining if a system uprating is an appropriate option as part of the replacement.

5.3 Evaluation/prioritization of cast iron main segments for replacement

- a. Cast Iron Main Segments will be evaluated in a similar manner as Steel Main segments, where the Prioritization factor will be the sum of the Deterioration Factor, Risk factor and DIMP factor ($Pr = D + R + IM$).
- b. Candidates are reviewed based primarily on breakage and/or graphitization history; and all segments that contain 1 or more breaks and/or graphitization repairs must be reviewed.
- c. If the candidate segment has had 2 or more breaks and/or graphitization repairs within 400 ft. and the MAOP is greater than six inches of water column – the segment has automatic approval for replacement. The Prioritization score will automatically be set at 21()
- d. If the candidate segment doesn't have at least 2 breaks and/or graphitization repairs or if the pressure is six inches of water column– approval will be based on the Prioritization calculation
 - i. If "Pr" is greater than 20 ($Pr > 20$), replacement will be required (however, a cast iron segment is not deemed active corrosion)
 - ii. If "Pr" is less than or equal to 20 ($Pr \leq 20$), prioritize and replace according to resources and replacement level recommendations
- e. The Repair Factor "N" (as defined 5.2 – c for steel evaluation), will be assigned for each leak, as follows:
 - 1) For cast iron – main breaks, graphitization (corrosion of cast iron) and joint leak repairs are examined.
 - i. If the leak is still open or associated service corrosion leak repair, $N = 1$
 - ii. If the leak was repaired only by joint sealing, $N = 0.5$
 - iii. If the leak was a break, crack or graphitization, $N = 3$

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED.		© National Grid Gas plc 2021– All Rights Reserved	
FOR THE LATEST AUTHORIZED VERSION PLEASE REFER TO THE APPROPRIATE DEPARTMENT WEBSITE OR DOCUMENTUM™.			
FILE: ENG04030 Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	ORIGINATING DEPARTMENT: STANDARDS, POLICIES AND CODES	REGIONS: ALL	

	Gas Work Method Design of Mains and Distribution Systems	Doc.# ENG04030 Page 7 of 9
	Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	Revision 5 11/01/2021

- f. Engineering judgment should also be applied to both the prioritization and determination of the segment length to be replaced based on the pressure, diameter, dates of failures, surrounding areas, etc.

5.4 Evaluation/prioritization of plastic main segments for replacement

- a. Vintage Plastic Main Segments shall be evaluated by Distribution Engineering based on Lab Failure Analysis Reports that are reviewed for systemic issues.
- I. If Distribution Engineering determines that a systemic issue exists in a specific main segment due to improper fusion or other construction defects, the entire affected section of main will be forwarded to Main and Service Replacement Group for prioritization and expedited replacement.
- b. Plastic Main Segments (including non-vintage plastic) will be evaluated in a similar manner as Steel Main segments, where the Prioritization factor will be the sum of the Deterioration Factor, Risk factor and DIMP factor ($Pr = D + R + IM$).
- c. For plastic pipe segments in "b", above, the following criteria shall apply:
- 1) For plastic – previous squeeze-offs, point loading failures (e.g. – rock impingement) and material defects (e.g. – cracking) and construction defect failures (e.g. – butt fusion joint) are examined.

Where:


$N =$ Repair Factor (within the defined "L")

- i. If the leak is still open, $N = 1$
- ii. If the leak was the result of an improper squeeze-off, $N = 2 \times$ (the number known squeeze-offs on ALDYL-A pre 1985 pipe)
- iii. If the leak was the result of a point loading failure, $N = 2$
- iv. If the leak was a the result of a construction defect or material defect, $N = 3$

5.5 Evaluation and Reclassification of Pre-1971 Gas Piping with Cathodic Protection

- a. The following factors should be considered in evaluating and reclassify Pre-DOT CP pipe:
- 1) The Corrosion Engineering department shall identify inadequately protected sections of mains and services on the basis of;
- i. Frequently failed readings in the last 5 years
- ii. Failed readings despite additional anode installation
- iii. Unusually low resistance or high current demand as determined by Corrosion Control
- iv. Excessive Coating degradation determined by integrity assessments
- v. High corrosion leak activity
- vi. Any other unusual or abnormal condition determined by Corrosion Control
- 2) The section identified in section 1 above shall be removed from the CP monitoring program. The Electronic Monitoring Database and the Corrosion Control section folders shall be updated accordingly. In PCS, the section shall be marked as "inactive" and a statement that the section has been removed from the CP monitoring program along with

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED.		© National Grid Gas plc 2021– All Rights Reserved
FOR THE LATEST AUTHORIZED VERSION PLEASE REFER TO THE APPROPRIATE DEPARTMENT WEBSITE OR DOCUMENTUM™.		
FILE: ENG04030 Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	ORIGINATING DEPARTMENT: STANDARDS, POLICIES AND CODES	REGIONS: ALL

	Gas Work Method Design of Mains and Distribution Systems	Doc.# ENG04030 Page 8 of 9
	Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	Revision 5 11/01/2021

an effective date with explanation of reclassification will be provided in the permanent remarks section. Reclassified pipe will be marked as “removed from CP” where Electronic Monitoring Database is available.

- 3) Once the section is removed from the CP monitoring program, it shall be treated as unprotected coated/bare main. Mapping (in NY) or Corrosion Control (in NE) will be notified to remove the Corrosion Control section number or the CP designation from electronic mapping records.
 - 4) Every six months, the Corrosion Engineering department will run a report listing which sections of pipe have been reclassified from CP to unprotected coated/bare main. The Corrosion Engineering department will check this list against Corrosion Control mapping records to ensure consistency. This list will be sent to the Distribution Engineering.
- b. The following steps are used to evaluate and reclassify Pre-DOT CP pipe when Distribution Engineering or field employees identify inadequacies:
- 1) Distribution Engineering shall consult with the Corrosion Engineering department to evaluate the effectiveness of the cathodic protection on the section identified. Corrosion Engineering department will evaluate the section of main based on section 1 above.
 - i. Distribution Engineering shall incorporate the reclassified unprotected coated/bare main section into the LPP main replacement program on the basis of priority.

5.6 Reinforcements, Jobs in public works areas or storm hardening

- a. Additional adjustment shall be applied for candidate segments in flood zones - by the addition of a storm hardening factor to the Prioritization calculation. An exception to the flood zone factor may be applied. Any exception to the flood zone factor shall be documented as part of the prioritization calculation.
- b. Additional adjustments may be applied for candidate segments in public works areas or for which reinforcement opportunities have been identified - by the addition of a Public Works (PW) and/or Reinforcement (RI) factor to the Prioritization calculation:


$$Pr = D + R + IM + PW + RI + SH$$

- 1) For Road Resurfacing, PW = 2.4
- 2) For Road Reconstruction, PW = 4.2
- 3) For Size-Pressure Upgrade Reinforcement, RI = 2.5
- 4) For 100-yr FEMA defined flood zone, SH = 2
- 5) For 500-yr FEMA defined flood zone, SH = 1



These factors are applied because of potential cost savings in combining main replacements with other work, as well as anticipated avoidance of performing work on protected streets that were recently improved.

PRINTED COPIES ARE NOT DOCUMENT CONTROLLED.		© National Grid Gas plc 2021– All Rights Reserved
FOR THE LATEST AUTHORIZED VERSION PLEASE REFER TO THE APPROPRIATE DEPARTMENT WEBSITE OR DOCUMENTUM™.		
FILE: ENG04030 Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	ORIGINATING DEPARTMENT: STANDARDS, POLICIES AND CODES	REGIONS: ALL

	Gas Work Method Design of Mains and Distribution Systems	Doc.# ENG04030 Page 9 of 9
	Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement	Revision 5 11/01/2021

6. Codes (Federal, State, Local – as applicable)

Code of Federal Regulation

- CFR 192.457

New York Code Rules and Regulations / Consolidated Laws of New York

- NYCRR 255.457

7. Knowledge Base & References ([Click here](#))

Knowledge Base		References
1 - Compliance History	5 - Job Aid	1 - Regulatory – Codes
2 - Data Capture	6 - Learning & Development	2 - Technical Documents
3 - Definitions	7 - Standard Drawings	3 - Tools Catalog
4 - Document History	8 - Tools & Equipment	

8. Attachments

Attachment 1: [DIMP Factor](#)

Division 1-7

Request:

Identify the basis for the increase in Workable Leak Backlog in 2019 and 2020 and explain what the Company is doing to reduce the backlog to levels experienced between 2012 and 2017.

Response:

The Workable Leak Backlog for 2018, as of Dec. 31, was 169. For 2019 and 2020, respectively, it was 164 and 155. The backlog has not risen during this period.

However, the backlog is higher than in the referenced earlier period of 2012 to 2017. The backlog rose in 2018 as a result of our transition to a new mapping system and resultant difficulties in dispatching work.

Since that time, the backlog has remained high for a number of reasons:

- Decreases in available gas technicians due to:
 - Attrition
 - Retirements
 - Deaths
 - Company reorganization pulled Crew Leaders from Field Operations crews. Union rules require offering internal positions to existing members through seniority.

To address this issue, the Company has begun hiring additional technicians. The training and qualification process for new gas technicians is lengthy, however, meaning that there will not be an appreciable contribution from new hires for 1-2 years.

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-8

Request:

Provide the Company's FY 2022 Gas ISR Quarterly Update ending September 30, 2021.

Response:

Please see Attachment DIV 1-8 for the Company's FY 2022 Gas Infrastructure, Safety, and Reliability Plan Quarterly Update – Second Quarter Ending September 30, 2021, as filed with the Rhode Island Public Utilities Commission ("PUC") on November 17, 2021.



Raquel J. Webster
Senior Counsel

November 17, 2021

BY ELECTRONIC MAIL

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

**RE: Docket 5099 – FY 2022 Gas Infrastructure, Safety, and Reliability Plan
Quarterly Update – Second Quarter Ending September 30, 2021**

Dear Ms. Massaro:

On behalf of National Grid,¹ I have enclosed an electronic version of the Company's fiscal year (FY) 2022 Gas Infrastructure, Safety, and Reliability (ISR) Plan quarterly update for the fourth quarter ending September 30, 2021.²

Pursuant to the provisions of the approved FY 2018 Gas ISR Plan, the Company committed to providing quarterly updates on the progress of its Gas ISR program to the Rhode Island Public Utilities Commission and the Rhode Island Division of Public Utilities and Carriers.

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

Very truly yours,

A handwritten signature in blue ink that reads "Raquel Webster".

Raquel J. Webster

Enclosures

cc: Docket 5099 Service List
Leo Wold, Esq.
John Bell, Division
Al Mancini, Division

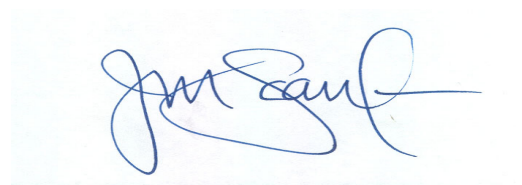
¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

² Per a communication from Commission counsel on October 4, 2021, the Company is submitting an electronic version of this filing followed by six (6) hard copies filed with the Clerk within 24 hours of the electronic filing.

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.

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



Joanne M. Scanlon

November 17, 2021
Date

Docket No. 5099- National Grid's FY 2022 Gas Infrastructure, Safety and Reliability (ISR) Plan - Service List 4/1/2021

Name/Address	E-mail Distribution	Phone
Raquel J. Webster, Esq. National Grid 40 Sylvan Road Waltham, MA 02451	raquel.webster@nationalgrid.com;	781-907-2121
	celia.obrien@nationalgrid.com;	
	Joanne.scanlon@nationalgrid.com;	
	Jennifer.Hutchinson@nationalgrid.com;	
National Grid Amy Smith Melissa Little Lee Gresham Ryan Scheib	Amy.smith@nationalgrid.com;	
	Robert.Gresham@nationalgrid.com;	
	Melissa.Little@nationalgrid.com;	
	Ann.leary@nationalgrid.com;	
	Theresa.Burns@nationalgrid.com;	
	Michael.Pini@nationalgrid.com;	
	Nathan.Kocon@nationalgrid.com;	
	Ryan.Scheib@nationalgrid.com;	
Division of Public Utilities & Carriers Leo Wold, Esq.	Leo.Wold@dpuc.ri.gov;	401-780-2130
	Margaret.I.hogan@dpuc.ri.gov;	
	Al.mancini@dpuc.ri.gov;	
	John.bell@dpuc.ri.gov;	
	Linda.george@dpuc.ri.gov;	
	Robert.Bailey@dpuc.ri.gov;	
	dmacrae@riag.ri.gov;	
MFolcarelli@riag.ri.gov;		
Rod Walter, CEO/President Rod Walker & Associates	Rwalker@RWalkerConsultancy.com;	706-244-0894

Office of Energy Resources (OER) Albert Vitali, Esq. Dept. of Administration Division of Legal Services One Capitol Hill, 4 th Floor Providence, RI 02908	Albert.Vitali@doa.ri.gov ;	
	Nancy.Russolino@doa.ri.gov ;	
	Christopher.Kearns@energy.ri.gov ;	
	Nicholas.Ucci@energy.ri.gov ;	
	Carrie.Gill@energy.ri.gov ;	
File an original & five (5) copies w/: Luly E. Massaro, Commission Clerk Public Utilities Commission 89 Jefferson Blvd. Warwick RI 02888	Luly.massaro@puc.ri.gov ;	401-780-2107
	Patricia.lucarelli@puc.ri.gov ;	
	Todd.bianco@puc.ri.gov ;	
	Emma.rodvien@puc.ri.gov ;	
	Rudolph.S.Falcone@puc.ri.gov ;	
	Alan.nault@puc.ri.gov ;	
PPL Electric Utilities Ronald Reybitz Stephen Breininger	rjreybitz@pplweb.com ;	
	skbreininger@pplweb.com ;	
Conservation Law Foundation James Crowley, Esq. Conservation Law Foundation 235 Promenade St. Suite 560, Mailbox 28 Providence, RI 02908	jcrowley@clf.org ;	401-228-1904

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update
Second Quarter Ending September 30, 2021
Page 1 of 9

Gas Infrastructure, Safety and Reliability Plan

The Narragansett Electric Company

FY 2022 Quarterly Update

Second Quarter – Ending September 30, 2021

Executive Summary

Fiscal year (FY) 2022 Gas Infrastructure, Safety and Reliability (ISR) second quarter results (Attachment A) reflect that the Company¹ has spent approximately \$73.19 million of an estimated year-to-date (YTD) budget of \$97.91 million, resulting in a second quarter underspending variance of \$24.72 million. This spending does not include the Southern Rhode Island Gas Expansion Project. The second quarter spend includes actual spending of \$21.84 million out of an estimated YTD budget of \$24.49 million for Non-Discretionary work, resulting in a second quarter underspending variance of \$2.65 million. In addition, the second quarter spend includes actual spending of \$51.35 million out of an estimated YTD budget of \$73.42 million on Discretionary work, resulting in a second quarter underspending variance of \$22.07 million.

To date, the \$73.19 million of actual spend represents approximately 48 percent of the total FY 2022 annual Gas ISR budget of \$153.81 million (including incremental costs). As of September 30, 2021, the forecasted total year-end spend was \$139.40 million, which was \$14.41 million below the total budget of \$153.81 million (including incremental costs). A summary forecast is provided in Attachment A. Additional details supporting this forecast are provided in Attachment B. In the sections below, the Company explains in more detail the primary drivers for spending to-date and the forecast for each category.

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

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update
Second Quarter Ending September 30, 2021
Page 2 of 9

FY 2022 Gas ISR second quarter results ([Attachment A](#)) reflect that the Company has spent \$10.72 million of an estimated YTD budget of \$11.67 million for the Southern Rhode Island Gas Expansion Project (Gas Expansion Project). This results in a second quarter underspending variance of \$0.95 million. YTD results ([Attachment B](#)) reflect that the Company spent approximately \$10.24 million for Construction – Pipeline compared to a YTD budget of \$10.59 million, resulting in a fiscal YTD underspending variance of \$0.35 million. For the Other Upgrades/Investments category, the Company has completed the Maximum Operating Pressure (MOP) increase from 150 pounds per square inch gauge (psig) to 200 psig of the existing main in Cranston and West Warwick. The Company is also continuing preparation for updates at the existing Cowesett Regulator Station along with planning, engineering, and site planning, for a new regulator station near the existing Cowesett regulator station. The Company forecasts that the Gas Expansion Project category will be underbudget by \$1.71 million at fiscal year-end.

FY 2022 Capital Spending by Category

Non-Discretionary Work²

Public Works Program – \$0.73 million variance over year-to-date budget

Through the second quarter of FY 2022, the Company spent a \$13.22 million, net reimbursements, against a projected year-to-date budget of \$12.49 million for the Public Works program, resulting in an overspending variance of \$0.73 million. Through the end of Q2 FY 2022, the Company installed 6.3 miles of a plan of 10.0 miles for new gas main and has abandoned 7.0 miles of a plan of 10.6 miles of leak-prone pipe through the Public Works program. The Company forecasts that FY 2022 Reimbursable work will come in \$1.04 million higher than budget and that Reimbursements (credits) will come in \$0.50 million higher than

² Non-Discretionary programs include projects that are required by legal, regulatory code, and/or agreement, or are the result of damage or failure, with limited exceptions.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update
Second Quarter Ending September 30, 2021
Page 3 of 9

budget. As a result, the Company projects that the Public Works Program category will be over budget by \$0.55 million at fiscal year-end.

Mandated Programs – \$3.25 million underspending variance to budget year-to-date

Through the second quarter of FY 2022, the Company spent approximately \$8.62 million of a projected YTD budget of \$11.87 million for Mandated Programs, resulting in an underspending variance of \$3.25 million. Please note that a total of \$0.82 million for Incremental Paving – Patches was allocated to the annual budgets of three Mandated programs. Please see Attachment C for a breakdown of the budget allocations. The primary driver of the underspend in the Mandated category is lower than anticipated costs accumulating in the Reactive Leaks categories (CI Joint Encapsulation/Service Replacement). However, as the Company continues to review FY 2022 work orders, the Company anticipates that charges are likely to increase in these categories. The Company forecasts that it will be underbudget by \$1.00 million for the Reactive Leaks category at year-end. Overall, as of September 30, 2021, the Mandated programs forecasted total year-end spend was \$23.62 million or \$1.42 million more than the budget. The primary drivers of the projected overspend are the Maintenance and Corrosion categories. The forecast for the maintenance category has been lowered since Q1 FY 2022, as the Reservoir Avenue project in Cranston will likely be deferred until FY 2023. The Oxbow Farms project in Middletown remains in the FY 2022 forecast and is continuing development as a main replacement job, but the Company will discuss options with the housing development owner prior to construction. The forecast for the Corrosion is higher than budget because the Company has been performing a higher volume of repair work than was budgeted.

In June 2021, the Company, in collaboration with the Rhode Island Division of Public Utilities and Carriers (Division), developed and implemented a plan to continuously improve the Company's tracking of its meter inventory and its purchasing strategies. This was implemented in compliance with Rhode Island Public Utilities Commission (PUC) Order in Docket 5099,

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update
Second Quarter Ending September 30, 2021
Page 4 of 9

National Grid's FY 2022 Gas ISR Plan. The first component of the plan is an enhanced process to track meter inventory. The Company is conducting a manual count of the meter lab inventory each month until the Company has validated that the Maximo system (system) is accurately capturing inventory data. The Company conducted a physical inventory count on June 10, 2021 to establish the baseline count. The chart below provides a summary of the meter lab inventory counts on June 10, 2021, June 30, 2021, and September 30, 2021. The Company is currently reviewing any variances between the physical counts and the meter inventory tracked in Maximo and anticipates the variance between the physical count and Maximo will continue to be reduced to a minimal amount. The Company is reviewing and addressing factors that contribute to the variance, including the timing of when inventory is counted and reports are run and the timing of data cleanup in the Maximo system.

Meter Lab Inventory				
Measure	Physical Count	Maximo	Variance	Variance %
Inventory as of 6/10/2021	9,943	10,926	983	9%
Inventory as of 6/30/2021	9,156	9,988	823	8%
Inventory as of 9/30/2021	9,568	10,370	802	8%

Damage/Failure Reactive Program – \$0.13 million variance to budget year-to-date

Through the second quarter of FY 2022, the Company spent \$0 of a projected year-to-date budget of \$0.13 million for the Damage/Failure Reactive program, resulting in an underspending variance of \$0.13 million. At this time, the Company forecasts that the Damage/Failure Reactive program category will be underbudget at fiscal year-end.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update
Second Quarter Ending September 30, 2021
Page 5 of 9

Discretionary Work³

Proactive Main Replacement Program – \$13.15 million underspending variance to budget year-to-date

Through the second quarter of FY 2022, the Company spent approximately \$41.55 million of a projected YTD budget of \$54.69 million for the Proactive Main Replacement programs, resulting in an underspending variance of approximately \$13.15 million. Please note that approximately \$2.84 million for Incremental Paving – Main Installation was allocated to the Leak Prone Pipe annual budget. Please see [Attachment C](#) for a breakdown of the budget allocations. Through Q2 FY 2022 in the Proactive Main Replacement (MRP) Program, the Company installed 31.6 miles of new main against a plan of 32.3 miles. Across all ISR programs, the Company installed a total of 38.4 miles of new main against a plan of 45.8 miles. Through Q2 FY 2022, the Company abandoned 24.5 miles in the MRP Program against a plan of 29.7 miles. Across all ISR programs, the Company abandoned 31.2 miles against an overall plan of 47.0 miles. Of the 31.2 miles abandoned, 24.1 miles were associated with prior year carryover work, meaning that the associated new main was installed prior to the beginning of FY 2022. The Company started FY 2022 with 34.4 miles of carryover main to be abandoned in the current fiscal year.

The number of YTD leak prone pipe miles abandoned has been impacted by the availability of internal main connection crews. Along with leak prone pipe abandonments, the Company also prioritized Regulator Station work that was in progress to ensure that work is completed prior to cold weather to minimize risk on the gas system. Additionally, the Company's crew counts continue to be impacted by longer term absences, which have increased since the start of the COVID-19 Pandemic ("Pandemic").

³ Discretionary programs are not required by legal, regulatory code, or agreement, or a result of damage or failure, with limited exceptions.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update
Second Quarter Ending September 30, 2021
Page 6 of 9

For the Atwells Avenue Project, the Company is continuing to work in conjunction with the City of Providence on the final restoration of Segments 1A and 1B. The Company is following a construction schedule that includes paving in segments as the City of Providence completes its sidewalk restoration; the first segment of paving began in August 2021. In terms of the prioritization of overall work in the City of Providence, the Company has been working in close conjunction with Providence Water (replacing pipe) and the City of Providence's Paving Plan (replacing leak prone main ahead of municipal paving). Based on that prioritization, construction for Segment 3 has not been started and due to the high volume of associated service and meter work, that segment has now been deferred to FY 2023 and was included in the FY 2023 ISR Proposal submitted to the Division on October 4, 2021.

Proactive Service Replacement Program – \$0.09 million underspending variance to budget year-to-date

Through the second quarter of FY 2022, the Company spent \$0.22 million of a projected YTD budget of \$0.31 million for the Proactive Service Replacement Program, resulting in an underspending variance of \$0.09 million. The Company is continuing to focus on replacing the copper services located in Cumberland and has replaced 37 services YTD, with 43 remaining in Cumberland. As of October 2021, all remaining Cumberland copper services are isolated to one street, Sun Valley Road. At this time, the Company forecasts that the Proactive Service Replacement Program category will be overbudget by \$0.08 million at fiscal year-end, due to costs associated with final restoration patching for work completed in FY 2021 and some FY 2022 work.

Reliability Programs – \$8.84 million underspending variance to budget year-to-date

Through the second quarter of FY 2022, the Company spent \$9.58 million of a projected YTD budget of \$18.42 million for Reliability programs, resulting in an underspending variance of

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update
Second Quarter Ending September 30, 2021
Page 7 of 9

\$8.84 million for this category. As of September 30, 2021, the Company projected that the Reliability programs would be underbudget by \$3.62 million at fiscal year-end. There are several drivers of this current underspending variance, most of which are due to timing delays for some of the planned work. At a category level, the first driver is project development delays with the Dey Street project within the Heater Installation Program. The Company's FY 2022 budget assumed the project would be constructed during the current fiscal year. However, development has been deferred until FY 2023, and construction has been deferred until FY 2024, as described in the FY 2023 ISR Proposal materials submitted to the Division on October 4, 2021. The second driver is the availability of crews to complete live gas connections for the projects within the Pressure Regulating Facilities category (along with other Reliability categories). The category is underbudget through Q2 but has four sites in progress, which the Company forecasts will be overbudget at year end, as contractors will be performing work at two stations, and the Company will be purchasing long lead time materials needed for FY 2023 construction. The third driver is timing delays associated with the East Providence De-rating (downrating) Project and permitting for two locations in Newport (eliminate single-feed) within the Gas System Reliability category; all three have been deferred and included within the FY 2023 ISR Proposal. The fourth driver is the I&R Reactive category, which is underbudget through Q2, but is forecast to be overbudget at fiscal year-end. Additional funds will be used for reactive work, to increase the rate of regulator replacements, increase the rate of pilot replacements, and replace older style odorant systems. The fifth driver is the LNG category, which is experiencing delays with the Exeter Boiloff Compressor and Emergency Shutdown System (ESD) System Installation. However, the forecasted underspend on those two elements is offset by higher forecasted costs for the Exeter High Expansion Foam System along with costs related to the existing Old Mill Lane site, which include site enhancements to reduce the noise impact to residential neighbors. The sixth driver is the Replace Pipe on Bridges category, which the Company forecasts will be underbudget by \$1.73 million because the Goat Island Bridget project in Newport has not been advanced by the Rhode Island Department of Transportation

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update
Second Quarter Ending September 30, 2021
Page 8 of 9

(RIDOT). Additionally, the Company forecasts that the Tools & Equipment category will be overbudget by \$1.25 million at fiscal year-end as the Company needs to replace certain tools and equipment that are experiencing greater wear and tear due to the type and volume of work being performed by Company crews. The Company is also purchasing certain specialty equipment that will no longer be available to borrow from the Boston Gas Company once the sale of the assets to PPL is complete, such as Kleiss systems, Williamson equipment, and hole hogs.

FY 2022 Southern Rhode Island Gas Expansion Project Spending by Category

Construction

Pipeline – \$0.35 million underspending variance to budget year-to-date

Through the second quarter of FY 2022, the Company spent \$10.24 million of a projected YTD budget of \$10.59 million for the Gas Expansion Project – Main Installation, resulting in an underspending variance of \$0.35 million for this category. Through the second quarter of FY 2022, the Company has now gassed in all the Phase 2 and Phase 3 gas main through South Road and final restoration has been completed in those areas. Through September 20, 2021, the Company and its Contractor have completed fitting replacements at 13 of 15 locations along the project's main installation route, with the remaining 2 expected to be completed by the end of October, with final restoration to follow afterwards. The associated main will be gassed in by November 1, 2021. At this time, the Gas Expansion Project – Main Installation category is forecasted to be on budget at fiscal year-end.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update
Second Quarter Ending September 30, 2021
Page 9 of 9

Other Upgrades/Investments

Maximum Operating Pressure (MOP) Project, Launcher/Receiver, Installation of Remote Operating Valve (ROV) – \$0.52 million underspending variance to budget year-to-date

Through the second quarter of FY 2022, the Company spent \$0.37 million of a projected YTD budget of \$0.88 million for the Other Upgrades/Investments category, resulting in an underspending variance of \$0.52 million for this category. The Cranston Line MOP increase to 200 pounds per square inch gauge (psig) was successfully completed at the end of August. At this time, the Other Upgrades/Investments category is projected to be underbudget at fiscal year-end by \$1.36 million, as the forecast was adjusted to align with the current cost estimate for work to be completed in FY 2022 and the construction phase of the Launcher/Receiver and Installation of ROV work was deferred until FY 2025, so some associated preparation was also deferred.

Regulator Station Investment

Updates to Cranston Take Station, Cowesett Regulator Station, and New Regulator Station – \$0.08 million underspending variance to budget year-to-date

Through the second quarter of FY 2022, the Company spent \$0.12 million of a projected YTD budget of \$0.20 million for the Regulator Station Investment category, resulting in an underspending variance of \$0.08 million for this category. The Company is continuing preparation for updates at the existing Cowesett Regulator Station along with planning, engineering, and site planning, for a new regulator station near the existing Cowesett regulator station. The FY 2022 forecast also includes costs for procurement of materials in preparation for FY 2023 construction related to the updates at the existing Cowesett Regulator Station. At this time, the Company forecasts that the Regulator Station Investment category will be underbudget by \$0.35 million at fiscal year-end.

Attachment A
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update

Attachment A - Summary

The Narragansett Electric Company
d/b/a National Grid - RI Gas
Capital Spending by Investment Categories - Summary
FY 2022 through September 30, 2021
(\$000)

Categories	FYTD			FY 2022 - Total		
	Budget	Actual	Variance	Budget	Forecast	Variance
NON-DISCRETIONARY						
Public Works ¹	\$12,493	\$13,222	\$729	\$19,202	\$19,747	\$545
Mandated Programs	\$11,873	\$8,619	(\$3,254)	\$22,203	\$23,624	\$1,421
Damage / Failure (Reactive)	\$125	\$0	(\$125)	\$250	\$145	(\$105)
NON-DISCRETIONARY TOTAL	\$24,491	\$21,842	(\$2,649)	\$41,655	\$43,516	\$1,861
DISCRETIONARY						
Proactive Main Replacement	\$54,693	\$41,547	(\$13,146)	\$77,871	\$65,138	(\$12,733)
Proactive Service Replacement	\$312	\$224	(\$88)	\$350	\$430	\$80
Reliability	\$18,415	\$9,575	(\$8,840)	\$33,932	\$30,316	(\$3,616)
SUBTOTAL DISCRETIONARY (Without Gas Expansion)	\$73,419	\$51,345	(\$22,074)	\$112,153	\$95,884	(\$16,269)
Southern RI Gas Expansion Project	\$11,671	\$10,724	(\$948)	\$19,438	\$17,728	(\$1,710)
DISCRETIONARY TOTAL (With Gas Expansion)	\$85,090	\$62,069	(\$23,022)	\$131,591	\$113,612	(\$17,979)
CAPITAL ISR TOTAL (Base Capital - Without Gas Expansion)	\$97,910	\$73,187	(\$24,723)	\$153,808	\$139,400	(\$14,408)
CAPITAL ISR TOTAL (With Gas Expansion)						
Includes incremental paving associated with new RI Paving Law ² and PE Stamps	\$109,581	\$83,911	(\$25,671)	\$173,246	\$157,128	(\$16,118)
Additional Capital Investments (Not currently included in the ISR)	\$1,675	\$449	(\$1,226)	\$6,900	\$4,316	(\$2,584)

() in Variance column denotes an underspend

1. Public Works Program includes reimbursements which will be credited as received throughout the year.

2. Budgets for Incremental Paving (Main Installation - \$3.019M; Patches - \$0.823M) were allocated to ISR categories that are forecasted to incur the incremental paving costs.

See Attachment C - Incremental Paving Budget Allocations.

Attachment B
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update

Attachment B - Breakout

The Narragansett Electric Company
d/b/a National Grid - RI Gas
Capital Spending by Investment Categories - Detail
FY 2022 through September 30, 2021
(\$000)

Categories	FYTD			FY 2022 - Total		
	Budget	Actual	Variance	Budget	Forecast	Variance
NON-DISCRETIONARY						
Public Works						
<i>CSC/Public Works - Non-Reimbursable</i>	\$12,468	\$11,828	(\$640)	\$19,152	\$19,152	\$0
<i>CSC/Public Works - Reimbursable</i>	\$727	\$1,808	\$1,081	\$1,455	\$2,499	\$1,044
<i>CSC/Public Works - Reimbursements</i>	(\$702)	(\$413)	\$289	(\$1,405)	(\$1,904)	(\$499)
Public Works Total	\$12,493	\$13,222	\$729	\$19,202	\$19,747	\$545
Mandated Programs						
<i>Corrosion</i>	\$478	\$1,434	\$955	\$1,250	\$2,250	\$1,000
<i>Purchase Meter (Replacement)</i>	\$1,668	\$1,443	(\$225)	\$2,880	\$2,880	\$0
<i>Reactive Leaks (CI Joint Encapsulation/Service Replacement)</i>	\$6,984	\$4,066	(\$2,918)	\$12,629	\$11,629	(\$1,000)
<i>Service Replacement (Reactive) - Non-Leaks/Other</i>	\$1,464	\$555	(\$908)	\$2,016	\$1,616	(\$400)
<i>Main Replacement (Reactive) - Maintenance (incl Water Intrusion)</i>	\$340	\$943	\$603	\$1,188	\$4,188	\$3,000
<i>Low Pressure System Elimination (Proactive)</i>	\$250	\$9	(\$241)	\$500	\$400	(\$100)
<i>Transmission Station Integrity</i>	\$689	\$169	(\$520)	\$1,740	\$661	(\$1,079)
Mandated Total	\$11,873	\$8,619	(\$3,254)	\$22,203	\$23,624	\$1,421
Damage / Failure (Reactive)						
<i>Damage / Failure (Reactive)</i>	\$125	\$0	(\$125)	\$250	\$145	(\$105)
NON-DISCRETIONARY TOTAL	\$24,491	\$21,842	(\$2,649)	\$41,655	\$43,516	\$1,861
DISCRETIONARY						
Proactive Main Replacement						
<i>Main Replacement (Proactive) - Leak Prone Pipe</i>	\$49,041	\$39,227	(\$9,814)	\$70,019	\$61,072	(\$8,947)
<i>Main Replacement (Proactive) - Large Diameter LPCI Program</i>	\$2,651	\$1,939	(\$713)	\$3,852	\$2,867	(\$985)
<i>Atwells Avenue</i>	\$3,000	\$381	(\$2,619)	\$4,000	\$1,200	(\$2,800)
Proactive Main Replacement Total	\$54,693	\$41,547	(\$13,146)	\$77,871	\$65,138	(\$12,733)
Proactive Service Replacement						
Proactive Service Replacement Total	\$312	\$224	(\$88)	\$350	\$430	\$80
Reliability						
<i>System Automation</i>	\$660	\$491	(\$169)	\$1,321	\$1,000	(\$321)
<i>Heater Installation Program</i>	\$1,359	\$141	(\$1,218)	\$3,557	\$1,375	(\$2,182)
<i>Pressure Regulating Facilities</i>	\$5,970	\$3,665	(\$2,304)	\$7,462	\$8,857	\$1,395
<i>Allens Ave Multi Station Rebuild</i>	\$1,540	\$1,524	(\$16)	\$2,500	\$2,500	\$0
<i>Take Station Refurbishment</i>	\$650	\$210	(\$440)	\$1,300	\$1,958	\$658
<i>Valve Installation/Replacement (incl Storm Hardening & Middletown/Newport)</i>	\$114	\$72	(\$42)	\$1,233	\$366	(\$867)
<i>Gas System Reliability</i>	\$2,044	\$109	(\$1,935)	\$3,244	\$970	(\$2,274)
<i>I&R - Reactive</i>	\$687	\$32	(\$655)	\$1,348	\$1,848	\$500
<i>Distribution Station Over Pressure Protection</i>	\$924	\$1,563	\$639	\$3,301	\$3,752	\$451
<i>LNG</i>	\$2,843	\$1,178	(\$1,665)	\$5,738	\$5,237	(\$501)
<i>Replace Pipe on Bridges</i>	\$1,103	\$72	(\$1,032)	\$2,006	\$281	(\$1,725)
<i>Access Protection Remediation</i>	\$210	\$47	(\$163)	\$310	\$310	\$0
<i>Tools & Equipment</i>	\$312	\$470	\$158	\$612	\$1,862	\$1,250
Reliability Total	\$18,415	\$9,575	(\$8,840)	\$33,932	\$30,316	(\$3,616)
SUBTOTAL DISCRETIONARY (Without Gas Expansion)	\$73,419	\$51,345	(\$22,074)	\$112,153	\$95,884	(\$16,269)
Southern RI Gas Expansion Project						
<i>Pipeline</i>	\$10,585	\$10,237	(\$348)	\$14,908	\$14,908	\$0
<i>Other Upgrades/Investments</i>	\$884	\$366	(\$518)	\$2,930	\$1,570	(\$1,360)
<i>Regulator Station Investment</i>	\$202	\$121	(\$81)	\$1,600	\$1,250	(\$350)
Southern RI Gas Expansion Project Total	\$11,671	\$10,724	(\$948)	\$19,438	\$17,728	(\$1,710)
DISCRETIONARY TOTAL (With Gas Expansion)	\$85,090	\$62,069	(\$23,022)	\$131,591	\$113,612	(\$17,979)
CAPITAL ISR TOTAL (Base Capital - Without Gas Expansion)	\$97,910	\$73,187	(\$24,723)	\$153,808	\$139,400	(\$14,408)
CAPITAL ISR TOTAL (With Gas Expansion)						
Includes incremental paving associated with new RI Paving Law ¹	\$109,581	\$83,911	(\$25,671)	\$173,246	\$157,128	(\$16,118)
Additional Capital Investments (Not currently included in the ISR)						
<i>Aquidneck Island Long Term Capacity Options</i>	\$1,355	\$376	(\$979)	\$4,900	\$3,842	(\$1,058)
<i>LNG - Cumberland Tank Replacement</i>	\$320	\$73	(\$247)	\$2,000	\$474	(\$1,526)

1) Budgets for Incremental Paving (Main Installation - \$3.019M; Patches - \$0.823M) were allocated to ISR categories that are forecasted to incur the incremental paving costs.
See Attachment C - Incremental Paving Budget Allocations.

Attachment C
RIPUC Docket No. 5099
FY 2022 Gas Infrastructure, Safety, and Reliability Plan
FY 2022 Quarterly Update

Attachment C - Incremental Paving Budget Allocations

The Narragansett Electric Company
d/b/a National Grid - RI Gas
Incremental Paving Budget Allocations - Detail
(\$000)

Incremental Paving Budget	ISR Category	Subcategory	Category Budget ISR Approved	Incremental Paving Budget Allocation	Updated Budget with Paving Allocation
Incremental Paving - Main Installation	Main Replacement (Proactive) - Leak Prone Pipe	Main Replacement (Proactive) - Leak Prone Pipe	\$ 67,176	\$ 2,843	\$ 70,019
Incremental Paving - Main Installation	Gas System Reliability	Gas Planning	\$ 3,068	\$ 176	\$ 3,244
Incremental Paving - Main Installation - Total Budget			\$	3,019	
Incremental Paving - Patches	Reactive Leaks (CI Joint Encapsulation/ Service Replacement)		\$ 11,973	\$ 656	\$ 12,629
Incremental Paving - Patches	Service Replacements (Reactive) - Non-Leaks/Other	Service Replacements (Reactive) - Non- Leaks/Other	\$ 1,911	\$ 105	\$ 2,016
Incremental Paving - Patches	Main Replacement (Reactive) - Maintenance (incl Water Intrusion)		\$ 1,126	\$ 62	\$ 1,188
Incremental Paving - Patches - Total Budget			\$	823	

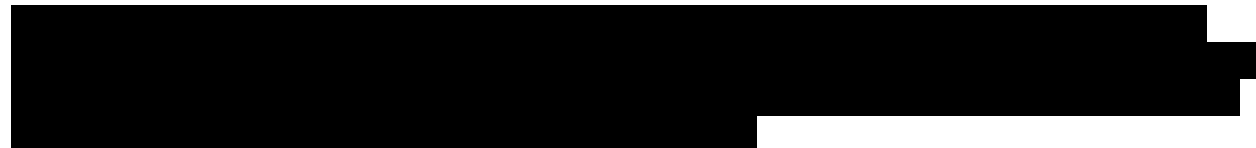
Redacted
Division 1-9

Request:

 and with respect to the WTPR, provide the following information:

- i Provide the total multi-year budget for the WTPR;
- ii Provide a detailed site plan for the project;
- iii Identify the "age" of the pipe;
- iv Explain why the "age" of the pipe requires commencement of the project;
- v Explain how the existing line is inspected and why it is not "piggable;"
- vi Identify what Company standards the current line does not conform to;
- vii Identify all safety concerns that arise from not initiating the WTPR;
- viii Identify any leak activity or what the current condition of the pipe is; and
- ix Identify if the WTPR is included in the 37 miles of Large Diameter Leak Prone Pipe.

Response:



- i. Multi-year budget for the WTPR;
 - FY23: \$500,000
 - FY24: \$500,000
 - FY25: \$5,000,000
 - FY26: \$5,000,000
 - FY27: \$250,000
- ii. National Grid is proposing to install the new main parallel to the existing main. The existing main would be abandoned at the conclusion of the project. See Attachment DIV 1-9 for GIS level scope of project.

Redacted
Division 1-9, page 2

- iii. The main was installed in 1953 with small a replacement happening in 1977 (approximately 428') on the main. A lateral leading to a regulator station along Veteran's Memorial Boulevard was installed in 1959.
- iv. This segment of main was installed prior to issuance of CFR part 192 in 1970, and may have been manufactured and constructed using materials and methods that have known threats, see CFR part 192.917. Additionally, it is common to see coating installed in this vintage deteriorate significantly.
- v. National Grid does not have as-builts for this main. Mains installed prior to the issuance of CFR part 192 in 1970 were not required to maintain records of as-built, or details of material and/or methods of construction. The main may have fittings that were commonly used before 1970 such as short radius elbows and miter bends. An internal inspection tool would not be able to pass through these fittings and become stuck, creating a blockage in the line. These unknowns pose a significant risk to pigging the existing line.
- vi. National Grid has maintained a policy of making existing and new mains operating at and over 125 psig to be capable of In-Line Inspection. Refer to Gas Policy ENG03001 – Design of Gas Transmission Line and Pipelines with MAOP of 125 psig or Greater. Gas Policy ENG03001 is available at [dc-gasweb1/codesnstds/CAndSPDFs/ENG03001.PDF](https://www.nec.com/gasweb1/codesnstds/CAndSPDFs/ENG03001.PDF)
- vii. Recent Direct Assessments inspections from the company's voluntary Integrity Management Program ("IMP") program have shown significant coating deterioration and pitting of the main. The existing coating during recent direct assessment shows the coat to be thin and flakey, providing little cathodic protection.
- viii. In the past two years there have been no leaks found on this segment of the 200 PSIG system. Recent Direct Assessments Inspections from the company's voluntary IMP program have shown significant coating deterioration and pitting and requires multiple rectifiers and high current requirements to provide adequate cathodic protection.
- ix. WTPR is not included in the 37 miles of Large Diameter Leak Prone Pipe.

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Attachment DIV 1-9

Redacted

The Narragansett Electric Company
d/b/a National Grid
In Re: Division’s Review of FY 2023 Proposed Gas ISR Plan
Responses to Division’s First Set of Data Requests
Issued October 28, 2021

Division 1-10

Request:

Provide a more detailed description of work relating to “regulator stations, other upgrades and investments” (P. 38 – 6.19 M) for the Southern RI Gas Expansion Project for FY 2023.

Response:

As indicated on Bates Page 38 of the Company’s FY 2023 Proposed Gas ISR Plan, the Company proposes a budget of \$6.19 million for the Southern RI Gas Expansion Project for FY 2023 relating to “regulator stations, other upgrades and investments”. In Table Division 1-10-1 below, the Company provides more detail on the planned work for the different components that combine for this category.

Table Division 1-10-1

Description	Planned Activity/Activities	FY 2023
<i>Regulator Station Investment:</i>		
Cranston Take Station Upgrades	Complete detailed engineering, apply and obtain environmental permitting and purchase long lead materials.	\$ 2,000,000
Cowesett Regulator Station Upgrades	Construction	\$ 3,093,000
New Regulator Station North of Cowesett Regulator Station	Securing a location, finalize planning, options analysis and engineering.	\$ 700,000
New Regulator Station at End of New Main near South Rd	Securing a location, finalize planning, options analysis and initiate engineering.	\$ 150,000
<i>Total - Regulator Station Investment</i>		<i>\$ 5,943,000</i>
<i>Other Upgrades/Investment:</i>		
Launcher/Receiver	Securing a location, finalize planning, options analysis and engineering.	\$ 100,000
MOP Increase from 150 to 200 psi	Project Closeout	\$ 46,000
Installation of ROV	Securing a location, finalize planning, options analysis and initiate engineering.	\$ 100,000
<i>Total - Other Investment</i>		<i>\$ 246,000</i>
<i>Total Southern RI Gas Expansion Project</i>		<i>\$ 6,189,000</i>

Division 1-11

Request:

For Purchase Meter Replacement "buffer inventory" the Company is contemplating, provide the following information:

- (i) The number of meters; and
- (ii) The cost of the overall buffer inventory.

Response:

- (i) The number of meters the Company is contemplating to have for buffer inventory is 6,324.
- (ii) The cost of the overall buffer inventory is \$1.584 Million. The buffer inventory of 6,324 meters is already included in the proposed FY 2023 budget \$5.248M budget, and the Company is not proposing to increase the FY 2023 budget for Purchase Meters at this time.

Division 1-12

Request:

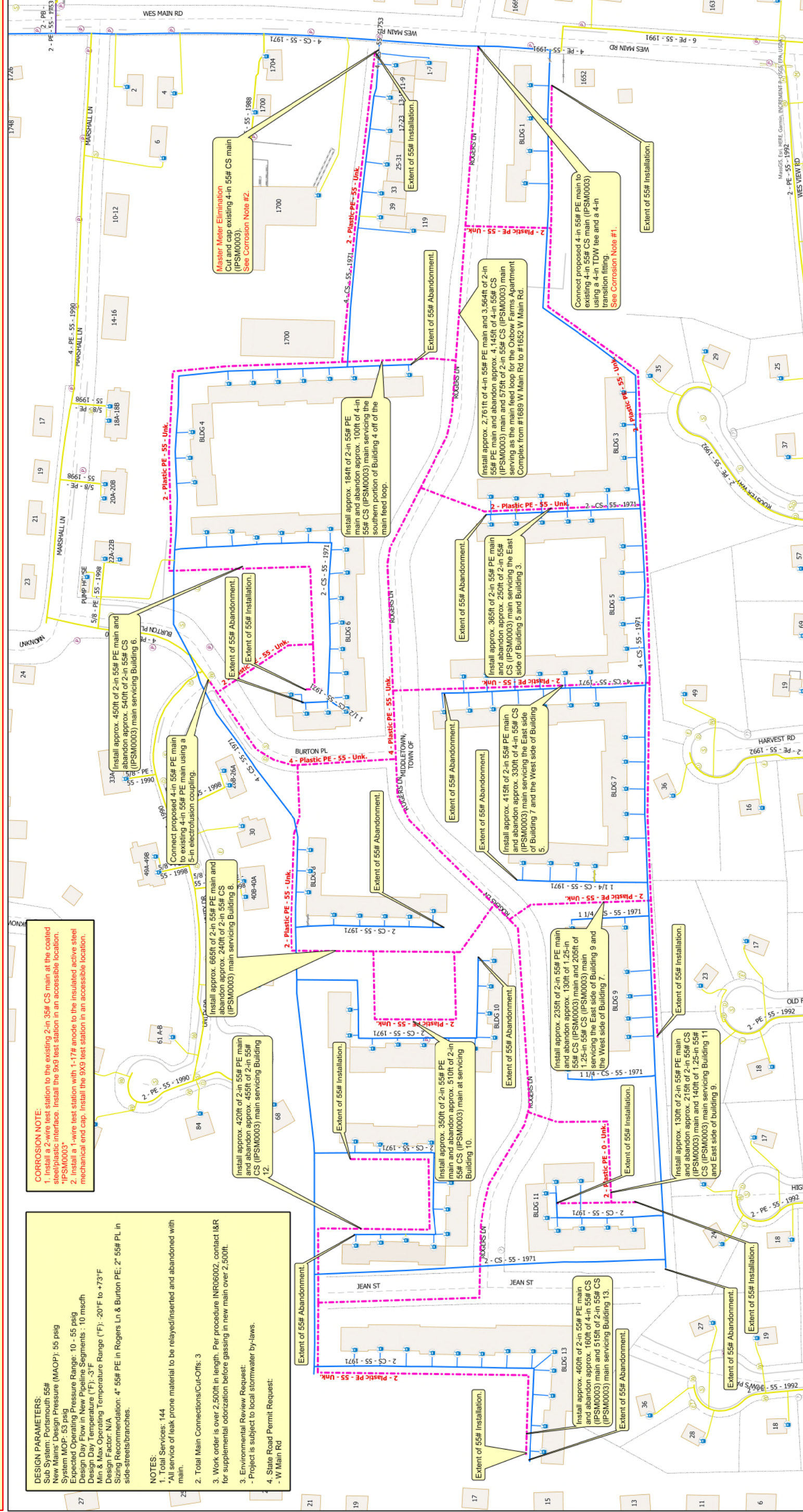
For Main Replacement (Reactive) Maintenance (incl Water Intrusion), provide the details and site plan regarding work that will be performed at Oxbow Farms, Middletown, RI and Reservoir Avenue, Cranston, RI.

Response:

Please see Attachment DIV 1-12 for the site plan and proposed work to be performed at Oxbow Farms, Middletown, RI.

The Reservoir Ave project is no longer being planned under the Main Replacement (Reactive) - Maintenance Program. Instead, this project will now be under the Main Replacement (Proactive) – Leak Prone Pipe Program. The project is currently being designed and is scheduled to start in FY 2023.

• PRESSURE GAUGES ARE REQUIRED AT ALL MAINS FOR ALL TIE-INS. REFER TO GCON02001 PROCEDURE.
• CHECK ELECTRONIC MAPPING SYSTEM FOR MOST CURRENT MAPPING INFORMATION.



CORROSION NOTE:
 1. Install a 2-wire test station to the existing 2-in 35# CS main at the coated steel/plastic interface. Install the 9x9 test station in an accessible location. (IPSM0003)
 2. Install a 1-wire test station with 1-17# anode to the insulated active steel mechanical end cap. Install the 9X9 test station in an accessible location.

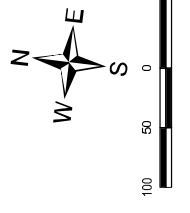
DESIGN PARAMETERS:
 Sub System: Portsmouth 55#
 New Mains Design Pressure (MAOP): 55 psig
 System MOP: 53 psig
 Expected Operating Pressure Range: 10 - 55 psig
 Design Day Flow in New Pipeline Segments: 10 mschd
 Design Day Temperature (°F): -3°F
 Min. & Max. Operating Temperature Range (°F): -20°F to +73°F
 Design Factor: N/A
 Sizing Recommendation: 4" 55# PE in Rogers Ln & Burton Pl; 2" 55# PL in side-streets/branches.

NOTES:
 1. Total Services: 144
 *All service of leak prone material to be relayed/inserted and abandoned with main.
 2. Total Main Connections/Cut-Offs: 3
 3. Work order is over 2,500ft in length. Per procedure INR06002, contact I&R for supplemental odorization before gassing in new main over 2,500ft.
 3. Environmental Review Request:
 - Project is subject to local stormwater by-laws.
 4. State Road Permit Request:
 - W Main Rd

Overview Drawing - WO#90000220920 - Oxbow Farms, Middletown, RI

As part of the RESOURCERISK program, Leak Detection Inventory Management assessments:
 - Install approx. 2,711ft of 4-in 55# PE main and 3,864ft of 2-in 55# PE main and abandon approx. 4,148ft of 4-in 55# CS (IPSM0003) main and 2,651ft of 1.25-in 55# CS (IPSM0003) main serving the East side of Building 9 and the West side of Building 7.
 - Install approx. 415ft of 2-in 55# PE main and abandon approx. 303ft of 4-in 55# CS (IPSM0003) main serving the East side of Building 7.
 - Install approx. 350ft of 2-in 55# PE main and abandon approx. 250ft of 2-in 55# CS (IPSM0003) main serving the East side of Building 8 and Building 3.
 - Total main installation: 9,999ft
 - Total main abandonment: 8,510ft
 - Services: 144
 - Main connections/cut-offs: 3
 - Work scheduled to eliminate the master meter for the Oxbow Farms Apartment Complex.

NOTE: The location of surface and underground objects shown are not warranted to be correct.



ENGINEER	Brandyn Botelho	WORK ORDER #	90000220920
DATE	8/23/2021	MATERIAL	PE
LENGTH	Install: 9,999ft Abandon: 8,510ft	PRESSURE	55#
SHEET	Overview Sheet 1 of 1	SIZE	2-in: 7,238ft 4-in: 2,761ft



Division 1-13

Request:

For Proactive Low-Pressure System Elimination, provide a breakdown of all of the phases of this project including description, site plan and a cost estimate for each phase.

Response:

The Company is pursuing the elimination of the Low-Pressure System at Tuckerman Ave, MDT. Refer to Attachment DIV1-13-1 for the site plan for Phase 1 and Attachment DIV 1-13-2 for the site plan for Phase 2. Below is the breakdown of the phases, description of the work to be performed and the cost estimate for each phase:

Phase 1: Originally scheduled for FY22. Not started yet. Likely deferred to FY23.

- 90000221100 – 1-120 Tuckerman Av, MDT
- Install: 2,250 feet
- Abandonment: 2,220 feet (435 feet of LPP / 1,785 feet of non-LPP)
- LP to HP service conversions: 29
- Cost Estimate: \$470,625

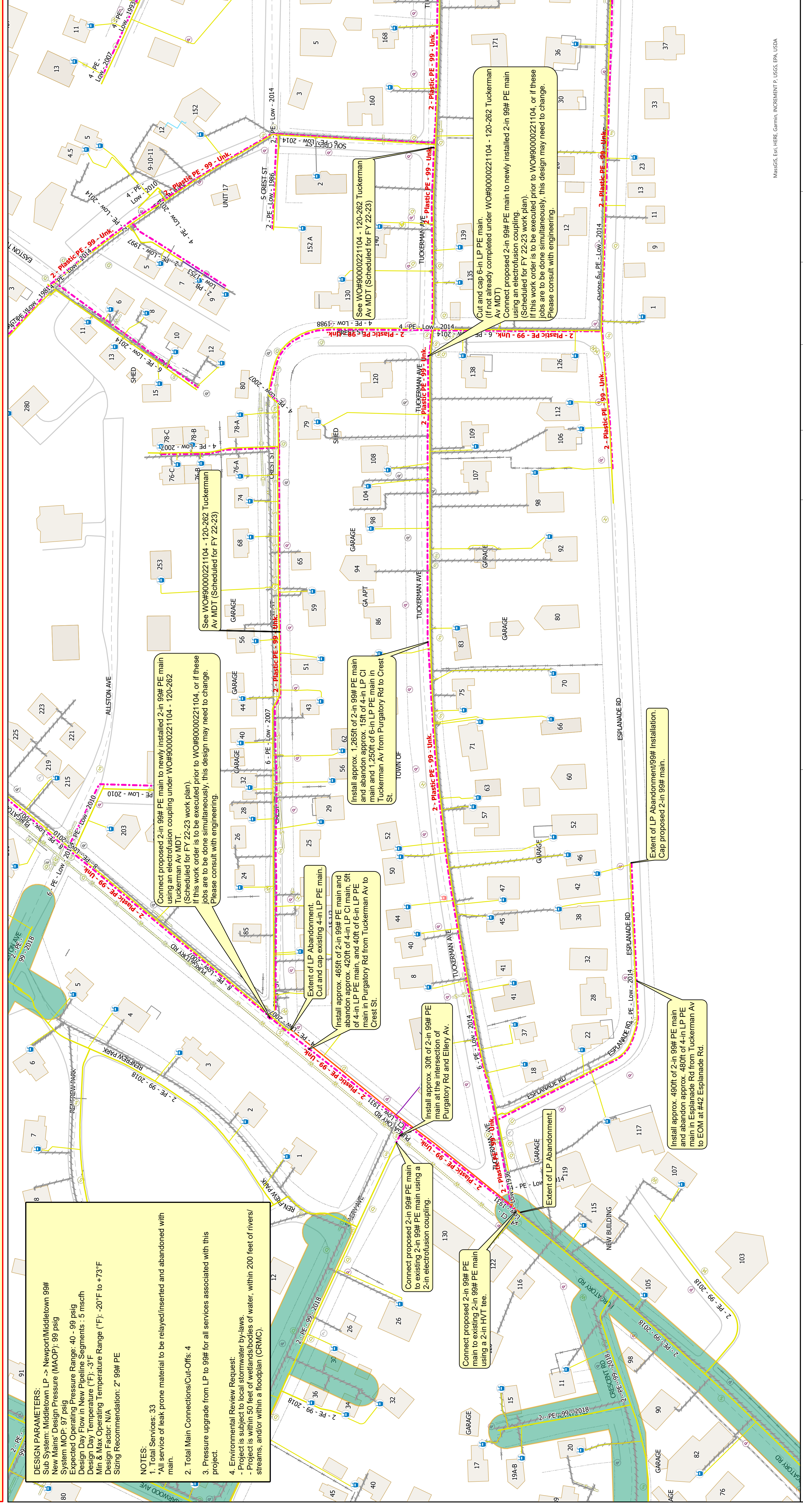
Phase 2: Scheduled for FY23

- 90000221104 – 120-262 Tuckerman Av, MDT
- Install: 8,300 feet
- Abandonment: 8,400 feet (300 feet of LPP / 8,100 feet of non-LPP)
- LP to HP service conversions: 112
- Cost Estimate: \$1,557,917

Additional work to be completed to abandon entire LP system fed by regulator station R-209 (99# to LP):

- Approximately 2.65 miles of abandonment/install (.85 miles of LPP / 1.79 miles of non-LPP)
- Approximately 140 LP to HP service conversions

• PRESSURE GAUGES ARE REQUIRED AT ALL MAINS FOR ALL TIE-INS. REFER TO GCON02001 PROCEDURE.
• CHECK ELECTRONIC MAPPING SYSTEM FOR MOST CURRENT MAPPING INFORMATION.



DESIGN PARAMETERS:
 Sub System: Middletown LP -> Newport/Middletown 99#
 New Mains Design Pressure (MAOP): 99 psig
 System MOP: 97 psig
 Expected Operating Pressure Range: 40 - 99 psig
 Design Day Flow in New Pipeline Segments : 5 mscfh
 Design Day Temperature (°F): -3°F
 Min & Max Operating Temperature Range (°F): -20°F to +73°F
 Design Factor: N/A
 Sizing Recommendation: 2" 99# PE

NOTES:
 1. Total Services: 33
 *All service of leak prone material to be relayed/inserted and abandoned with main.
 2. Total Main Connections/Cut-Offs: 4
 3. Pressure upgrade from LP to 99# for all services associated with this project.
 4. Environmental Review Request:
 - Project is subject to local stormwater by-laws.
 - Project is within 50 feet of wetlands/bodies of water, within 200 feet of rivers/streams, and/or within a floodplain (CRMC).

Overview Drawing - WO#90000221100 - 1-120 Tuckerman Av, Middletown, RI

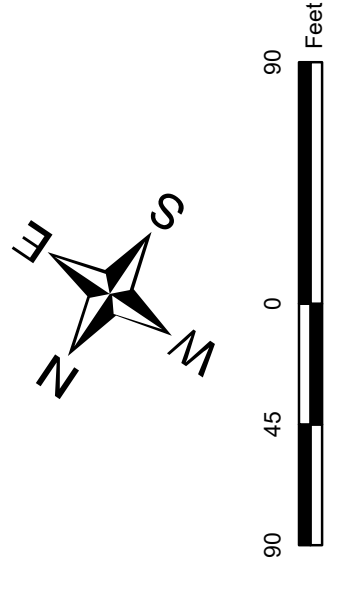
As part of the Low Pressure System Elimination Program, Leak Prone Pipe Integrity Management recommends the relay of approx. 480ft of 2-in 99# PE main to newly installed 2-in 99# PE main, and 40ft of 6-in LP PE main in Purgatory Rd from Tuckerman Av to Crest St.
 -Install approx. 30ft of 2-in 99# PE main at the intersection of Purgatory Rd and Ellery Av.
 -Install approx. 1,265ft of 2-in 99# PE main and abandon approx. 15ft of 4-in LP PE main in Tuckerman Av from Purgatory Rd to Crest St.
 -Install approx. 490ft of 2-in 99# PE main and abandon approx. 480ft of 4-in LP PE main in Esplanade Rd from Tuckerman Av to EOM at #42 Esplanade Rd.

- Total main installation: 2,250ft
 - Total main abandonment: 2,220ft
 - Main connections/cut-offs: 4

-Work scheduled to work towards eliminating the one way feed system being fed by regulator station R-209.

NOTE: The location of surface and underground objects shown are not warranted to be correct!

ENGINEER	Brandy Botelho	WORK ORDER #	90000221100
DATE	7/23/2021	MATERIAL	PE
LENGTH	Install: 2,250ft Abandon: 2,220ft	PRESSURE	LP to 99# 2-in: 2,250ft
SHEET	Overview Sheet 1 of 1	SIZE	

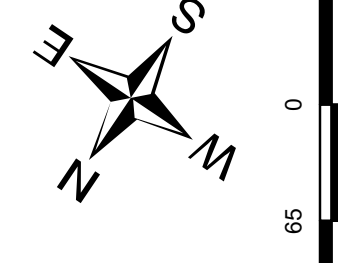
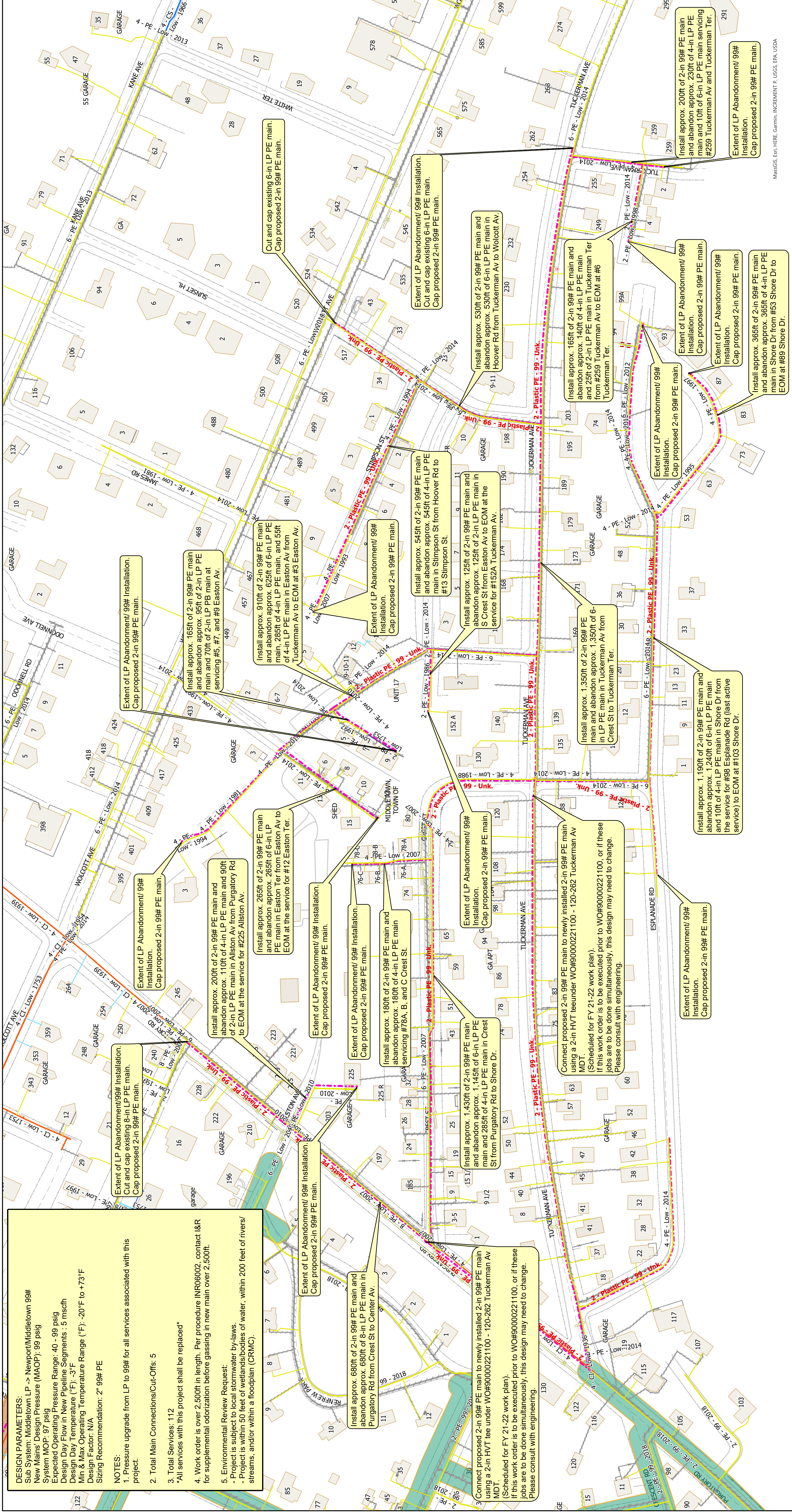


MS&GS, Esr, HERS, Gamma, INCREMENT P, USGS, EPA, USDA



FOR REFERENCE ONLY

PRESSURE GAUGES ARE REQUIRED AT ALL MAINS FOR ALL TIE-INS. REFER TO GCON02001 PROCEDURE.
CHECK ELECTRONIC MAPPING SYSTEM FOR MOST CURRENT MAPPING INFORMATION.



- DESIGN PARAMETERS:**
 Sub System: Middletown LP -> Newport/Middletown 99#
 New Mains' Design Pressure (MAOP): 99 psig
 System MOP: 97 psig
 Expected Operating Pressure Range: 40 - 99 psig
 Design Day Flow in New Pipeline Segments : 5 mschf
 Design Day Temperature (°F): -3°F
 Min & Max Operating Temperature Range (°F): -20°F to +73°F
 Design Factor: N/A
 Sizing Recommendation: 2" 99# PE
- NOTES:**
 1. Pressure upgrade from LP to 99# for all services associated with this project.
 2. Total Main Connections/Cut-Offs: 5
 3. Total Services: 112
 All services with this project shall be replaced
 4. Work order is over 2,500ft in length. Per procedure INR06002, contact I&R for supplemental coordination before gassing in new main over 2,500ft.
 5. Environmental Review Request:
 - Project is subject to local stormwater by-laws.
 - Project is within 50 feet of wetlands/bodies of water, within 200 feet of rivers/streams, and/or within a floodplain (CRMIC).

Overview Drawing - WO#90000221104 - 120-262 Tuckerman Av, Middletown, RI

ALL OF THE LOW PRESSURE SYSTEM ESTIMATIONS, PLANS, AND SPECIFICATIONS ARE BASED ON THE FOLLOWING ASSUMPTIONS:
 - Utility conditions: 4000'± PE main and abandon approx. 4200'± PE main in Middletown Av from Purugatory Rd to Center Av.
 - Installation: 2000'± of 2-in 99# PE main and abandon approx. 1100'± of 4-in LP PE main in Purugatory Rd from Center Av to Middletown Av.
 - Abandonment: 6000'± of 2-in 99# PE main and abandon approx. 1100'± of 4-in LP PE main in Middletown Av from Purugatory Rd to Center Av.
 - Installation: 1430ft of 2-in 99# PE main and abandon approx. 1145ft of 6-in LP PE main in Tuckerman Av from Purugatory Rd to Middletown Av.
 - Abandonment: 1430ft of 2-in 99# PE main and abandon approx. 1145ft of 6-in LP PE main in Tuckerman Av from Purugatory Rd to Middletown Av.
 - Installation: 1517'± of 2-in 99# PE main and abandon approx. 1430ft of 4-in LP PE main in Middletown Av from Purugatory Rd to Center Av.
 - Abandonment: 1517'± of 2-in 99# PE main and abandon approx. 1430ft of 4-in LP PE main in Middletown Av from Purugatory Rd to Center Av.
 - Installation: 1430ft of 2-in 99# PE main and abandon approx. 1145ft of 6-in LP PE main in Middletown Av from Purugatory Rd to Center Av.
 - Abandonment: 1430ft of 2-in 99# PE main and abandon approx. 1145ft of 6-in LP PE main in Middletown Av from Purugatory Rd to Center Av.
 - Installation: 1430ft of 2-in 99# PE main and abandon approx. 1145ft of 6-in LP PE main in Middletown Av from Purugatory Rd to Center Av.
 - Abandonment: 1430ft of 2-in 99# PE main and abandon approx. 1145ft of 6-in LP PE main in Middletown Av from Purugatory Rd to Center Av.
 - Installation: 1430ft of 2-in 99# PE main and abandon approx. 1145ft of 6-in LP PE main in Middletown Av from Purugatory Rd to Center Av.
 - Abandonment: 1430ft of 2-in 99# PE main and abandon approx. 1145ft of 6-in LP PE main in Middletown Av from Purugatory Rd to Center Av.

ENGINEER	Brandy Botelho	WORK ORDER #	90000221104
DATE	8/4/2021	MATERIAL	PE
LENGTH	Install: 8,300ft Abandon: 8,400ft	PRESSURE	LP to 99# 2-in: 8,300ft
SHEET	Overview Sheet 1 of 1	SIZE	

nationalgrid
 FOR REFERENCE ONLY

MINGOS, ERI, HSE, GATMA, INCREMENT P, USGS, EPA, USDA

NOTE: The location of surface and underground objects shown are not warranted to be correct.

Division 1-14

Request:

Provide a detailed description, site plan and the total costs for the multi-year Scott Road Take Station Project.

Response:

The Scott Road Take Station Project is a replacement of the existing station in accordance with current standards. The new station design will greatly improve safety, reliability, and operability. A new precast concrete building will house the new station near the middle of company property, closer to the pipeline operators metering building. A second small "data building" for telemetry will also be included in this project. Existing facilities will be abandoned and potentially removed if there are no other uses. Existing piping will be abandoned in place.

The main building will consist of three sections:

Section 1: Pressure regulation equipment. Dual runs for adequate redundancy, each run with three layers of overpressure protection: control regulator, monitor regulator, and super-monitor regulator.

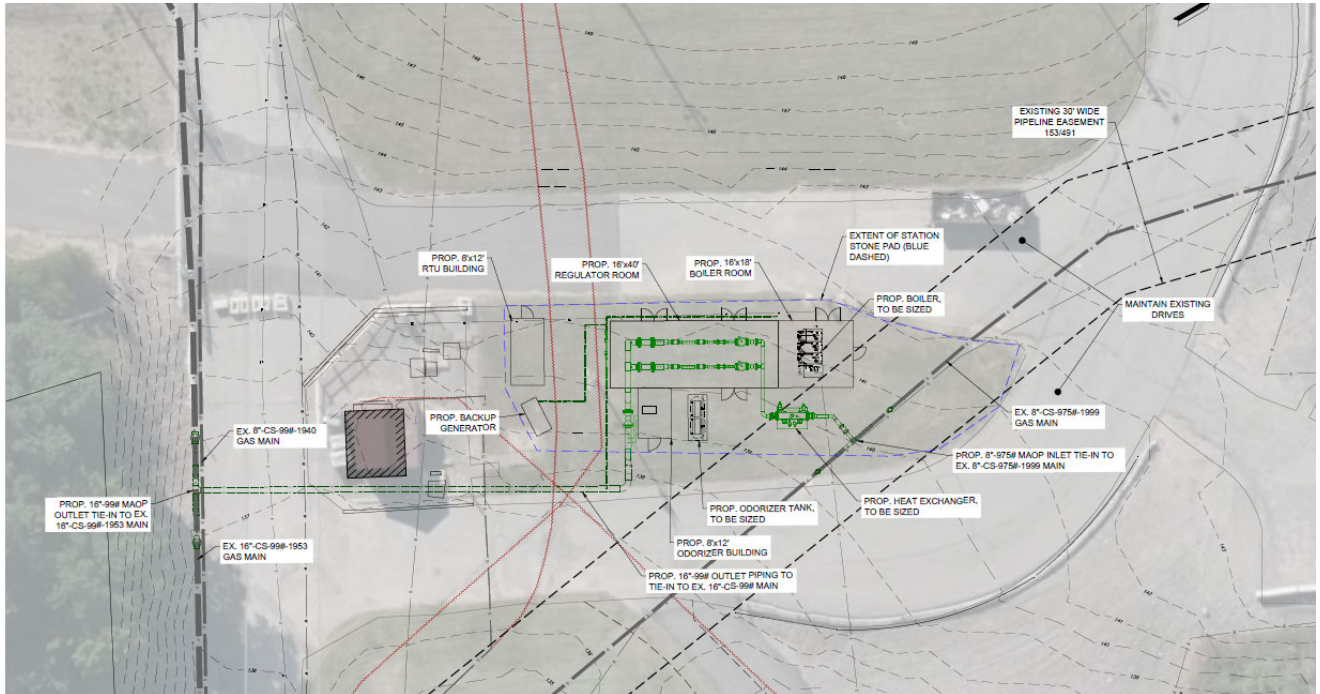
Section 2: Boilers for pre-regulation heat

Section 3: Odorant System

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-14, page 2

30% Design:



Division 1-14, page 3

Existing Site:



The projected cost for the project is \$14.600 M.

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-15

Request:

Identify and risk rank the 12 of 24 transmission stations that are in scope for re-testing and/or replacing equipment.

Response:

Please see the table below. There are now 11 stations in scope following the completion of the Allens Avenue rebuild and additional records reviews.

The stations have been ranked using the Kiefner risk model, which is used by transmission engineering and is more suited to risk ranking pipeline segments and measuring interacting threats compared to the regulator station risk model.

APPENDIX B: Risk Assessment Summary Table (RAST) RI

2021-2022 Rhode Island Station Risk Assessment Summary Table											
Station Number	National Grid Ranking	Kiefner Risk Score w/ Int. March 2021	Station Name	Location	Year Inst.	Nom Dia (in.)	%SMYS	MAOP (psig)	Wall Thickness (in.)	Material Yield Strength (psi)	Outer Diameter (in.)
RIN-C045	6	3864.7	600 George Washington Hwy (Rt 116)	Lincoln	1992, 2013	10	41.0%	975	0.365	35000	10.750
					1992, 2013	8	37.3%	975	0.322	35000	8.625
					1992, 2013	6	33.0%	975	0.280	35000	6.625
					1992, 2013	4	26.4%	975	0.237	35000	4.500
RIN-C046	2	4429.64	68 Scott Rd	Cumberland	UNK	8	37.3%	975	0.322	35000	8.625
					UNK	6	33.0%	975	0.280	35000	6.625
					UNK	4	26.4%	975	0.237	35000	4.500
RIN-C047	5	4040.5	4425 Diamond Hill Rd	Cumberland	1983/2018	4	20.3%	750	0.237	35000	4.500
RIS-335	7	3650.1	67 Laten Knight Rd	Cranston	1992	12	36.4%	750	0.375	35000	12.750
					1992	10	31.6%	750	0.365	35000	10.750
					1992	8	28.7%	750	0.322	35000	8.625
					1992	6	25.4%	750	0.280	35000	6.625
RIS-400	4	4336.8		Providence	1993, 2016, 2017	12	36.4%	750	0.375	35000	12.750

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-15, page 2

			30 Allens Av (Manchester St) Power Plant		1993, 2016, 2017	10	31.6%	750	0.365	35000	10.750
					1993, 2016, 2017	8	28.7%	750	0.322	35000	8.625
					1993, 2016, 2017	6	25.4%	750	0.280	35000	6.625
RIS-BW010	11	2847	28 Brown St TS	Warren	1993	8	28.7%	750	0.322	35000	8.625
					1993	6	25.4%	750	0.280	35000	6.625
RIS-N203	8	3404.2	135 Old Mill Ln TS	Portsmouth	1999	12	27.3%	750	0.500	35000	12.750
					1999	10	31.6%	750	0.365	35000	10.750
					1999	8	28.7%	750	0.322	35000	8.625
					1999	6	25.4%	750	0.280	35000	6.625
RIS-OOB-R	1	6505.8	Westerly TS	Westerly	1951	8	28.7%	750	0.322	35000	8.625
					1951	6	20.3%	750	0.237	35000	4.500
RIS-340	3	4411.6	1084 Wallum Lake Rd	Burnillville	1971, 1992	4	20.3%	750	0.237	35000	4.500
RIS-125	9	3406	374 Putnam Pike (Rt 44)	Smithfield	1999	12	26.5%	1000	0.688	35000	12.750
					1999	8	24.6%	1000	0.500	35000	8.625
RIS-402	10	3406	374 Putnam Pike (Rt 44)	Smithfield	1999	12	26.5%	1000	0.688	35000	12.750
					1999	8	24.6%	1000	0.500	35000	8.625

Division 1-16

Request:

Identify the costs for re-testing on these stations and/or the replacing of equipment that will be done on each station in FY 2023.

Response:

Burrillville: 1084 Wallum Lake Rd Estimates
Replacement and Pressure Test Cost: \$260,000
Material Testing Cost: \$40,000

Cumberland: 4317 Diamond Hill Rd Estimates:
Replacement and Pressure Test Cost: \$600,000
Material Testing Cost: \$100,000

For the Scott Rd project, please refer to the Company's response to data request Division 1-14.

Division 1-17

Request:

For the year to year increases in Main Replacement (Proactive) (<16-inch) at Page 22, identify the principal cost drivers (in terms of % and in \$) for the following:

- (i) New contract impacts;
 - (ii) Local paving requirements;
 - (iii) Professional engineering; and
 - (iv) Higher proportion of cast iron main replacement.
- Also provide the overall average cost per mile installed.

Response:

For the purposes of this response, the Company is using FY 2020 actuals as the baseline for comparison to the identified cost drivers included in the FY 2023 proposal. FY 2020 is used as the baseline for comparisons since there was limited COVID-19 Pandemic impact on operations. In addition, FY 2020 costs did not include any new contract costs, and the new requirements for incremental paving and PE stamps were not yet in effect.

Description	Amount (\$000)	Percentage
Main Replacement Actuals (FY 2020)	\$60,696	
New Contract	\$5,569	9.2%
Local Paving	\$5,937	9.8%
Professional Engineering	\$1,670	2.8%
Portfolio Change/Cast Iron Mix	\$8,276	13.6%
Other (Includes lower miles, inflation, net carryover reduction)	(\$1,914)	(3.2%)
Main Replacement Budget (FY2023)	\$80,234	

The Main Replacement (Proactive) program identified a funding requirement of \$80.234 million to install 43.4 miles and abandon 49.9 miles. This included \$2.600 million to achieve a reduction in net carryover miles, which supports the total abandonment target. The average per mile cost estimate for installation is \$1.788 million.

Division 1-18

Request:

Provide the current Gas Work Method procedure for the Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement.

Response:

Please see Attachment DIV 1-6 for a copy of procedure ENG04030: Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement.

Division 1-19

Request:

Provide a low/medium/high risk ranking by material of all remaining leak prone pipe inventory by city/town in the Rhode Island gas distribution system including cast iron, unprotected steel, ductile iron and Aldyl-A pipe as of FY 2021 year-end, March 31,2021.

Response:

Please see Attachment DIV 1-19 for the list of the Leak Prone Pipe the Company has analyzed by city/town and material based on procedure ENG04030: Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement.

MRP RI Analyzed Main Inventory - As of 11/2/2021 Mileage in Priority Tiers by Town (includes INPRG work)		MRP RI Analyzed Main Inventory - As of 11/2/2021 Mileage in Priority Tiers by Material				
Town	Mileage in Priority Score Tiers				Total	
	High Pr > 15	Medium 15 ≥ Pr ≥ 8	Low 8 > Pr	Total		
Barrington	0.00	0.07	1.77	1.84		
Bristol	1.72	1.92	2.01	5.65		
Central Falls	0.45	2.86	2.12	5.43		
Coventry	0.00	0.00	6.18	6.18		
Cranston	5.80	18.55	17.38	41.73		
Cumberland	0.51	3.73	2.61	6.85		
East Greenwich	0.03	0.00	1.61	1.64		
East Providence	5.18	8.27	11.08	24.53		
Exeter	0.00	0.00	0.00	0.00		
Hopkinton	0.00	0.00	0.02	0.02		
Johnston	0.90	3.46	12.06	16.42		
Lincoln	1.64	3.80	3.20	8.64		
Middletown	0.67	0.53	4.60	5.80		
Narragansett	0.00	0.00	0.71	0.71		
Newport	1.62	2.83	5.07	9.52		
North Kingstown	0.00	0.00	4.23	4.23		
North Providence	8.17	7.85	5.12	21.14		
North Smithfield	1.32	1.79	1.70	4.81		
Pawtucket	11.12	11.14	7.73	29.99		
Providence	41.91	26.54	20.00	88.45		
Smithfield	1.54	0.00	3.63	5.17		
South Kingston	0.00	0.00	1.98	1.98		
Warren	0.00	0.50	0.40	0.90		
Warwick	4.84	12.66	32.06	49.56		
West Warwick	0.00	0.56	4.03	4.59		
Westerly	2.57	2.06	1.86	6.49		
Woonsocket	5.69	7.69	7.31	20.69		
Total	95.68	116.81	160.47	372.96		

Town	Mileage in Priority Score Tiers				Total
	High Pr > 15	Medium 15 ≥ Pr ≥ 8	Low 8 > Pr	Total	
Cast Iron (12" and under)	80.83	92.07	62.46	235.36	
Large Diameter Cast Iron (16" and greater)	3.10	5.64	20.36	29.10	
Steel	11.75	19.10	76.08	106.93	
Plastic	0.00	0.00	1.57	1.57	
Total	95.68	116.81	160.47	372.96	

Division 1-20

Request:

Provide a current list of all proactive main replacement, Public Works, Reliability, and Regulator Station projects and their current status for FY 2022. Please include installation and abandonment miles.

Response:

Please see Attachment DIV 1-20 for the requested information.

Main WOr#	Plan Year	Project Status Date Updated: 1/1/3	Project Title	Town	Actual Start Date	Date Completed	Program	Work Type	Total # of Services (project scope)	Project Scope Install Footage	Footage Installed in FY21	Footage Installed in FY22	Estimated Abandonment Footage	Actual Abandonment Footage
90000208726	FY20/21	COMP	Cross St from Broad to Railroad	Central Falls	6/11/2020	6/4/2021	CSC	Ahead of Paving	3	280	303	0	280	340
90000208753	FY20/21	COMP	Cross St from High to Roosevelt	Central Falls	6/18/2020	6/4/2021	CSC	Ahead of Paving	7	0	0	0	0	468
90000208590	FY20/21	COMP	Central St CFL	Central Falls	6/10/2020	9/14/2021	CSC	Ahead of Paving	7	500	461	0	490	480
90000221308	FY21/22	COMP	0 Tiogue Ave (behind 244)	Covenry	6/16/2021	6/16/2021	CSC	Ahead of Paving	0	50	0	17	4	0
90000189861	FY21/22	INPRG	RIDOT Park Ave RR Bridge No 922 HP	Cranston	5/18/2021		CSC	RIDOT	0	218	0	0	302	0
90000221186	FY21/22	COMP	Donic Ave	Cranston	7/20/2021	8/4/2021	CSC	Encroachment	3	270	0	276	280	280
90000200332	FY20/21	INPRG	RIDOT Park Ave RR Bridge No 922	Cranston	5/18/2021		CSC	RIDOT	0	572	0	0	404	0
90000221635	FY21/22	FCOMP	Broad St CLD	Cumberland	7/21/2021	9/6/2021	CSC	RIDOT	28	0	0	0	0	0
90000218127	FY21/22	FCOMP	Chapel Ave	Cumberland	6/7/2021	9/6/2021	CSC	Ahead of 3rd Party	3	127	0	0	127	127
90000217675	FY21/22	FCOMP	Chapel Ave @ Broad St	Cumberland	6/7/2021	9/6/2021	CSC	RIDOT	0	57	0	211	64	57
90000217674	FY21/22	ABANDONED	Thius St @ Broad St	Cumberland	6/7/2021	9/2/2021	CSC	Ahead of Paving	0	70	0	71	64	64
90000202501	FY20/21	W/STOP	RIDOT Division St Bridge	East Greenwich	7/13/2020		CSC	Other	0	480	0	0	485	0
90000208222	FY20/21	ABANDONED	Cushman Ave EPV	East Providence	6/12/2020	9/15/2021	CSC	Ahead of 3rd Party	68	5,025	5091	0	4,945	4945
90000203977	FY20/21	ABANDONED	Alexander Ave EPV	East Providence	8/27/2020	9/15/2021	CSC	Other	4	575	522	0	575	575
90000210675	FY20/21	FCOMP	332 Veterans Memorial Pkwy EPV	East Providence	9/21/2021	10/12/2021	CSC	Other	0	50	0	0	50	50
90000218392	FY21/22	COMP	Bridgham Ave	East Providence	4/8/2021	5/11/2021	CSC	Ahead of Paving	8	270	0	0	280	280
90000218405	FY21/22	FCOMP	Nevada Ave	East Providence	5/14/2021	7/30/2021	CSC	Ahead of Paving	11	648	0	653	845	845
90000218516	FY21/22	FCOMP	South Spruce St	East Providence	5/21/2021	7/21/2021	CSC	Ahead of Paving	6	536	0	538	525	525
90000218547	FY21/22	COMP	Hillside Ave	East Providence	5/18/2021	6/4/2021	CSC	Ahead of Paving	4	173	0	175	175	175
90000219821	FY21/22	COMP	Sunset Ave	East Providence	6/24/2021	9/22/2021	CSC	Ahead of Paving	1	0	0	0	90	90
90000219798	FY21/22	ABANDONED	Providence Ave Area	East Providence	7/26/2021	10/16/2021	CSC	Ahead of Paving	20	1718	0	1776	1718	1718
90000219344	FY21/22	ABANDONED	Bloomfield Ave	East Providence	6/29/2021	9/30/2021	CSC	Ahead of Paving	38	2669	0	2740	2101	2101
90000204230	FY20/21	ABANDONED	Oakwood Ave area	Lincoln	3/23/2020	8/16/2021	CSC	Ahead of Paving	15	1,473	1497	0	1,312	1312
90000212951	FY20/21	COMP	Railroad St /New River Rd Intersection	Lincoln	10/26/2020	4/22/2021	CSC	Ahead of Paving	0	188	154	29	175	175
90000210420	FY20/21	FCOMP	Center Ave MDT	Middletown	4/11/2021	6/1/2021	CSC	Ahead of Paving	30	2205	0	2250	2240	2240
90000223340	FY21/22	AWPER	Fourth St	Narragansett			CSC	Ahead of Water	4	280	0	0	260	0
90000222381	FY21/22	FCOMP	124 Harrison Ave	Newport	9/29/2021	9/29/2021	CSC	Encroachment	1	15	0	0	10	10
90000206742	FY20/21	COMP	Poplar St	Newport	11/22/2020	4/1/2021	CSC	Encroachment	12	775	833	0	395	403
90000219589	FY21/22	FCOMP	Howard St	Newport	4/19/2021	4/19/2021	CSC	Pre-Encroachment	0	0	0	0	66	66
90000221479	FY21/22	INPRG	Adm Kalblus 10 PSIG relay	Newport	10/7/2021		CSC	RIDOT	0	430	0	377	400	0
90000223065	FY21/22	FCOMP	JT Connell Hwy	Newport	9/24/2021	10/19/2021	CSC	RIDOT	9	580	0	921	570	570
90000208262	FY20/21	ABANDONED	Narragansett Ave NPR	Newport	3/20/2021	9/27/2021	CSC	Ahead of 3rd Party	3	985	199	795	1015	1015
90000221475	FY21/22	FCOMP	Adm Kalblus @ JT Connell	Newport	9/7/2021	11/2/2021	CSC	RIDOT	0	1025	0	1041	960	960
90000223768	FY21/22	AWPER	West Marlborough St	Newport			CSC	Ahead of Water	0	0	0	0	250	0
90000214721	FY21/22	INPRG	Post Rd @ Essex Rd	North Kingston	10/19/2021		CSC	RIDOT	0	13	0	0	13	0
90000214720	FY21/22	FCOMP	Post Rd @ Hse 6171	North Kingston	9/7/2021	10/22/2021	CSC	Ahead of Paving	3	45	0	0	35	35
90000219489	FY21/22	INPRG	QDC Mill Creek Railyard	North Kingston	8/20/2021		CSC	N/A	0	2830	0	3087	2764	0
90000201312	FY20/21	INPRG	Charles St NPV	North Providence	8/20/2020		CSC	Ahead of 3rd Party	101	5,530	5998	0	5,515	0
90000205685	FY20/21	W/STOP	RIDOT Union Village Bldg - Great Rd	North Smithfield	11/30/2020		CSC	Ahead of Paving	0	240	0	0	165	0
90000209032	FY20/21	NRTD	Great Rd	North Smithfield			CSC	Ahead of Paving	5	253	0	0	210	0
90000221096	FY21/22	DISPATCH	Saratoga Ave	Pawtucket			CSC	Pre-Encroachment	13	0	0	0	766	0
90000221098	FY21/22	AWPER	Perrin Ave	Pawtucket			CSC	Pre-Encroachment	0	42	0	0	220	0
90000218178	FY20/21	COMP	Lockbridge St	Pawtucket	4/8/2021	5/28/2021	CSC	Encroachment	11	920	0	923	913	786
90000220126	FY21/22	COMP	193 Harrison St	Pawtucket	8/18/2021	8/18/2021	CSC	Encroachment	0	20	0	12	20	12
90000207569	FY20/21	INPRG	Meacalf St PVD	Providence	1/4/2020		CSC	Ahead of 3rd Party	117	6,655	6716	0	7,135	0

Main WOr#	Plan Year	Project Status Date Updated: 1/1/3	Project Title	Town	Actual Start Date	Date Completed	Program	Work Type	Total # of Services (project scope)	Project Scope Installed Footage	Footage Installed in FY21	Footage Installed in FY22	Estimated Abandonment Footage	Actual Abandonment Footage
90000221908	FY21/22	FCOMP	Baker St / Eddy St	Providence	10/12/2021	10/12/2021	CSC	Encroachment	0	9	0	0	9	9
90000222353	FY21/22	DISPATCH	153 Delaine St	Providence			CSC	Encroachment	1	15	0	0	15	15
90000222206	FY21/22	FCOMP	25 Christopher St	Providence	10/19/2021	10/29/2021	CSC	Encroachment	1	20	0	0	12	12
90000203307	FY19/20	ABANDONED	Ermine St PVD	Providence	11/19/2019	8/2/2021	CSC	Ahead of Paving	55	5,320	0	0	6,360	6,360
90000203305	FY19/20	COMP	Cole Ave PVD	Providence	11/20/2019	5/20/2021	CSC	Ahead of Paving	26	2,405	0	0	3,430	3,350
90000204272	FY19/20	ABANDONED	Wayland Ave PVD	Providence	10/30/2019	5/24/2021	CSC	Ahead of Paving & Third Party	27	3,510	243	0	3,380	3,380
90000210761	FY20/21	COMP	320 Charles St	Providence	4/7/2021	4/7/2021	CSC	Other	0	0	0	0	0	175
90000211224	FY19/20	ABANDONED	Planet St PVD	Providence	7/8/2020	8/11/2021	CSC	Other	5	660	652	0	660	660
90000207983	FY21/22	WSTOP	Reservoir Ave Bridge	Providence	6/7/2021		CSC	Other	1	729	0	0	828	828
90000210923	FY21/22	INPRG	Taft Ave	Providence	8/30/2021		CSC	Ahead of 3rd Party	27	1004	0	1066	1137	1137
90000211226	FY20/21	INPRG	S Main St PVD	Providence	11/18/2020		CSC	Other	9	2075	697	1500	2075	2075
90000207575	FY20/21	INPRG	Commodore St PVD	Providence	1/25/2021		CSC	Ahead of 3rd Party	150	5990	4519	1441	7565	7565
90000211252	FY21/22	INPRG	Vassar Ave & Elmgrove Ave	Providence	7/20/2021		CSC	Pre-Encroachment	35	2202	0	2237	2687	2687
90000211228	FY21/22	INPRG	N Main St PVD	Providence	3/29/2021		CSC	Other	20	2515	80	2549	2600	2600
90000211631	FY21/22	INPRG	Staler Ave Area	Providence	6/1/2021		CSC	Pre-Encroachment	34	2873	0	2836	2710	2710
90000207573	FY20/21	ABANDONED	Northrup Ave PVD	Providence	3/23/2021	9/24/2021	CSC	Ahead of 3rd Party	122	5305	1110	4260	5695	5695
90000198043	FY18/19	WSTOP	Hope Furnace Rd	Scituate	10/1/2019		CSC	N/A	0	72	0	0	43	43
90000202363	FY21/22	INPRG	Dean St SMF	Smithfield	9/29/2021		CSC	N/A	0	150	0	0	0	0
90000218716	FY21/22	COMP	00 Upper College Rd	South Kingston	7/13/2021	7/26/2021	CSC	N/A	7	650	0	727	0	550
90000208352	FY20/21	COMP	Wood St WAN	Warren	6/7/2021	6/8/2021	CSC	Ahead of 3rd Party	0	105	0	115	0	0
90000208260	FY20/21	INPRG	Market St WAN	Warren	5/10/2021		CSC	Ahead of 3rd Party	18	670	0	670	1,460	1,460
90000204980	FY20/21	NRTD	Van Zandt Ave WWK Relay	Warwick	3/24/2020		CSC	Ahead of 3rd Party	31	2,005	2545		1,936	
90000204878	FY20/21	WSTOP	Lippit Ave WWK	Warwick	4/2/2020		CSC	Ahead of 3rd Party	1	190	0		190	
90000207397	FY20/21	WSTOP	Heights Ave WWK	Warwick	5/7/2020		CSC	Ahead of 3rd Party	10	720	418		720	
90000207395	FY20/21	WSTOP	Friendship St WWK	Warwick	5/7/2020		CSC	Ahead of 3rd Party	8	440	766		440	
90000204961	FY20/21	NRTD	125 Wentworth Ave WWK	Warwick			CSC	Ahead of 3rd Party	1	215	0		215	
90000216100	FY21/22	COMP	Greenwich Ave @ Rt 5	Warwick	6/9/2021	7/7/2021	CSC	RIDOT	0	47	0	79	37	58
90000217815	FY21/22	INPRG	RIDOT Rte 5 Bridge	Warwick	9/13/2021		CSC	Bridge Work	0	585	0		557	
90000207302	FY20/21	NRTD	Webb Ave WWK	Warwick	5/15/2020		CSC	Ahead of 3rd Party	44	2,745	725		2,745	
90000222444	FY21/22	DISPATCH	Buttwoods Ave	Warwick			CSC	Ahead of Paving	15	2050	0		2035	
90000204838	FY21/22	NRTD	Wentworth Ave WWK	Warwick			CSC	Ahead of 3rd Party	25	2530	0		2435	
90000223561	FY21/22	DISPATCH	Rte 5 Fessenden to Soule	Warwick			CSC	RIDOT	1	190			180	
90000221727	FY21/22	INPRG	Potter Ave	West Warwick	9/21/2021		CSC	Ahead of Paving	1	125	0	128	125	
90000221503	FY21/22	INPRG	New London Ave	West Warwick	10/14/2021		CSC	Ahead of Paving	3	150	0	230	220	
90000220890	FY21/22	FCOMP	Carlson Circle	West Warwick	8/17/2021	9/29/2021	CSC	Ahead of Paving	2	195	0	200	188	188
90000222450	FY21/22	INPRG	Lachance Rd	West Warwick	10/16/2021		CSC	Ahead of Paving	2	266	0	10	286	
90000220827	FY21/22	FCOMP	Gosselin St	West Warwick	8/25/2021	10/15/2021	CSC	Ahead of Paving	1	270	0	269	228	228
90000220810	FY21/22	ABANDONED	Betz St	West Warwick	7/23/2021	10/25/2021	CSC	Ahead of Paving	6	290	0	290	294	294
90000222072	FY21/22	INPRG	Hollow Cir	West Warwick	9/23/2021		CSC	Ahead of Paving	3	390	0	418	398	
90000222423	FY21/22	INPRG	Pennsylvania Av	West Warwick	10/28/2021		CSC	Ahead of Paving	6	405	0	370	408	
90000221730	FY21/22	FCOMP	Youngs Ave	West Warwick	9/16/2021	10/13/2021	CSC	Ahead of Paving	5	420	0	396	417	417
90000222189	FY21/22	INPRG	Home St	West Warwick	10/20/2021		CSC	Ahead of Paving	9	500	0	485	494	
90000221734	FY21/22	ABANDONED	Maple Ave	West Warwick	9/7/2021	10/22/2021	CSC	Ahead of Paving	7	510	0	498	510	510
90000221502	FY21/22	INPRG	New London Ave	West Warwick	8/24/2021		CSC	Ahead of Paving	6	780	0	838	777	
90000222172	FY21/22	INPRG	Quaker Dr Area	West Warwick	10/22/2021		CSC	Ahead of Paving	76	5559	0	506	5556	5556

The Narragansett Electric Company
d/b/a National Grid
Division's Review of FY 2023 Proposed Gas ISR Plan
Attachment DIV 1-20
Page 3 of 9

Main WOr#	Plan Year	Project Status Date Updated: 1/1/3	Project Title	Town	Actual Start Date	Date Completed	Program	Work Type	Total # of Services (project scope)	Project Scope Install Estimated Footage	Footage Installed in FY21	Footage Installed in FY22	Estimated Abandonment Footage	Actual Abandonment Footage
90000222535	FY21/22	INPRG	Spring St	West Warwick	10/22/2021		CSC	Ahead of Paving	2	190	0	0	202	
90000221911	FY21/22	INPRG	Arthur St & Bleach Ave	West Warwick	10/25/2021		CSC	Ahead of Paving	7	727	0	0	718	
90000213562	FY21/22	COMP	School St	Westerly	5/6/2021	5/24/2021	CSC	Ahead of Paving	3	305	0	311	270	311
90000213524	FY20/21	WSTOP	Elm St / School St	Westerly	4/6/2021		CSC	Ahead of Paving	0	130	0	0	199	
90000214711	FY20/21	WSTOP	School @ Granite St	Westerly	11/30/2020		CSC	Other	0	0	0	0	30	
90000213355	FY20/21	WSTOP	Main St / School St	Westerly	11/30/2020		CSC	Ahead of Paving	0	55	0	0	106	
90000220439	FY21/22	FCOMP	School - Elm Main Cutoff	Westerly	5/10/2021	5/10/2021	CSC	N/A	0	0	0	0	20	20
90000219921	FY21/22	AWPER	Mountain Ave	Westerly			CSC	Ahead of Paving	8	1200	0	0	1203	
90000222565	FY21/22	COMP	School Street east of Elm	Westerly	8/31/2021	8/31/2021	CSC	Ahead of Water	0	55	0	65	55	65
90000206962	FY20/21	INPRG	Wood Ave	Woonsocket	8/26/2020		CSC	Ahead of Paving	90	4,595	4529	0	4,474	
90000218904	FY21/22	GUAR	Florida St	Woonsocket			CSC	Ahead of Paving	6	90	0	0	393	
90000204598	FY20/21	INPRG	County Rd, BRG	Barrington	6/4/2020		Integrity	Other	5	730	761	0	770	
90000196730	FY21/22	WSTOP	Legion Way	Barrington	4/12/2021		Integrity	Other	1	425	0	435	425	
90000204655	FY20/21	INPRG	1129-1180 Hope St, BST	Bristol	9/15/2020		Integrity	Other	35	3,555	3340	0	3,490	
90000204656	FY20/21	FCOMP	Church St, BST	Bristol	6/11/2020	5/7/2021	Integrity	Other	56	2,940	2828	0	3,495	3495
90000194282	FY21/22	AWPER	573-744 Hope St, BST	Bristol			Integrity	Other	48	2270	0	0	2270	
90000204639	FY20/21	COMP	Jenks Av, CFL	Central Falls	7/14/2020	6/24/2021	Integrity	Other	46	2,480	2485	0	2,580	2580
90000204232	FY20/21	FCOMP	1-8 Cross St, CFL	Central Falls	4/17/2021	8/13/2021	Integrity	Ahead of Paving	1	355	0	0	355	355
90000210484	FY21/22	INPRG	Shawmut Ave	Central Falls	10/13/2021		Integrity	N/A	47	700	0	686	2400	
90000210486	FY21/22	AWPER	Butler St	Central Falls			Integrity	Other	78	3585	0	0	3435	
90000204658	FY20/21	ABANDONED	Bluff Av, CRA	Cranston	6/24/2020	10/12/2021	Integrity	Other	66	1,990	2131	0	3,485	3485
90000175438	FY19/20	COMP	Pontiac Av, CRA	Cranston	6/28/2019	4/20/2021	Integrity	Other	0	2,975	0	0	5,160	5607
90000204661	FY20/21	ABANDONED	Kearsarge Dr, CRA	Cranston	3/16/2020	4/26/2021	Integrity	Other	10	950	0	0	595	595
90000204657	FY20/21	ABANDONED	Beech Av, CRA	Cranston	3/18/2020	5/3/2021	Integrity	Other	26	1,165	1177	0	1,110	1110
90000204743	FY20/21	COMP	Harvard St, CRA	Cranston	6/2/2020	5/27/2021	Integrity	Other	78	3,900	4405	0	3,970	3950
90000204607	FY20/21	COMP	Mashanicut Valley Pkwy, CRA	Cranston	6/2/2020	8/17/2021	Integrity	Other	32	3,005	3039	0	3,005	2850
90000194284	FY20/21	ABANDONED	Pheasant Dr, CRA	Cranston	5/4/2020	4/14/2021	Integrity	Other	77	4,500	4874	0	4,500	4500
90000204450	FY21/22	INPRG	Oaklawn Manor Dr	Cranston	10/7/2021		Integrity	Other	5	350	0	0	455	
90000216380	FY21/22	INPRG	Commercial St (Cisbot)	Cranston	8/30/2021		Integrity	CISBOT	0	0	0	0	0	
90000216379	FY21/22	INPRG	Beckwith St CISBOT	Cranston	6/28/2021		Integrity	CISBOT	0	0	0	0	0	
90000210486	FY21/22	NRTD	Wellington Ave	Cranston			Integrity	Other	2	850	0	0	850	
90000212647	FY21/22	INPRG	Garden St	Cranston	4/14/2021		Integrity	Other	19	640	0	630	840	
90000204660	FY20/21	WSTOP	Grand Av, CRA	Cranston	3/6/2020		Integrity	Other	16	905	0	170	1,225	
90000212603	FY21/22	COMP	Homestead Ave	Cranston	4/14/2021	7/20/2021	Integrity	Other	5	335	0	360	315	275
90000212629	FY21/22	INPRG	Holland St	Cranston	6/25/2021		Integrity	Other	35	2045	0	2330	2045	
90000204664	FY21/22	GUAR	Smith St	Cranston			Integrity	Other	26	1015	0	0	1195	
90000204606	FY21/22	INPRG	Hezelton St	Cranston	4/30/2021		Integrity	Other	44	2760	0	2902	2665	
90000212602	FY21/22	INPRG	Devis Ave	Cranston	4/14/2021		Integrity	Other	69	3715	0	3837	3715	
90000142840	FY21/22	INPRG	Heaven Ave	Cranston	5/15/2021		Integrity	Other	94	5980	0	6006	6740	
90000220861	FY21/22	NRTD	Meadowbrook Dr	Cumberland			Integrity	Ahead of Paving	11	905	0	0	905	
90000210490	FY21/22	AWPER	Pleasant St	Cumberland			Integrity	N/A	45	1775	0	0	1775	
90000203616	FY20/21	INPRG	Massasoit Av, EPV	East Providence	7/15/2020		Integrity	Other	40	6,310	5809	0	5,960	
90000194304	FY21/22	WSTOP	Vineyard Ave	East Providence	6/9/2021		Integrity	Other	62	3520	0	2409	4225	
90000204814	FY20/21	ABANDONED	Burgess Av, EPV	East Providence	10/22/2020	9/20/2021	Integrity	Ahead of Paving	34	1,400	1404	0	1,865	1865
90000218412	FY21/22	AWPER	Case St	East Providence			Integrity	Ahead of Paving	6	270	0	0	270	

Main WOr#	Plan Year	Project Status Date Updated: 1/1/3	Project Title	Town	Actual Start Date	Date Completed	Program	Work Type	Total # of Services (project scope)	Project Scope Install Estimated Footage	Footage Installed in FY21	Footage Installed in FY22	Estimated Abandonment Footage	Actual Abandonment Footage
90000202607	FY2021	ABANDONED	Burton Av, EPV	East Providence	6/29/2020	6/9/2021	Integrity	Other	51	2,975	2936	0	2,810	2810
90000210583	FY21/22	AWPER	N. Broadway	East Providence			Integrity	Other	3	605	0		605	
90000184051	FY21/22	NRTD	Island Av, EPV (RR Crossing)	East Providence			Integrity	Other	3	640	0		640	
90000211006	FY21/22	INPRG	Commercial Way	East Providence	8/6/2021		Integrity	N/A	2	910	0	970	960	
90000204808	FY2021	ABANDONED	Taunton Av, EPV	East Providence	11/15/2020	9/15/2021	Integrity	Other	21	1665	2001	0	1665	1665
90000204816	FY2021	ABANDONED	Second St, EPV	East Providence	9/16/2020	9/20/2021	Integrity	Other	123	6465	6787	0	6480	6480
90000211681	FY21/22	ABANDONED	Harding Ave	East Providence	5/24/2021	10/7/2021	Integrity	Other	20	915	0	900	1055	1055
90000218389	FY21/22	AWPER	2145-2289 Pawtucket Ave	East Providence			Integrity	N/A	9	1220	0		1220	
90000211716	FY21/22	COMP	Tripps Ln	East Providence	3/2/2021	8/18/2021	Integrity	Other	7	220	0	317	2005	2005
90000211720	FY21/22	ABANDONED	Winthrop St	East Providence	5/20/2021	8/13/2021	Integrity	Other	4	495	0	508	495	495
90000194305	FY21/22	WSTOP	Wanamissett Rd	East Providence	6/3/2021		Integrity	Other	72	4485	0	4471	4505	
90000210913	FY21/22	AWPER	Waterman Ave	East Providence			Integrity	Other	44	4010	0		1030	
90000155080	FY21/22	INPRG	208-321 Warren Ave	East Providence	8/18/2021		Integrity	Ahead of Paving	99	5205	0	4999	5425	
90000204612	FY2021	COMP	1869-1974 Atwood Av, JOH	Johnston	7/27/2020	6/7/2021	Integrity	Other	2	690	727	0	690	690
90000204745	FY2021	COMP	Teakwood Dr, JOH	Johnston	5/15/2020	6/24/2021	Integrity	Other	63	5,900	5976	0	5,800	4605
90000142764	FY21/22	AWPER	1284 Atwood Ave	Johnston			Integrity	Other	0	115	0		115	
90000204614	FY2021	COMP	Oakdale Av, JOH	Johnston	6/23/2020	4/22/2021	Integrity	Other	14	1,860	1703	0	1,895	1995
90000204640	FY20/21	INPRG	Manville Rd, LNC	Lincoln	10/7/2020		Integrity	Other	65	5,235	5288	0	6,965	
90000175584	FY20/21	INPRG	Summer St, LNC	Lincoln	8/14/2020		Integrity	Other	9	220	220	0	1,145	
90000212370	FY21/22	AWPER	George Washington Hwy	Lincoln			Integrity	Rush Main	1	710	0		970	
90000212473	FY21/22	ABANDONED	Kelly St, LNC	Lincoln	5/3/2021	9/24/2021	Integrity	Other	38	2035	0	2100	2100	2100
90000185724	FY19/20	INPRG	Aquidneck Av, MDT	Middletown	10/7/2019		Integrity	RIDOT	26	3,365	3360	0	3,540	
90000118396	FY20/21	COMP	Rego Rd, MDT	Middletown	5/19/2021	5/28/2021	Integrity	Ahead of Paving	3	225	0	245	225	250
90000221100	FY21/22	AWPER	1-120 Tucker Ave	Middletown			Integrity	N/A	39	2250	0		2220	
90000208988	FY20/21	AWPER	Thames @ W Narragansett 12in Valve	Newport			Integrity	Relief Valve	0	0	0		0	
90000208982	FY20/21	AWPER	Thames @ Washington Sq 12in Valve	Newport			Integrity	Relief Valve	0	0	0		0	
90000209009	FY20/21	AWPER	Rhode Island @ Champlin 6in Valve	Newport			Integrity	Relief Valve	0	0	0		0	
90000209012	FY20/21	DISPATCH	Amandale @ Weaver 6in Valve	Newport			Integrity	Relief Valve	0	0	0		0	
90000183013	FY21/22	NRTD	Third St, NPR	Newport			Integrity	Other	21	820	0		3265	
90000204615	FY20/21	WSTOP	Coddington Wf, NPR	Newport	4/12/2021		Integrity	Ahead of Paving	14	1050	0	1158	1050	
90000185659	FY21/22	AWPER	Broadway, NPR	Newport			Integrity	Other	18	1620	0		1780	
90000118037	FY21/22	AWPER	Williams St	Newport			Integrity	Other	39	2180	0		2165	
90000185682	FY21/22	NRTD	Memorial Blvd, NPR	Newport			Integrity	Ahead of RIDOT Paving	9	2410	0		2460	
90000204618	FY21/22	COMP	Seadgefield Rd	North Kingston	4/20/2021	5/27/2021	Integrity	Other	6	965	0	1043	965	999
90000211980	FY21/22	ABANDONED	Shore Acres Ave	North Kingston	5/27/2021	8/5/2021	Integrity	Other	59	4040	0	3886	3955	3955
90000203623	FY21/22	INPRG	Intrepid Rd	North Kingston	7/20/2021		Integrity	Other	49	2775	0	2666	2660	
90000210592	FY21/22	INPRG	Camp Av	North Kingston	10/21/2021		Integrity	N/A	11	3195	0	1003	3195	
90000185688	FY20/21	ABANDONED	Top Hill Rd, NPV	North Providence	7/23/2020	10/29/2021	Integrity	Other	42	2,860	2897	0	2,860	2860
90000204674	FY20/21	INPRG	Brightwood Av, NPV	North Providence	4/24/2020		Integrity	Other	36	1,575	1659	0	1,575	
90000204591	FY20/21	ABANDONED	Fruit Hill Av, NPV	North Providence	4/21/2020	5/10/2021	Integrity	Other	21	1,875	2236	0	2,980	2980
90000172082	FY20/21	NRTD	Benjamin Dr, NPV	North Providence			Integrity	Ahead of Paving	4	120	0		1,175	
90000211582	FY21/22	WSTOP	Obed Ave	North Providence	3/26/2021		Integrity	Other	22	1050	0	1079	1050	
90000212618	FY21/22	INPRG	Brown Ave	North Providence	4/9/2021		Integrity	Other	28	1315	0	1258	1295	
90000212523	FY21/22	WSTOP	Elizabeth Dr	North Providence	4/22/2021		Integrity	Other	25	1325	0		1160	
90000211588	FY21/22	ABANDONED	Belcourt Ave	North Providence	4/5/2021	11/2/2021	Integrity	Other	37	1485	0	1550	1485	1485

Main WOr#	Plan Year	Project Status Date Updated: 1/1/3	Project Title	Town	Actual Start Date	Date Completed	Program	Work Type	Total # of Services (project scope)	Project Scope Install Footage	Footage Installed in FY21	Footage Installed in FY22	Estimated Abandonment Footage	Actual Abandonment Footage
90000187217	FY21/22	ABANDONED	Greystone Ave	North Providence	4/23/2021	11/2/2021	Integrity	Other	34	1575	0	1708	1575	1575
90000185663	FY21/22	FCOMP	Belvidere Blvd	North Providence	4/12/2021	7/23/2021	Integrity	Other	33	1585	0	1567	1585	1585
90000211854	FY21/22	INPRG	Waterman Ave	North Providence	7/1/2021		Integrity	Other	67	1665	0	1833	3170	
90000185666	FY21/22	AWPER	Smith St	North Providence			Integrity	Other	25	2450	0		2450	
90000212820	INPRG		2-88 Homewood Ave	North Providence	9/17/2021		Integrity	Other	56	2630	0	3089	2630	
90000210558	FY21/22	INPRG	Lyman Ave	North Providence	3/29/2021		Integrity	Other	81	4260	0	4126	4145	
90000214933	FY21/22	AWPER	211-870 Woonasquatucket Ave	North Providence			Integrity	N/A	106	11140	0		11450	
90000211548	FY21/22	INPRG	Summit Ave	North Smithfield			Integrity	Other	17	610	0		630	
90000175638	FY21/22	INPRG	N Main St NSF	North Smithfield	10/22/2021		Integrity	Other	27	2720	0	741	2720	
90000212438	FY20/21	INPRG	Smithfield Rd	North Smithfield	10/28/2021		Integrity	Other	56	4445	0	0	6815	
90000173914	FY20/21	NRTD	Division St Bridge Brackets	Pawtucket			Integrity	RIDOT	0	0	0	0	0	0
90000204644	FY20/21	INPRG	Woodbine St, PAW	Pawtucket	5/18/2020		Integrity	Ahead of Paving	19	760	808	0	840	
90000204643	FY20/21	COMP	Stearns St, PAW	Pawtucket	6/11/2020	8/26/2021	Integrity	Other	33	2,445	2527	0	2,830	2830
90000204641	FY20/21	WSTOP	Blaisdell St, PAW	Pawtucket	5/21/2020		Integrity	Other	71	2,885	2858	0	2,845	
90000204645	FY20/21	COMP	Yale Av, PAW	Pawtucket	4/21/2020	5/4/2021	Integrity	Ahead of Paving	12	555	554	0	55	555
90000218701	FY21/22	AWPER	Lonsdale Ave Bridge	Pawtucket			Integrity	Other	0	210	0	0	210	
90000204753	FY20/21	INPRG	Myrtle St, PAW	Pawtucket	8/11/2021		Integrity	Other	16	0	0	0	630	
90000212478	FY21/22	ABANDONED	Lindesia Rd	Pawtucket	8/11/2021	11/1/2021	Integrity	Other	21	0	0	0	665	665
90000204756	FY20/21	COMP	Prentice Av, PAW	Pawtucket	6/16/2020	4/29/2021	Integrity	Ahead of Paving	26	1,140	1167	0	1,255	1220
90000204752	FY20/21	COMP	Lilac St, PAW	Pawtucket	6/15/2020	4/15/2021	Integrity	Ahead of Paving	17	485	642	0	685	685
90000211129	FY21/22	INPRG	Taft St	Pawtucket	8/18/2021		Integrity	Other	9	465	0	498	520	
90000211546	FY21/22	INPRG	1-75 East Ave	Pawtucket	6/21/2021		Integrity	Other	8	875	0	0	2745	
90000204759	FY20/21	COMP	Woodhaven Rd, PAW	Pawtucket	10/20/2020	9/22/2021	Integrity	Ahead of Paving	44	2050	2313	0	2050	2050
90000212483	FY21/22	INPRG	Slade St	Pawtucket	9/24/2021		Integrity	Other	30	1435	0	1458	1495	
90000211137	FY21/22	INPRG	Oakdale Ave	Pawtucket			Integrity	Other	32	1440	0		2330	
90000211789	FY21/22	DISPATCH	Conant St	Pawtucket	5/10/2021		Integrity	Other	11	1975	0	1786	1920	
90000211182	FY21/22	INPRG	Carver St	Pawtucket	4/27/2021		Integrity	Other	8	2085	0		2085	
90000211435	FY21/22	NRTD	1-34 Central Ave	Pawtucket			Integrity	Other	40	2,155	0	2230	2370	
90000211538	FY21/22	INPRG	Fenner St	Pawtucket	10/1/2021		Integrity	Other	16	2415	0		2505	
90000211518	FY21/22	INPRG	Broadway	Pawtucket	5/24/2021		Integrity	Other	58	2485	0	0	3585	
90000211188	FY21/22	INPRG	Cherry St	Pawtucket	9/14/2021		Integrity	Other	47	2290	0	2235	2820	
90000211112	INPRG		Beverage Hill Ave	Pawtucket	7/1/2021		Integrity	Other	54	2655	0	2583	2685	
90000212444	FY21/22	INPRG	380-433 Lonsdale Ave	Pawtucket	8/2/2021		Integrity	Other	55	2895	0	3267	2955	
90000200966	FY20/21	ABANDONED	Laurel Av, PVD	Providence	8/18/2020	10/21/2021	Integrity	Ahead of Paving & Third Party	73	3110	0	3287	3390	
90000194358	FY20/21	ABANDONED	Freeman Pkwy, PVD	Providence	6/24/2020	10/21/2021	Integrity	Ahead of Paving	100	5,150	5338	0	6,095	6095
90000155230	FY20/21	INPRG	Dean St, PVD	Providence	8/6/2020		Integrity	Other	70	4,405	4634	105	4,710	4710
90000143075	FY20/21	INPRG	1207-1275 Elmwood Av, PVD	Providence	11/22/2020		Integrity	Ahead of Paving	54	3,295	3752	0	4,260	
90000194373	FY20/21	INPRG	Terrace Av, PVD	Providence	11/17/2020		Integrity	Ahead of Paving	67	3,050	3105	0	3,050	
90000185679	FY20/21	INPRG	1315-1477 Broad St, PVD	Providence	8/4/2020		Integrity	Other	63	3030	3046	0	2950	
90000155107	FY20/21	INPRG	Union Av, PVD	Providence	10/26/2020		Integrity	Ahead of Paving	32	2,340	2714	0	2,325	
90000185689	FY20/21	INPRG	Dover St, PVD	Providence	11/10/2020		Integrity	Other	56	1,830	1891	0	1,830	
90000195699	FY20/21	AWPER	1-111 Harris Av, PVD	Providence			Integrity	Rush Main	58	1,450	1501	0	2,220	
90000206081	FY21/22	NRTD	Test Camera pits Cl Lining Russell St	Providence			Integrity	Other	0	0	0	0	1,630	
90000175690	FY19/20	WSTOP	Vinton St, PVD	Providence	8/2/2019		Integrity	Rush Main	0	0	0	0	0	0
							Integrity	Rush Main	111	880	0	0	5,695	

Main WOr#	Plan Year	Project Status Date Updated: 1/1/3	Project Title	Town	Actual Start Date	Date Completed	Program	Work Type	Total # of Services (project scope)	Project Scope Installed Footage	Footage Installed in FY21	Footage Installed in FY22	Estimated Abandonment Footage	Actual Abandonment Footage
90000185696	FY21/22	INPRG	392-550 Valley St	Providence	8/30/2021		Integrity	Other	19	3420	703	2938	3485	
90000209087	FY20/21	INPRG	Althea St, PVD	Providence	12/11/2020		Integrity	Rush Main	6	670	682		705	
90000155218	FY21/22	AWPER	Brighton St, PVD	Providence			Integrity	Other	21	80	0		630	
90000194371	FY21/22	GUAR	Sharon St, PVD	Providence			Integrity	Other	39	1625	0		1695	
90000212910	FY21/22	AWPER	Elder Pl, PVD	Providence			Integrity	Other	2	170	0		170	
90000212518	FY21/22	AWPER	307-349 Hope St	Providence			Integrity	Other	11	225	0		1625	
90000175682	FY20/21	COMP	Indiana Av, PVD	Providence	10/20/2020	4/1/2021	Integrity	Ahead of Paving	104	2,700	2640	0	2,700	2700
90000194364	FY21/22	AWPER	Linden Dr, PVD	Providence			Integrity	Other	8	325	0		325	
90000155253	FY20/21	ABANDONED	Park Av, PVD	Providence	7/10/2020	6/24/2021	Integrity	Other	30	1,855	2014	0	1,805	1805
90000218019	FY21/22	AWPER	434-842 Allens Ave	Providence			Integrity	C I Lining	4	335	0		4710	
90000194780	FY21/22	AWPER	Rt 10 S Offramp @ Union Av, PVD	Providence			Integrity	Rush Main	0	385	0		385	
90000194352	FY20/21	COMP	Basswood Av, PVD	Providence	8/28/2020	4/22/2021	Integrity	Ahead of Paving	76	3,330	3322	0	3,330	3310
90000218016	FY21/22	AWPER	336-842 Allens Ave	Providence			Integrity	Other	5	565	0		4775	
90000210631	FY21/22	AWPER	Woodbine St	Providence			Integrity	Other	23	605	0		605	
90000194368	FY20/21	ABANDONED	Mt. Pleasant Av, PVD	Providence	10/16/2020	5/25/2021	Integrity	Ahead of Paving	55	2,375	2407	0	2,645	2645
90000210246	FY21/22	INPRG	Ernest St	Providence	8/27/2021		Integrity	Other	5	630	0	687	3630	
90000185686	FY20/21	FCOMP	Admiral St, PVD	Providence	10/21/2020	4/14/2021	Integrity	Ahead of Paving	92	3,160	3218	0	3,840	3840
90000194351	FY21/22	INPRG	Amy St, PVD	Providence	9/14/2021		Integrity	Other	34	845	0	845	1315	
90000212579	FY20/21	COMP	Broad St LP Abandonment PVD	Providence	8/13/2020	7/8/2021	Integrity	Other	0	0	0	0	475	475
90000220383	FY21/22	ABANDONED	Empire St	Providence	7/29/2021	10/19/2021	Integrity	Other	4	970	0	1079	895	895
90000185694	FY19/20	INPRG	Sessions St, PVD	Providence	8/16/2019		Integrity	N/A	13	1,015	0		1,848	
90000175676	FY21/22	AWPER	Gloucester St	Providence			Integrity	Other	30	1160	0		1150	
90000212419	FY21/22	AWPER	531-590 Manton Ave	Providence			Integrity	Other	45	1250	0		3205	
90000155245	FY21/22	INPRG	Herbert St	Providence	8/27/2021		Integrity	Other	16	1260	0	1236	1260	
90000210644	FY21/22	AWPER	Burnside St	Providence			Integrity	Other	38	1390	0		1390	
90000175665	FY21/22	AWPER	Cair St, PVD	Providence			Integrity	Other	48	1430	0		1430	
90000210499	FY21/22	AWPER	Atwells Ave	Providence	8/13/2020		Integrity	Other	42	1430	0		2740	
90000155376	FY21/22	AWPER	Delaine St	Providence			Integrity	N/A	16	1430	0		2295	
90000212117	FY21/22	GUAR	Sackett St	Providence			Integrity	Other	57	2675	0		2745	
90000184274	FY21/22	INPRG	Moore St, PVD - LINING	Providence	4/22/2021		Integrity	Other	4	1560	0	0	0	
90000194356	FY21/22	INPRG	Felix St, PVD	Providence	7/19/2021		Integrity	Other	37	1570	0	1838	1570	
90000194369	FY21/22	AWPER	Ocean St, PVD	Providence			Integrity	Other	50	1845	0		1945	
90000142541	FY21/22	AWPER	Whitehall St	Providence			Integrity	Other	41	1950	0		1950	
90000212129	FY20/21	AWPER	Penn St	Providence			Integrity	Other	40	2135	0		2070	
90000142618	FY21/22	AWPER	Charles St, PVD	Providence			Integrity	Other	46	2210	0		2210	
90000212520	FY20/21	AWPER	632-734 Hope St	Providence			Integrity	Other	49	2225	0		2325	
90000194347	FY21/22	AWPER	330-505 Silver Spring St, PVD	Providence			Integrity	Other	7	2345	0		2395	
90000210746	FY21/22	AWPER	Abbott St	Providence			Integrity	Other	58	2455	0		2375	
90000210771	FY21/22	AWPER	Winnoth Ave	Providence			Integrity	Other	72	2485	0		3100	
90000194359	FY21/22	AWPER	Gallup St	Providence			Integrity	Other	50	2520	0		3815	
90000187222	FY21/22	AWPER	Reservoir Ave	Providence			Integrity	Other	13	2835	0		2826	
90000142519	FY21/22	INPRG	Rounds Av, PVD	Providence	10/7/2021		Integrity	Other	91	2960	0	2457	2960	
90000212422	FY21/22	GUAR	707-902 Douglas Ave	Providence			Integrity	Other	58	2970	0		3055	
90000188537	FY21/22	AWPER	Harris Ave	Providence			Integrity	Other	16	3108	0		3108	
90000142626	FY21/22	INPRG	392-498 Douglas Av, PVD	Providence	8/30/2021		Integrity	Other	53	3020	0	3130	3020	

Main WOr#	Plan Year	Project Status Date Updated: 1/1/3	Project Title	Town	Actual Start Date	Date Completed	Program	Work Type	Total # of Services (project scope)	Project Scope Install Footage	Footage Installed in FY21	Footage Installed in FY22	Estimated Abandonment Footage	Actual Abandonment Footage
90000194355	FY21/22	INPRG	Branch Av, PVD	Providence	10/21/2021		Integrity	Ahead of 3rd Party	31	3210	0	361	3180	3180
90000211756	FY21/22	AWPER	Hartford Ave	Providence			Integrity	Other	38	3295	0		3410	3410
90000194357	FY21/22	INPRG	Fosdyke St, PVD	Providence	6/1/2021		Integrity	Ahead of 3rd Party	76	3820	0	3849	3820	3820
90000219454	FY21/22	INPRG	Libson St	Providence	9/27/2021		Integrity	Rush Main	109	4105	0	4017	4200	4200
90000211636	FY21/22	INPRG	Ledge St	Providence	4/26/2021		Integrity	Other	146	5590	0	5793	5865	5865
90000204762	FY20/21	COMP	Swan Rd, SMF	Smithfield	5/13/2020	4/8/2021	Integrity	Other	24	2,315	2327	0	2,315	2315
90000204763	FY20/21	COMP	Welcome Rd, SMF	Smithfield	6/8/2020	4/19/2021	Integrity	Other	18	1,295	1380	0	1,400	1310
90000204761	FY20/21	COMP	Penbyn Av, SMF	Smithfield	8/14/2020	5/25/2021	Integrity	Ahead of Paving	25	1,900	2055	0	1,900	1865
90000211491	FY20/21	INPRG	Esmond Mill Dr	Smithfield	11/17/2020		Integrity	Other	1	907	0	970	941	941
90000217989	FY21/22	INPRG	Macarthur Dr	Smithfield	9/29/2021		Integrity	N/A	16	1510	0		1510	1510
90000211875	FY20/21	INPRG	Waterman Ave	Smithfield	7/23/2021		Integrity	Other	64	1775	0	1865	6080	6080
90000210825	FY21/22	COMP	Farnum Pike	Smithfield	5/17/2021	6/25/2021	Integrity	Other	4	520	0	587	520	550
90000210821	FY21/22	ABANDONED	Fraternity Cir SKS	Smithfield	7/14/2021	9/28/2021	Integrity	Other	5	1305	0	1122	1330	1330
90000194409	FY20/21	COMP	Pettis Dr, WWK	Wanwick	3/26/2020	4/14/2021	Integrity	Other	52	1,935	2005	0	1,935	1945
90000194405	FY20/21	ABANDONED	Marine Av, WWK	Wanwick	8/3/2020	4/30/2021	Integrity	Other	37	2,005	2070	0	2,175	2175
90000204624	FY20/21	FCOMP	Dahlia St, WWK	Wanwick	6/24/2021	8/28/2021	Integrity	Other	2	350	0	345	615	615
90000194391	FY20/21	ABANDONED	Hoxsie Av, WWK	Wanwick	6/17/2021	8/30/2021	Integrity	Other	31	1,725	0	1771	1,725	1725
90000211833	FY21/22	AWPER	Benefit St	Wanwick			Integrity	Other	6	495	0		495	495
90000214977	FY21/22	NRTD	Alden Ave	Wanwick			Integrity	N/A	13	600			510	510
90000211723	FY21/22	INPRG	Center Ct	Wanwick	9/15/2021		Integrity	N/A	6	300	0	317	300	300
90000194383	FY20/21	ABANDONED	Archdale Dr, WWK	Wanwick	5/24/2021	9/8/2021	Integrity	Other	37	3,755	0	3891	3,755	3755
90000175759	FY20/21	ABANDONED	2536-2783 W Shore Rd, WWK	Wanwick	10/5/2020	7/27/2021	Integrity	Other	18	3755	3766	0	3755	3755
90000204676	FY20/21	COMP	Mayfair Rd, WWK	Wanwick	8/20/2020	4/30/2021	Integrity	Other	55	2410	2561	0	2505	2616
90000212537	FY21/22	INPRG	Grove Ave	Wanwick	8/11/2021		Integrity	N/A	20	1045	0	1122	1045	1045
90000211817	FY21/22	INPRG	Oventon St	Wanwick	8/13/2021		Integrity	N/A	21	1310	0	1334	1310	1310
90000155600	FY21/22	INPRG	Kirby Ave	Wanwick	7/29/2021		Integrity	N/A	13	1625	0	1652	1625	1625
90000212539	FY21/22	ABANDONED	Junction St WWK	Wanwick	6/28/2021	8/31/2021	Integrity	Other	7	355	0	375	415	415
90000212599	FY21/22	ABANDONED	George St	Wanwick	6/28/2021	8/27/2021	Integrity	Other	36	2700	0	2796	2700	2700
90000194417	FY21/22	DISPATCH	Terrace Av, WWK	Wanwick			Integrity	Other	21	2445	0		2350	2350
90000211809	FY21/22	DISPATCH	Sabin St	Wanwick			Integrity	N/A	44	2760	0		2760	2760
90000202070	FY21/22	NRTD	Tidewater Dr	Wanwick			Integrity	Ahead of 3rd Party	45	3060	0		3060	3060
90000194416	FY21/22	ABANDONED	Tennessee Av, WWK	Wanwick	8/12/2021	10/29/2021	Integrity	Other	40	3250	0	3344	3250	3250
90000212588	FY21/22	FCOMP	Canfield Ave	Wanwick	8/22/2021	10/30/2021	Integrity	Other	53	3315	0	3342	3315	3315
90000211988	FY21/22	INPRG	10-67 Jefferson Blvd	Wanwick	9/1/2021		Integrity	N/A	14	3420	0	3015	3485	3315
90000155652	FY21/22	INPRG	3073-3416 West Shore Rd	Wanwick	9/24/2021		Integrity	Other	45	3730	0	350	3785	3785
90000204619	FY21/22	ABANDONED	125-318 Warwick Neck Ave	Wanwick	6/9/2021	10/8/2021	Integrity	N/A	47	3810	0	4180	3885	3885
90000212561	FY21/22	INPRG	Armstrong Ave	Wanwick	7/23/2021		Integrity	N/A	68	3985	0	4487	3940	3940
90000204620	FY21/22	INPRG	2790-3055 W Shore Rd, WWK	Wanwick	7/28/2021		Integrity	Other	73	5115	0	5875	5170	5170
90000204634	FY21/22	AWPER	Warwick Ave	Wanwick			Integrity	Other	59	5180	0		5180	5180
90000212008	FY21/22	INPRG	956-1251 Narragansett Pkwy	Wanwick	7/19/2021		Integrity	Other	93	5940	0	6342	7395	7395
90000212593	FY21/22	ABANDONED	Trinity St	Wanwick	5/28/2021	9/24/2021	Integrity	N/A	91	6160	0	6471	6175	6175
90000204635	FY20/21	ABANDONED	E Main St, WWW	West Warwick	11/30/2020	10/28/2021	Integrity	Other	17	1770	1122	721	1770	1770
90000210836	FY21/22	AWPER	Quaker Lane	West Warwick			Integrity	Other	4	350	0		535	535
90000196789	FY19/20	ABANDONED	79-138 Beach St, WLY	Westerly	2/14/2020	6/21/2021	Integrity	Other	82	9,105	1928	0	8,915	8915
90000211237	FY21/22	ABANDONED	88 Old Post Rd	Westerly	5/22/2021	7/28/2021	Integrity	Other	1	460	0	463	460	460

Main WOr#	Plan Year	Project Status Date Updated: 1/1/3	Project Title	Town	Actual Start Date	Date Completed	Program	Work Type	Total # of Services (project scope)	Project Scope Install Footage	Footage Installed in FY21	Footage Installed in FY22	Estimated Abandonment Footage	Actual Abandonment Footage
90000118525	FY21/22	INPRG	Spruce St	Westerly	6/1/2021		Integrity	Other	61	2860	0	2966	4085	
90000204638	FY21/22	AWPER	Ward Ave	Westerly			Integrity	Other	50	4140	0		6410	
90000194434	FY20/21	INPRG	Transit St, WSO	Woonsocket	7/15/2020		Integrity	Other	25	1,455	1788	0	1,700	
90000204646	FY20/21	WSTOP	Seventh Av, WSO	Woonsocket	7/1/2020		Integrity	Other	21	1,075	1079	0	1,075	
90000185702	FY20/21	COMP	East St, WSO	Woonsocket	8/18/2020	6/9/2021	Integrity	Other	27	1,450	1480	0	1,450	1450
90000194429	FY19/20	WSTOP	Fairmount St, WSO	Woonsocket	5/22/2019		Integrity	Other	3	3,710	80	0	3,520	
90000204547	FY21/22	AWPER	Lambert Av (insertion), WSO	Woonsocket			Integrity	Other	1	375	0	0	375	
90000211793	FY21/22	INPRG	Lemay Rd	Woonsocket	6/2/2021		Integrity	Other	21	980	0	0	980	
90000175911	FY21/22	DISPATCH	S Main St, WSO	Woonsocket			Integrity	Other	28	1710	0		3450	
90000194428	FY21/22	INPRG	Blackstone St, WSO	Woonsocket	7/16/2021		Integrity	Ahead of Paving	24	2270	0	2294	2265	
90000212441	FY21/22	COMP	Railroad St / New River Rd Intersection	Woonsocket	5/4/2021	7/1/2021	Integrity	Encroachment	39	2885	0	2975	2900	2900
90000210929	FY21/22	INPRG	Bellou St	Woonsocket	8/30/2021		Integrity	Other	54	2875	0	3053	3000	
90000210947	FY21/22	INPRG	Willow Ave	Woonsocket	6/9/2021		Integrity	Other	91	4080	0	4332	5090	
90000118510	FY21/22	INPRG	Mason St	Woonsocket	9/8/2021		Integrity	Other	54	4360	0	3695	4155	
90000175904	FY21/22	INPRG	Halsey Rd, WSO	Woonsocket	5/12/2021		Integrity	Other	115	6190	0	7432	6190	
90000204089	FY20/21	NRTD	Park @ Maple	Cranston			Reliability	Reg Station	0	0	0	0	0	
90000180674	FY18/19	WSTOP	Old Park Ave, CRA	Cranston	8/22/2018		Reliability	N/A	0	1,130	0	0	530	
90000144222	FY20/21	FCOMP	Park @ Old Park	Cranston	4/12/2021	6/10/2021	Reliability	Reg Station	0	0	0	0	0	0
90000220362	FY21/22	DISPATCH	Scott RD Take Station	Cumberland			Reliability	Reg Station	0	0	0	0	0	
90000204096	FY21/22	AWPER	816 Middle Rd	East Greenwich			Reliability	Reg Station	0	0	0	0	0	
90000205544	FY20/21	INPRG	French Town Rd	East Greenwich	6/14/2021		Reliability	Reg Station	0	0	0	0	0	
90000208284	FY20/21	ABANDONED	Boyd Av, EPV	East Providence	6/12/2020	9/15/2021	Reliability	Other	0	960	983	0	0	0
90000207442	FY20/21	DISPATCH	747 Bullocks Point	East Providence			Reliability	Single Valve Bypass	0	0	0	0	0	
90000218144	FY21/22	DISPATCH	Pawtucket Ave	East Providence			Reliability	Other	2	270	0	0	270	
90000212105	FY21/22	DISPATCH	Plainfield @ Simmonsville	Johnston			Reliability	Reg Station	0	0	0	0	0	
90000206010	FY21/22	FCOMP	Cottage St @ Putnam Pike	Johnston	6/7/2021	9/6/2021	Reliability	Reg Station	0	0	70	0	0	0
90000140066	FY21/22	INPRG	Attitash @ George Waterman	Johnston	10/12/2021		Reliability	Valve	0	0	0	0	0	
90000208175	FY20/21	WSTOP	Woodland St @ Smithfield Ave	Lincoln	7/29/2021		Reliability	Reg Station	0	0	0	0	0	
90000216930	FY21/22	INPRG	Powder Hill Rd	Lincoln	10/23/2021		Reliability	N/A	3	1870	0	412	1820	
90000218895	FY21/22	DISPATCH	Green End Ave	Middletown			Reliability	N/A	15	3000	0	0	0	
90000207987	FY20/21	NRTD	Memorial Blvd, Newport	Newport			Reliability	Other	18	2080	0	0	7030	
90000207468	FY20/21	AWPER	Carroll Ave @ Ocean	Newport			Reliability	Single Valve Bypass	0	0	0	0	0	
90000217493	FY21/22	FCOMP	Dr Marcus Wheatland BLVD4 In valve	Newport	10/14/2021	10/14/2021	Reliability	Relief Valve	0	10	0	0	10	10
90000216931	FY21/22	AWPER	Ten Rod Rd	North Kingston			Reliability	Ahead of Paving	6	1050	0	0	1050	
90000204283	FY20/21	AWPER	Smith @ Sunset NPV	North Providence			Reliability	Other	0	0	0	0	0	
90000180116	FY21/22	NRTD	Central Ave	Pawtucket			Reliability	N/A	0	2000	0	0	0	
90000222362	FY21/22	AWPER	Link St	Pawtucket			Reliability	N/A	1	300	0	0	0	
90000223061	FY21/22	NRTD	Taft St 16 in Cutoff	Pawtucket			Reliability	N/A	0	0	0	0	0	
90000215327	FY21/22	ABANDONED	Lee St Relief Valve	Pawtucket	7/13/2021	7/23/2021	Reliability	Relief Valve	0	0	0	0	0	0
90000208693	FY21/22	INPRG	Tidewater St	Pawtucket	9/15/2021		Reliability	Relief Valve	0	0	0	0	0	
90000218897	FY21/22	AWPER	Harris Ave	Providence			Reliability	N/A	6	970	0	0	0	
90000204098	FY21/22	AWPER	Dexter St	Providence			Reliability	Relief Valve	0	0	0	0	0	
90000162172	FY20/21	FCOMP	Ontario St @ Niagara, PVD_Reg Station	Providence	10/28/2020	6/29/2021	Reliability	Reg Station	0	0	0	0	0	0
90000203313	FY20/21	WSTOP	Fountain @ Eddy	Providence	7/20/2020		Reliability	Reg Station	0	0	0	0	0	
90000207499	FY20/21	DISPATCH	Waterman @ Whitman	Smithfield			Reliability	Single Valve Bypass	0	0	0	0	0	

Main WOr#	Plan Year	Project Status Date Updated: 11/3	Project Title	Town	Actual Start Date	Date Completed	Program	Work Type	Total # of Services (project scope)	Project Scope Install Estimated Footage	Footage Installed in FY21	Footage Installed in FY22	Estimated Abandonment Footage	Actual Abandonment Footage
90000216932	FY21/22	AWPER	Franklin St	Warren			Reliability	N/A	20	2440	0		2865	
90000207498	FY20/21	AWPER	Byron @ Post	Wanwick			Reliability	Single Valve Bypass	0	0	0		0	
90000199253	FY19/20	INPRG	RI Growthpoint - MOP Increase	Wanwick	9/29/2019		Reliability	Other	0	0	0		0	
90000205540	FY21/22	FCOMP	Maple @ Albany	Wanwick	6/14/2021	8/17/2021	Reliability	Reg Station	0	0	0	0	0	0
90000215129	FY21/22	FCOMP	Cowesett Ave @ Quaker Ln	West Warwick	12/7/2020	9/27/2021	Reliability	Reg Station	0	0	0	0	0	0
90000209570	FY20/21	INPRG	Franklin St, WLY	Westerly	8/18/2021		Reliability	Other	0	450	0	75	0	0
90000210146	FY21/22	FCOMP	Canal St TS	Westerly	6/11/2021	10/2/2021	Reliability	Other	0	0	0	50	0	0
90000202479	FY20/21	COMP	East Ave	Westerly	5/12/2021	6/7/2021	Reliability	N/A	0	2350	0	2350	0	0
90000208671	FY21/22	NRTD	St James Relief Valve	Woonsocket			Reliability	Relief Valve	0	0	0	0	0	0
90000209564	FY20/21	FCOMP	Bernon @ Front WSO	Woonsocket	7/27/2021	9/16/2021	Reliability	Other	0	0	0	0	0	0
90000208179	FY21/22	WSTOP	Bailey @ Bailou	Woonsocket	10/6/2021		Reliability	Reg Station	0	0	0	0	0	0

Division 1-21

Request:

Provide a list of the proposed leak prone pipe projects for FY 2023 that ties into the proposed overall installation miles of 57.7.

Response:

Please see Attachment DIV 1-21 for the list of Proactive Main Replacement – Leak Prone Pipe jobs planned for FY 2023. Those jobs total 43.4 miles of installation and 44.9 miles of ISR Abandonment. Additionally, the Company also proposes to install 14.0 miles within the Public Works program, but the municipalities have not yet been submitted these specific projects. The Company also plans to install 0.3 miles of replacement main on the Atwells Avenue project. All three programs contribute towards the total proposed installation of 57.7 miles.

Attachment DIV 1-21

Insurance Code:
CRCC200 - Steel
CRCC206-350 - Cast Iron

City	Address	Material	Quantity	Unit Price	Total Price	Notes	Material	Quantity	Unit Price	Total Price	Notes
Providence	9000215259	CRCC207	4165	0.80	3332.00		CRCC207	4165	0.80	3332.00	
Providence	9000215267	CRCC207	2700	0.51	1377.00		CRCC207	2700	0.51	1377.00	
Providence	9000215274	CRCC203	710	0.13	92.30		CRCC203	710	0.13	92.30	
Providence	9000215445	CRCC207	4090	0.77	3149.83		CRCC207	4090	0.77	3149.83	
Providence	9000215452	CRCC207	2915	0.55	1602.75		CRCC207	2915	0.55	1602.75	
Providence	9000215465	CRCC206	2045	0.39	807.15		CRCC206	2045	0.39	807.15	
Providence	9000215537	CRCC207	855	0.42	359.10		CRCC207	855	0.42	359.10	
Providence	9000217203	CRCC207	640	0.12	76.80		CRCC207	640	0.12	76.80	
Providence	9000217292	CRCC207	140	0.03	4.20		CRCC207	140	0.03	4.20	
Providence	9000218848	CRCC207	845	0.15	126.75		CRCC207	845	0.15	126.75	
Providence	9000218881	CRCC207	2055	0.39	801.45		CRCC207	2055	0.39	801.45	
Providence	9000219874	CRCC203	9015	0.19	1712.85		CRCC203	9015	0.19	1712.85	
Warren	9000219878	CRCC203	295	0.06	17.70		CRCC203	295	0.06	17.70	
Warren	9000204628	CRCC203	5855	1.21	7085.55		CRCC203	5855	1.21	7085.55	
Warren	9000204629	CRCC203	2000	0.51	1020.00		CRCC203	2000	0.51	1020.00	
Warren	9000204631	CRCC203	2400	0.61	1464.00		CRCC203	2400	0.61	1464.00	
Warren	9000211622	CRCC203	1200	0.24	288.00		CRCC203	1200	0.24	288.00	
Warren	9000212544	CRCC203	380	0.05	19.00		CRCC203	380	0.05	19.00	
Warren	9000212545	CRCC203	380	0.05	19.00		CRCC203	380	0.05	19.00	
Warren	9000212627	CRCC203	600	0.05	30.00		CRCC203	600	0.05	30.00	
Warren	9000212544	CRCC203	4100	0.59	2419.00		CRCC203	4100	0.59	2419.00	
Warren	9000212545	CRCC203	75	0.01	0.75		CRCC203	75	0.01	0.75	
Warren	9000217944	CRCC203	2115	0.40	846.00		CRCC203	2115	0.40	846.00	
Warren	9000219187	CRCC203	900	0.17	153.00		CRCC203	900	0.17	153.00	
Warren	9000219184	CRCC203	4800	0.94	4512.00		CRCC203	4800	0.94	4512.00	
Warren	9000219201	CRCC203	500	0.29	145.00		CRCC203	500	0.29	145.00	
Warren	9000220780	CRCC203	720	0.14	100.80		CRCC203	720	0.14	100.80	
Warren	9000220783	CRCC203	2850	0.56	1596.00		CRCC203	2850	0.56	1596.00	
Warren	9000220987	CRCC203	4260	0.87	3712.20		CRCC203	4260	0.87	3712.20	
Warren	9000220990	CRCC203	1205	0.23	277.15		CRCC203	1205	0.23	277.15	
Warren	9000220959	CRCC207	1615	0.45	726.75		CRCC207	1615	0.45	726.75	
West Warwick	9000211867	CRCC203	815	0.12	97.80		CRCC203	815	0.12	97.80	
West Warwick	9000215534	CRCC203	805	0.15	120.75		CRCC203	805	0.15	120.75	
West Warwick	9000219681	CRCC203	1000	0.20	200.00		CRCC203	1000	0.20	200.00	
West Warwick	9000212431	CRCC207	10455	1.88	19665.40		CRCC207	10455	1.88	19665.40	
West Warwick	9000212440	CRCC207	1565	0.30	469.50		CRCC207	1565	0.30	469.50	
West Warwick	9000217184	CRCC207	1795	0.33	595.35		CRCC207	1795	0.33	595.35	
West Warwick	9000218845	CRCC207	760	0.14	106.40		CRCC207	760	0.14	106.40	
West Warwick	9000219108	CRCC206	845	0.16	135.20		CRCC206	845	0.16	135.20	
West Warwick	9000219276	CRCC207	545	0.10	54.50		CRCC207	545	0.10	54.50	

Install Mileage	51.41
NR Abandonment Mileage	44.93

City	Install	Abandon
Barrington	0.33	0.31
Bristol	0.58	0.58
Coxsack	0.19	0.19
Cumberland	4.16	4.42
East Greenwich	1.82	1.82
East Providence	0.68	0.68
Littleton	0.51	0.47
Littleton	1.56	1.41
Newport	1.17	1.15
North Kingstown	0.07	0.03
North Providence	4.66	4.69
North Scitucket	1.11	1.12
Providence	9.02	10.11
Warren	0.25	0.24
West Warwick	7.68	7.39
West Warwick	0.12	0.12
Westerly	0.35	0.35
Woonsocket	3.01	2.91
Total	43.41	44.93

Division 1-22

Request:

Provide the current population of leak prone services by material type and decade of installation in risk ranking order as of FY 2021 year-end, March 31, 2021.

Response:

Please see Attachment DIV 1-22 for the list of leak prone services by material type and decade of installation with associated risk ranking scores. The range of the risk ranking scores are between 46 and 21. A score of 46 being the riskiest. Please note that this list of leak prone services is as of October 2021.

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Attachment DIV 1-22

Due to the voluminous nature of Attachment DIV 1-22, the Company is providing the Excel version of this file.

Division 1-23

Request:

Regarding the Large Diameter LPCI Program, provide the details and the site plan for each location in Providence and Newport where the Company plans to rehabilitate large diameter cast iron pipe using the "CISBOT" method of joint sealing.

Response:

Please see Attachment DIV 1-23 for the list of CISBOT projects scheduled to be completed in FY23. The Company is in the process of developing the site plans for these projects.

WO #	Address	Town	FY	Footage	Material	Diameter	Pressure
90000224271	94-188 Legion Wy	Cranston	FY23	1109	CI	20	7 psi
90000177418	602-710 Killingly St	Johnston	FY23	2904	CI	16	LP
90000224287	1092-1247 Chalkstone Ave	Providence	FY23	1373	CI	30	LP
90000218064	Early St	Providence	FY23	1162	CI	20	7 psi
90000218059	1-94 Legion Wy	Cranston	FY23	1690	CI	20	7 psi
90000177419	Tobey St	Providence	FY23	940	CI	16	LP
90000201453	Thames St	Newport	FY23	1540	CI	16	LP

Division 1-24

Request:

When the Company is rehabilitating large diameter pipe by either CISBOT joint sealing or relining, how are associated leak prone services addressed? If they are not addressed during the same period, how will the Company track them going forward?

Response:

The Company does not replace associated leak prone services at the time of rehabilitation of large diameter cast iron either by CISBOT or lining. The services off these main segments must be replaced through either the Reactive or Proactive Service Replacement Program.

Division 1-25

Request:

How many leak prone services are associated with the 37 miles of large diameter leak prone pipe?

Response:

There are 578 service associated with the large diameter leak prone mains in the system as of October 14, 2021. Please note that the number of services may be lower based on the mapping backlog.

Division 1-26

Request:

As Large Diameter Leak Prone Pipe is rehabilitated, is that length of pipe removed from the overall count of leak prone pipe? Please explain.

Response:

The large diameter leak prone pipe rehabilitated by lining is removed from the leak prone pipe inventory and reported on PHMSA Form F7100.1-1. Please see Attachment DIV 1-26, Part B-System Description, for the definition of the materials listed on the instructions for completing Form PHMSA F7100.1-1.

Large Diameter Leak Prone Pipe Rehabilitated by CISBOT is not removed from the leak prone pipe inventory. The Company plots and labels the rehabilitated segments in the mapping system for identification purposes. Pipe Rehabilitated by CISBOT is not prescribed in the instructions for completing PHMSA form F7100.1-1. Please see Attachment DIV 1-26, Part B, System Description.

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

12-3-2018 minor correction in Part G pending OMB approval

All section references are to Title 49 of the Code of Federal Regulations. Reporting requirements are contained in Part 191, "Transportation of Natural and Other Gas by Pipeline; Annual Reports, Incident Reports and Safety Related Condition Reports." Except as provided in §191.11(b), each operator of a gas distribution pipeline (see definitions below) must submit an annual report Form PHMSA F 7100.1-1 for the preceding calendar year not later than **March 15th**. Be sure to report TOTAL miles of main pipeline and services in the system at the end of the reporting year, including additions to the system during the year. The annual reporting period is on a calendar year basis ending on December 31st of each year.

If you need copies of the Form PHMSA F 7100.1-1 and/or instructions, they can be found on <http://www.phmsa.dot.gov/pipeline/library/forms>. The documents are included in the section titled Accident/Incident/Annual Reporting Forms.

ONLINE SUBMISSION IS REQUIRED UNLESS AN ALTERNATIVE REPORTING METHOD IS GRANTED BY PHMSA

ALTERNATE REPORTING METHOD

If electronic reporting imposes an undue burden and hardship, an operator may submit a written request for an alternative reporting method to the Information Resources Manager, Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, PHP-20, 1200 New Jersey Avenue, SE Washington DC 20590. The request must describe the undue burden and hardship. PHMSA will review the request and may authorize, in writing, an alternative reporting method. An authorization will state the period for which it is valid, which may be indefinite. An operator must contact PHMSA at 202-366-8075, or electronically to informationresourcesmanager@dot.gov or make arrangements for submitting a report that is due after a request for alternative reporting is submitted but before an authorization or denial is received.

ONLINE REPORTING METHOD

Annual Reports must be submitted online through the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>, unless an alternate method is approved (see Alternate Reporting Methods below).

You will not be able to submit reports until you have met all of the Portal registration requirements – see http://opsweb.phmsa.dot.gov/portal_message/PHMSA_Portal_Registration.pdf. Completing these registration requirements could take several weeks. Plan ahead and register well in advance of the report due date.

Use the following procedure for online reporting:

1. Go to the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

2. Enter PHMSA Portal Username and Password ; press *enter*
3. Select OPID; press "*continue*" button.
4. Under "**Create Reports**" on the left side of the screen, under *Annual* select "Gas Distribution" and proceed with entering your data. *Note: Data fields marked with a single asterisk are considered required fields that must be completed before the system will accept your initial submission.* Also, only one annual report by commodity for an OPID may be submitted per year.
5. To save intermediate work without formally submitting it to PHMSA, click **Save**. To modify a draft of an annual report that you saved, go to **Saved Reports** and click on *Gas Distribution*. Locate your saved report by the date, report year, or commodity. Select the record by clicking on it once, and then click **Modify** above the record.
6. Once all sections of the form have been completed, click on **Validate** to ensure all required fields have been completed and data meets all other requirements. A list of errors will be generated that must be fixed prior to submitting an Annual Report.
7. Click **Submit** when you have completed the Report (for either an Initial Report or a Supplemental Report), and are ready to initiate formal submission of your Report to PHMSA.
8. A confirmation message will appear that confirms a record has been successfully submitted. To save or print a copy of your submission, go to **Submitted Reports** on the left hand side, and click on *Gas Distribution*. Locate your submitted report by the date, report year, or Commodity Group, and then click on the PDF icon to either open the file and print it, or save an electronic copy.
9. To submit a *Supplemental Report*, go to **Submitted Reports** on the left hand side, and click on *Gas Distribution*. Locate your submitted report by the date, report year, or Commodity Group. Select the record by clicking on it once, and then click "Create Supplemental".

GENERAL INSTRUCTIONS

The following definitions are from § 192.3:

1. "Distribution line" means a pipeline other than a gathering or transmission line.
2. "Gathering line" means a pipeline that transports gas from a current production facility to a transmission line or main.
3. "Transmission line" means a pipeline, other than a gathering line, that:
 - a. Transports gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not downstream from a distribution center;
 - b. Operates at a hoop stress of 20 percent or more of SMYS; or

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

- c. Transports gas within a storage field. A large volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas.

4. "Operator" means a person who engages in the transportation of gas.

Make an entry in each block for which data are available. Estimate data if necessary. Avoid entering any data in the **UNKNOWN** columns, if possible. Some companies may have very old pipe for which installation records do not exist. Estimate the total of such mileage in the **UNKNOWN** column of Part B, item 2 "Miles of Main in System at End of Year" and item 3 "Number of Services in System at End of Year", and item 4 "Miles of Main and Number of Services by Decade of Installation."

Do not report miles of pipe, pipe segments, or pipeline in feet. When main miles and service counts for the same set of pipelines is reported in different parts of the form, the online system will require the different parts to be consistent. Main miles and service counts over 60 must be within 0.5% of the baseline and values under 60 must be within 0.3 miles for main and service counts must match exactly. Part B4, decade of installation, will serve as the baseline for main miles and service counts. For example, if you report 60 miles of main in Part B4, the miles of main in Parts B1 and B2 must be within 0.3 miles of 60. For main miles, use the number of decimal places needed to satisfy these consistency checks. Service counts may only be entered as positive integers.

For a given OPID, a separate Annual Report is required for each Commodity Group within that OPID. As an example, if an operator uses a single OPID and has one set of pipeline facilities transporting natural gas and another transporting landfill gas, this operator must file two Annual Reports – one Annual Report covering natural gas facilities and a second for the landfill gas facilities. When a pipeline facility transports two or more Commodity Groups, the pipeline facility should be reported only once under the predominantly transported Commodity Group.

PART A – OPERATOR INFORMATION

1. Name of Operator

This is the company name associated with the OPID. For online entries, the name will be automatically populated based on the OPID entered in A3. If the name that appears is not correct, you need to submit an Operator Name Change (Type A) Notification.

2. Location of Office Where Additional Information May Be Obtained

Enter the appropriate address.

3. Operator's 5-digit Identification Number (OPID)

For online entries, the OPID will automatically populate based on the selection you made when entering the Portal. If you have log-in credentials for multiple OPID, be sure the report is being created for the appropriate OPID. Contact PHMSA's Operator Hotline at 202-366-8075 if you need assistance with an OPID.

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

4. Headquarters Name and Address

This is the headquarters address associated with the OPID. For online entries, the address will automatically populate based on the OPID entered in A3. If the address that appears is not correct, you need to change it in the online Contacts module.

5. State of Operation

Enter the **State for which information is being reported. Submit a separate report for each State** in which the company operates a gas distribution pipeline system.

6. Commodity Group

It is a PHMSA requirement that operators submit separate Reports for each Commodity Group within a particular OPID.

File a separate Annual Report for each of the following Commodity Groups:

Natural Gas

Synthetic Gas (such as manufactured gas based on naphtha)

Hydrogen Gas

Propane Gas

Landfill Gas (includes biogas)

Other Gas – If this Commodity Group is selected, report the name of the other gas in the space provided.

Note: When a pipeline facility transports two or more of the above Commodity Groups, the pipeline facility should be reported only once under the predominantly transported Commodity Group. For example, if an operator has a pipeline segment that is used to transport natural gas during the majority of the year and propane for a couple of weeks, that operator should only file an annual report for the natural gas. If an operator has two pipeline segments with one pipeline segment used to transport natural gas and the other pipeline segment transporting hydrogen gas, that operator should file two annual reports - 1 report for natural gas and 1 report for hydrogen gas.

7. Operator Type

Enter the Type of Operator based on the structure of the company included in this OPID for which this report is being submitted. "Investor Owned" means the operator is controlled by a corporation with publicly traded stock. "Municipally Owned" means the operator is controlled by any type of State or local government entity including, county, parish, utility district, or municipality. "Privately Owned"

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

means the operator is controlled by a corporation without publicly traded stock. All other operators should report "Cooperative."

PART B – SYSTEM DESCRIPTION

"Coated" means pipe coated with any effective hot or cold applied dielectric coating or wrapper.

"Reconditioned Cast Iron" means cast iron gas distribution pipe that has been lined internally by use of suitable materials that ensure safe operation at an MAOP not to exceed the previously established MAOP. "Reconditioned Cast Iron" does not include cast iron pipe inserted with a gas pipe that is, by itself, suitable for gas service under Part 192, e.g., an ASTM D2513 pipe meeting code requirements for the intended gas service. Such insertions shall be reported as the material used in the insertion. The intent of the definition is to make a clear distinction between a liner and inserted pipe. An example of "Reconditioned Cast Iron" would be the insertion of a liner inside cast iron pipe where the liner relies on the structural integrity of the cast iron pipe. For details on liner insertion, see ASTM F2207, Standard Specification for Cured-in-Place Pipe Lining System for Rehabilitation of Metallic Gas Pipe. Methods of installation like pipe-splitting or bursting that involve the installation of a new stand-alone pipe while the host pipe is destroyed does not result in "Reconditioned Cast Iron".

"PVC" means polyvinyl chloride plastic.

"PE" means polyethylene plastic.

"ABS" means acrylonitrile-butadiene-styrene plastic.

"Cathodically protected" applies to both "bare" and "coated."

"Other" means a pipe of any material not specifically designated on the form. If you enter miles of main or services in the "other" category, describe these materials in the appropriate text box.

"Number of service" is the number of service lines, not the number of customers served.

Provide miles of main and numbers of services by decade installed in Part B, section 4.

If you do not know the decade of installation of the pipe because there are no records containing such information, enter an estimate in the UNKNOWN column. The sum total of mileage and number of services reported for Part B, section 4 must be consistent with total mileage and number of services reported in sections 1, 2, and 3 in Part B.

PART C – TOTAL LEAKS AND HAZARDOUS LEAKS ELIMINATED/REPAIRED DURING YEAR

In the appropriate column, include the total number of leaks and the number of hazardous leaks eliminated by repair, replacement or other action during the reporting year. The number of "hazardous leaks" eliminated or repaired during the year is reported as a performance measure for integrity management per § 192.1007(g). When reporting leaks or hazardous leaks eliminated by replacing or

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

abandoning a segment of pipe, count the leaks that existed in the pipe segment before it was replaced or abandoned. Also include leaks and hazardous leaks reported on form PHMSA 7100.1, "Incident Report Gas Distribution Systems." A reportable incident is one described in § 191.3. Do not include leaks that occurred during testing.

A "leak" is defined as an unintentional escape of gas from the pipeline. Do NOT report a leak determined to be non-hazardous and eliminated by lubrication, adjustment, or tightening.

A "hazardous leak" means a leak that represents an existing or probable hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous. A "hazardous leak" which occurs aboveground or belowground is a leak and must be reported.

Operators who do not grade leaks for hazard, but rather repair all leaks when found, need not grade repaired leaks solely for the purpose of this report. Such operators treat all leaks as if hazardous. Operators who do not grade leaks must report the same values for both total and hazardous leaks for each cause.

The "number of known system leaks at the end of the year scheduled for repair" is the total number pipeline system leaks being monitored and scheduled for repair at the end of the calendar year. Monitored leaks also include those leaks which have been temporarily repaired until a permanent repair can be performed. These leaks are non-hazardous unless reclassified following the operator's operation and maintenance procedures.

Leak causes are classified as:

CORROSION FAILURE: leak caused by galvanic, atmospheric, stray current, microbiological, or other corrosive action. A corrosion release or failure is not limited to a hole in the pipe or other piece of equipment. If the bonnet or packing gland on a valve or flange on piping deteriorates or becomes loose and leaks due to corrosion and failure of bolts, it is classified as Corrosion. (Note: If the bonnet, packing, or other gasket has deteriorated to failure, whether before or after the end of its expected life, but not due to corrosive action, report it under a different cause category, such as G4 Incorrect Operation for improper installation or G6 Equipment Failure if the gasket failed)

NATURAL FORCE DAMAGE: leak caused by outside forces attributable to causes NOT involving humans, such as earth movement, earthquakes, landslides, subsidence, heavy rains/floods, lightning, temperature, thermal stress, frozen components, high winds (Including damage caused by impact from objects blown by wind), or other similar natural causes. Lightning includes both damage and/or fire caused by a direct lightning strike and damage and/or fire as a secondary effect from a lightning strike in the area. An example of such a secondary effect would be a forest fire started by lightning that results in damage to a gas distribution system asset which results in an incident.

EXCAVATION DAMAGE: leak resulting directly from excavation damage by operator's personnel (oftentimes referred to as "first party" excavation damage) or by the operator's contractor (oftentimes referred to as "second party" excavation damage) or by people or contractors not associated with the operator (oftentimes referred to as "third party" excavation damage). Also, this section includes a release or failure determined to have resulted from previous damage due to excavation activity. For damage

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

from outside forces OTHER than excavation which results in a release, use Natural Force Damage or Other Outside Force, as appropriate.

OTHER OUTSIDE FORCE DAMAGE: leak resulting from outside force damage, other than excavation damage or natural forces such as:

- Nearby Industrial, Man-made or Other Fire/Explosion as Primary Cause of Incident (unless the fire was caused by natural forces, in which case the leak should be classified Natural Forces. Forest fires that are caused by human activity and result in a release should be reported as Other Outside Force),
- Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation. Other motorized vehicles/equipment includes tractors, mowers, backhoes, bulldozers and other tracked vehicles, and heavy equipment that can move. Leaks resulting from vehicular traffic loading or other contact (except report as "Excavation Damage" if the activity involved digging, drilling, boring, grading, cultivation or similar activities.
- Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels so long as those activities are not excavation activities. If those activities are excavation activities such as dredging or bank stabilization or renewal, the leak repair should be reported as "Excavation Damage".
- Previous Mechanical Damage NOT Related to Excavation. A leak caused by damage that occurred at some time prior to the release that was apparently NOT related to excavation activities, and would include prior outside force damage of an unknown nature, prior natural force damage, prior damage from other outside forces, and any other previous mechanical damage other than that which was apparently related to prior excavation. Leaks resulting from previous damage sustained during construction, installation, or fabrication of the pipe, weld, or joint from which the release eventually occurred are to be reported under "Pipe, Weld, or Joint Failure". Leaks resulting from previous damage sustained as a result of excavation activities should be reported under "Excavation Damage" unless due to corrosion in which case it should be reported as a corrosion leak.
- Intentional Damage/. Vandalism means willful or malicious destruction of the operator's pipeline facility or equipment. This category would include pranks, systematic damage inflicted to harass the operator, motor vehicle damage that was inflicted intentionally, and a variety of other intentional acts.
- Terrorism, per 28 C.F.R. § 0.85 General functions, includes the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.
- Theft. Theft means damage by any individual or entity, by any mechanism, specifically to steal, or attempt to steal, the transported gas or pipeline equipment.

PIPE, WELD, OR JOINT FAILURE : Leak resulting from a material defect within the pipe, component or joint due to faulty manufacturing procedures, design defects, or in-service stresses such as vibration, fatigue and environmental cracking. Material defect means an inherent flaw in the material or weld that occurred in the manufacture or at a point prior to construction, fabrication or installation. Design defect means an aspect inherent in a component to which a subsequent failure has been attributed that is not associated with errors in installation, i.e., is not a construction defect. This could include, for example, errors in engineering design. Fitting means a device, usually metal, for joining lengths of pipe into various piping systems. It includes couplings, ells, tees, crosses, reducers, unions, caps and plugs. Any leak that is associated with a component or process that joins pipe such as threaded connections, flanges, mechanical couplings, welds, and pipe fusions that leak as a result from poor construction should be classified as "Incorrect Operation". Leaks resulting from failure of original sound material from force

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

applied during construction that caused a dent, gouge, excessive stress, or other defect, including leaks due to faulty wrinkle bends, faulty field welds, and damage sustained in transportation to the construction or fabrication site that eventually resulted in a leak, should be reported as "Pipe, Weld or Joint Failure".

EQUIPMENT FAILURE: leak caused by malfunctions of control and relief equipment including regulators, valves, meters, compressors, or other instrumentation or functional equipment, Failures may be from threaded components, Flanges, collars, couplings and broken or cracked components, or from O- Ring failures, Gasket failures, seal failures, and failures in packing or similar leaks. Leaks caused by overpressurization resulting from malfunction of control or alarm device; relief valve malfunction: and valves failing to open or close on command; or valves which opened or closed when not commanded to do so. If overpressurization or some other aspect of this incident was caused by incorrect operation, the incident should be reported under "Incorrect Operation."

INCORRECT OPERATION: leak resulting from inadequate procedures or safety practices, or failure to follow correct procedures, or other operator error. It includes leaks due to improper valve selection or operation, inadvertent overpressurization, or improper selection or installation of equipment. It includes a leak resulting from the unintentional ignition of the transported gas during a welding or maintenance activity.

OTHER CAUSE: leak resulting from any other cause not attributable to the above causes. A best effort should be made to assign a specific leak cause before choosing the Other cause category. An operator replacing a bare steel pipeline with a history of external corrosion leaks without visual observation of the actual leak, may form a hypothesis based on available information that the leak was caused by external corrosion and assign the Corrosion cause category to the leak.

PART D – EXCAVATION DAMAGE

Excavation damages are reported as a measure of the effectiveness of integrity management programs (§ 192.1007(g)).

Report the "Number of Excavation Damages" experienced during the calendar year by the following apparent root cause which are classified as:

One-Call Notification Practices Not Sufficient: Damages resulting from no notification made to the One-Call Center; or notification to one-call center made, but not sufficient; or wrong information provided to One Call Center.

Locating Practices Not Sufficient: Damages resulting from facility could not be found or located; or facility marking or location not sufficient; or facility was not located or marked; or incorrect facility records/maps.

Excavation Practices Not Sufficient: Damages resulting from failure to maintain marks; or failure to support exposed facilities; or failure to use hand tools where required; or failure to test-hole (pot-hole); or improper backfilling practices; or failure to maintain clearance; or other insufficient excavation practices.

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

Other: Damages resulting from One-Call Center error; or abandoned facility; or deteriorated facility; or previous damage or data not collected; or other.

The Total Number of Excavation Damages will be calculated automatically based on the data entered. For this purpose, "Excavation Damage" means any impact that results in the need to repair or replace an underground facility due to a weakening, or the partial or complete destruction, of the facility, including, but not limited to, the protective coating, plastic pipe tracer wire, lateral support, cathodic protection or the housing for the line device or facility.

Report also the "Number of Excavation Tickets" received during the year, (i.e., receipt of information by the operator from the notification center).

PART E – EXCESS FLOW VALVE (EFV) AND SERVICE VALVE DATA

Report the number of EFV and manual service line shut-off valves installed during the calendar year. Report the estimated total number of EFV and manual service line shut-off valves in the system at the end of the calendar reporting year. Be sure to include the number installed during the calendar year when reporting the estimated number in the system at the end of the calendar year.

PART F – TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED/ELIMINATED OR SCHEDULED FOR REPAIR

Federal Lands: As defined in 30 U.S.C. §185, federal lands means "all lands owned by the United States except lands in the National Park System, lands held in trust for an Indian or Indian tribe, and lands on the Outer Continental Shelf." Indicate only those leaks repaired, eliminated, or scheduled for repair during the reporting year, including those incidents reported on Form PHMSA F 7100.1.

PART G – PERCENT OF UNACCOUNTED FOR GAS

"Unaccounted for gas" is gas lost; that is, gas that the operator cannot account for as usage or through appropriate adjustment. Adjustments are appropriately made for such factors as variations in temperature, pressure, meter-reading cycles, or heat content; calculable losses from construction, purging, line breaks, etc., where specific data are available to allow reasonable calculation or estimate; or other similar factors.

State the amount of unaccounted for gas as a percent of total consumption for the 12 months ending June 30 of the reporting year.

[(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)]
divided by (customer use + company use + appropriate adjustments) times 100 equals percent unaccounted for.

Instructions (rev 10-11-2018) for completing Form PHMSA F 7100.1-1 (rev 10-11-2018)
ANNUAL REPORT FOR CALENDAR YEAR 20 _____
GAS DISTRIBUTION SYSTEM

PART H – ADDITIONAL INFORMATION

Include any additional information which will assist in clarifying or classifying the reported data.

PART I - PREPARER

PREPARER is the name of the person most knowledgeable about the report or the person to be contacted for more information. Please include the direct phone number and email address as applicable (e-mail address is desired but not required). It should be noted that PHMSA will use your e-mail address to issue correspondence that is normally sent via mass mailings. "Correspondence" includes notifications such as the annual reminder letter for Annual Report filings.

Division 1-27

Request:

Provide an updated list of the isolated services (leak prone services on non-leak prone pipe) by location, material type, and date of installation in risk ranking order as of FY 2021 year-end, March 31, 2021.

Response:

Please see Attachment DIV 1-27 for the list of leak prone services on non-leak prone pipe (isolated services) by location, material type and date of installation in risk ranking order. The data provided is an update to the original list of isolated services identified for the FY 2021 ISR and subsequent update as part of the FY 2022 ISR. Currently, the updated list consists of 238 isolated services.

The Company continues to validate the inventory to be included in the Proactive Services Replacement Program.

Service Material	Service Diameter	Operating Pressure	Decade of Installation	Location City/Town	Risk Score
Bare Steel	1.25	0.25	1910	Providence	44
Bare Steel	1.25	0.25	1910	Providence	44
Bare Steel	1.25	0.25	1910	Providence	44
Bare Steel	1.25	0.25	1910	Woonsocket	44
Bare Steel	1.25	0.25	1910	Woonsocket	44
Bare Steel	1.25	35	1920	East Greenwich	42
Bare Steel	1.5	0.25	1910	Woonsocket	42
Bare Steel	1	35	1930	Warwick	41
Bare Steel	1	35	1930	Warwick	41
Bare Steel	1.25	0.25	1920	Pawtucket	41
Bare Steel	1.25	0.25	1920	Newport	41
Bare Steel	1	25	1930	Riverside	41
Bare Steel	1.25	0.25	1920	Providence	41
Bare Steel	1.25	0.25	1920	Central Falls	41
Bare Steel	1	35	1940	Warwick	41
Bare Steel	1.25	99	1940	Middletown	40
Bare Steel	1	35	1930	Warwick	40
Bare Steel	1	25	1950	Riverside	40
Bare Steel	1	5	1950	East Providence	40
Bare Steel	1	25	1950	Barrington	40
Bare Steel	1	25	1950	Barrington	40
Bare Steel	1.25	0.25	1930	Newport	39
Bare Steel	1.5	0.25	1920	Pawtucket	38
Bare Steel	1.5	0.25	1920	Pawtucket	38
Bare Steel	1.5	0.25	1920	Pawtucket	38
Bare Steel	1.5	0.25	1920	Pawtucket	38
Bare Steel	1.5	0.25	1920	Cranston	38
Bare Steel	1.5	0.25	1920	Manville	38
Bare Steel	1.5	0.25	1920	Johnston	38
Bare Steel	1.5	0.25	1920	Johnston	38
Bare Steel	1.5	0.25	1920	Pawtucket	38
Bare Steel	1.5	0.25	1920	Johnston	38
Bare Steel	1.5	0.25	1920	North Providence	38
Bare Steel	1.5	0.25	1920	North Providence	38
Bare Steel	1.5	0.25	1920	Providence	38
Bare Steel	1.5	0.25	1920	Providence	38
Bare Steel	1.5	0.25	1920	Providence	38
Bare Steel	1.5	0.25	1920	Providence	38
Bare Steel	1.5	0.25	1920	Woonsocket	38
Bare Steel	1.5	0.25	1920	Woonsocket	38
Bare Steel	1.5	0.25	1920	Lincoln	38
Bare Steel	1.5	0.25	1920	Cumberland	38
Bare Steel	1.5	0.25	1920	Cumberland	38

Bare Steel	1.5	0.25	1920	Cumberland	38
Bare Steel	1.5	0.25	1920	Cumberland	38
Bare Steel	1.5	0.25	1920	Cumberland	38
Bare Steel	1.5	0.25	1920	Cumberland	38
Bare Steel	1.5	0.25	1920	Cumberland	38
Bare Steel	1.5	0.25	1920	Central Falls	38
Bare Steel	1.5	0.25	1920	Pawtucket	38
Bare Steel	1.25	0.25	1950	Johnston	38
Bare Steel	1.25	0.25	1950	Providence	38
Bare Steel	2	0.25	1920	Pawtucket	37
Bare Steel	2	0.25	1920	Pawtucket	37
Bare Steel	2	0.25	1920	Providence	37
Bare Steel	3	0.25	1920	Providence	37
Bare Steel	3	0.25	1920	Pawtucket	37
Bare Steel	2	0.25	1920	Woonsocket	37
Bare Steel	1.5	0.25	1920	Pawtucket	37
Bare Steel	1.5	0.25	1920	Cumberland	37
Bare Steel	UK	35	1960	Newport	37
Bare Steel	1.25	0.25	1950	Westerly	36
Bare Steel	1.5	0.25	1930	Pawtucket	36
Bare Steel	1.5	0.25	1930	Pawtucket	36
Bare Steel	1.5	0.25	1930	Pawtucket	36
Bare Steel	1.5	0.25	1930	Pawtucket	36
Bare Steel	1.5	0.25	1930	Cranston	36
Bare Steel	1.5	0.25	1930	Johnston	36
Bare Steel	1.5	0.25	1930	Pawtucket	36
Bare Steel	1.5	0.25	1930	North Providence	36
Bare Steel	1.5	0.25	1930	Providence	36
Bare Steel	1.5	0.25	1930	Lincoln	36
Bare Steel	1.5	0.25	1930	Cumberland	36
Bare Steel	1.5	0.25	1930	Cumberland	36
Bare Steel	1.5	0.25	1930	Cumberland	36
Bare Steel	1.5	0.25	1930	Central Falls	36
Bare Steel	1.5	0.25	1930	Central Falls	36
Bare Steel	1	35	Pre 1940	East Greenwich	36
Bare Steel	1	25	Pre 1940	Riverside	36
Bare Steel	1	35	Pre 1940	Warwick	36
Bare Steel	1.5	0.25	1940	Johnston	36
Bare Steel	1.5	0.25	1940	Johnston	36
Bare Steel	1.5	0.25	1940	Johnston	36
Bare Steel	1.5	0.25	1940	Johnston	36
Bare Steel	1.5	0.25	1940	Pawtucket	36
Bare Steel	1.5	0.25	1940	Lincoln	36
Bare Steel	1.5	0.25	1940	Lincoln	36
Bare Steel	1.5	0.25	1940	Cumberland	36

Bare Steel	1.5	0.25	1940	Cumberland	36
Bare Steel	1.5	0.25	1940	Cumberland	36
Bare Steel	1.5	0.25	1940	Manville	36
Bare Steel	UK	35	1960	Newport	36
Bare Steel	1.25	0.25	1960	Rumford	36
Bare Steel	1.25	0.25	1960	Cranston	36
Bare Steel	1.25	0.25	1960	Johnston	36
Bare Steel	1.25	0.25	1960	Providence	36
Bare Steel	1.25	0.25	1960	Providence	36
Bare Steel	1.25	0.25	1960	Providence	36
Bare Steel	1.25	0.25	1960	Providence	36
Bare Steel	1.25	0.25	1960	Providence	36
Bare Steel	2	0.25	1930	Pawtucket	35
Bare Steel	UK	35	Pre 1940	Newport	35
Bare Steel	Unknown	35	Pre 1940	Cranston	35
Bare Steel	2	0.25	1930	Pawtucket	35
Bare Steel	999	60	Pre 1940	Woonsocket	35
Bare Steel	2	0.25	1930	Cumberland	35
Bare Steel	2	0.25	1930	Pawtucket	35
Bare Steel	1	35	Pre 1940	East Greenwich	35
Bare Steel	1	35	Pre 1940	Warwick	35
Bare Steel	1	0.25	Pre 1940	Cranston	35
Bare Steel	0.75	25	1920	Riverside	35
Bare Steel	0.75	25	1920	Riverside	35
Bare Steel	1	0.25	Pre 1940	East Providence	35
Bare Steel	1	0.25	Pre 1940	Providence	35
Bare Steel	1	0.25	Pre 1940	Providence	35
Bare Steel	1.5	0.25	1940	Pawtucket	35
Bare Steel	1.5	0.25	1940	Cumberland	35
Bare Steel	1.5	0.25	1950	Pawtucket	35
Bare Steel	1.5	0.25	1950	Pawtucket	35
Bare Steel	1.5	0.25	1950	Pawtucket	35
Bare Steel	1.5	0.25	1950	Manville	35
Bare Steel	1.5	0.25	1950	Cranston	35
Bare Steel	1.5	0.25	1950	Cranston	35
Bare Steel	1.5	0.25	1950	Newport	35
Bare Steel	1.5	0.25	1950	Pawtucket	35
Bare Steel	1.5	0.25	1950	Pawtucket	35
Bare Steel	1.5	0.25	1950	Pawtucket	35
Bare Steel	1.5	0.25	1950	Providence	35
Bare Steel	1.5	0.25	1950	Pawtucket	35
Bare Steel	1.5	0.25	1950	Pawtucket	35
Bare Steel	1.5	0.25	1950	Woonsocket	35
Bare Steel	1.5	0.25	1950	Woonsocket	35
Bare Steel	1.5	0.25	1950	Lincoln	35
Bare Steel	1.5	0.25	1950	Lincoln	35

Bare Steel	1.5	0.25	1950	Cumberland	35
Bare Steel	1.5	0.25	1950	Cumberland	35
Bare Steel	UK	60	Pre 1940	Bradford	34
Bare Steel	Unknown	0.25	Pre 1940	Pawtucket	34
Bare Steel	UK	0.25	Pre 1940	Newport	34
Bare Steel	1.25	0.25	Pre 1940	Providence	34
Bare Steel	1.25	0.25	Pre 1940	Providence	34
Bare Steel	1.25	0.25	Pre 1940	Providence	34
Bare Steel	1.25	0.25	Pre 1940	Providence	34
Bare Steel	1.25	0.25	Pre 1940	Providence	34
Bare Steel	Unknown	0.25	Pre 1940	Providence	34
Bare Steel	UK	0.25	Pre 1940	Newport	34
Bare Steel	UK	0.25	Pre 1940	Newport	34
Bare Steel	UK	0.25	Pre 1940	Newport	34
Bare Steel	2	0.25	1950	Pawtucket	34
Bare Steel	2	0.25	1950	Pawtucket	34
Bare Steel	1.5	0.25	1950	Pawtucket	34
Bare Steel	1.5	0.25	1950	Providence	34
Bare Steel	1.5	0.25	1950	Woonsocket	34
Bare Steel	1.5	0.25	1950	Woonsocket	34
Bare Steel	1.5	0.25	1950	Lincoln	34
Bare Steel	1.5	0.25	1960	Woonsocket	33
Bare Steel	1.5	0.25	1960	Pawtucket	33
Bare Steel	1.5	0.25	1960	Cumberland	33
Bare Steel	1.5	0.25	1960	Cumberland	33
Bare Steel	UK	0.25	Pre 1940	Newport	33
Bare Steel	1.25	0.25	Pre 1940	Providence	33
Bare Steel	1.25	0.25	Pre 1940	Providence	33
Bare Steel	1.25	0.25	Pre 1940	Westerly	33
Bare Steel	999	0.25	Pre 1940	Lincoln	33
Bare Steel	0.75	60	1930	Cumberland	33
Bare Steel	1.5	35	Pre 1940	Warwick	33
Bare Steel	2	0.25	1960	Rumford	32
Bare Steel	2	0.25	1960	Woonsocket	32
Bare Steel	1.5	0.25	1960	Manville	32
Bare Steel	1.5	0.25	1960	Providence	32
Bare Steel	1.5	0.25	1960	Pawtucket	32
Bare Steel	1.5	0.25	1960	Woonsocket	32
Bare Steel	1.5	0.25	1960	Woonsocket	32
Bare Steel	0.75	25	1930	Barrington	32
Coated Steel	1	35	1960	Cranston	32
Bare Steel	1.5	0.25	Pre 1940	Cranston	32
Bare Steel	1.5	0.25	Pre 1940	Cranston	32
Bare Steel	1.5	0.25	Pre 1940	Newport	32
Bare Steel	1.5	0.25	Pre 1940	Johnston	32

Bare Steel	1.5	0.25	Pre 1940	Pawtucket	32
Bare Steel	1.5	0.25	Pre 1940	Providence	32
Bare Steel	1.5	0.25	Pre 1940	Providence	32
Bare Steel	1.5	0.25	Pre 1940	Providence	32
Bare Steel	1.5	0.25	Pre 1940	Providence	32
Bare Steel	1.5	0.25	Pre 1940	Providence	32
Bare Steel	0.75	60	1950	North Smithfield	32
Bare Steel	1.5	0.25	Pre 1940	Central Falls	32
Bare Steel	2	0.25	1960	Providence	31
Bare Steel	2	0.25	Pre 1940	Newport	31
Bare Steel	3	0.25	Pre 1940	Woonsocket	31
Bare Steel	1.5	0.25	Pre 1940	Providence	30
Bare Steel	1.5	0.25	Pre 1940	Providence	30
Bare Steel	1.5	0.25	1970	Woonsocket	30
Bare Steel	4	0.25	1950	Cumberland	30
Bare Steel	0.75	35	1960	Johnston	30
Bare Steel	0.75	25	1960	Riverside	30
Bare Steel	0.75	60	1960	Cumberland	30
Coated Steel		35	1960	Providence	30
Coated Steel	1.25	0.25	1960	Cranston	30
Coated Steel	1.25	0.25	1960	Providence	30
Bare Steel	2	0.25	Pre 1940	Westerly	29
Bare Steel	0.75	60	1960	Providence	29
Bare Steel	0.75	35	1960	West Warwick	29
Bare Steel	0.75	35	1960	West Warwick	29
Bare Steel	0.75	60	1960	Cumberland	29
Bare Steel	0.75	60	1960	Cumberland	29
Bare Steel	0.75	10	Pre 1940	Middletown	28
Bare Steel	0.75	35	Pre 1940	North Kingstown	28
Bare Steel	0.75	25	Pre 1940	Riverside	28
Bare Steel	0.75	35	Pre 1940	Cranston	27
Bare Steel	0.75	10	Pre 1940	Middletown	27
Bare Steel	0.75	60	1970	Cumberland	27
Coated Steel	1.25	0.25	1970	Johnston	27
Coated Steel	0.75	35	1960	Cranston	24
Coated Steel	0.75	35	1960	Cranston	24
Coated Steel	0.75	35	1960	Cranston	24
Coated Steel	0.75	25	1960	Barrington	24
Coated Steel	0.75	35	1960	Johnston	24
Coated Steel	0.75	25	1960	Riverside	24
Coated Steel	0.75	35	1960	Warwick	24
Coated Steel	0.75	35	1960	Warwick	24
Coated Steel	0.75	25	1960	Barrington	24
Coated Steel	0.75	35	1960	Cranston	22
Coated Steel	0.75	35	1960	Cranston	22

Coated Steel	0.75	35	1960	Cranston	22
Coated Steel	0.75	35	1960	Cranston	22
Coated Steel	0.75	35	1960	Johnston	22
Coated Steel	0.75	35	1960	North Kingstown	22
Coated Steel	0.75	25	1960	Riverside	22
Coated Steel	0.75	35	1960	Warwick	22
Coated Steel	0.75	35	1960	Warwick	22
Coated Steel	0.75	35	1960	Kingston	22
Coated Steel	0.75	35	Pre 1940	Warwick	22
Coated Steel	0.75	35	1970	Warwick	22
Coated Steel	0.75	35	1970	Cranston	21
Coated Steel	0.75	35	1970	Cranston	21
Coated Steel	0.75	35	Pre 1940	Warwick	21
Coated Steel	0.75	35	1970	Narragansett	21
Coated Steel	0.75	0.25	Pre 1940	Providence	21

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-28

Request:

Provide all leak receipts for CY 2021 by month and type (Grade 1, 2, or 3). Please separate main leaks from service leaks.

Response:

Please see the table below for the leak receipts for CY 2021. Please note that the Company is unable to distinguish with certainty whether a leak is located on a gas main or an associated gas service until the Company has begun excavation and pinpointing of the leak location just prior to repair. Therefore, open leak receipts are not separated by mains and services. Please see the 2020 System Integrity Report for an analysis of Main Leak Repairs and Service Leak Repairs that occurred in CY 2020.

**LEAK RECEIPTS
JANUARY 1, 2021 TO OCTOBER 31, 2021**

MONTH	GRADE 1	GRADE 2	GRADE 3	TOTAL
January	54	78	24	156
February	50	35	16	101
March	42	61	32	135
April	43	83	79	205
May	46	47	38	131
June	52	38	50	140
July	46	52	40	138
August	42	23	55	120
September	43	29	46	118
October	54	330	34	118
GRAND TOTAL =	472	476	414	1,362

Division 1-29

Request:

Explain the reluctance of the Town of Warren to replace 50 copper services where the Town had "recently replaced the sidewalks and road" when the Company will restore the area to its original condition.

Response:

The Company assessed the risk at the time of the Town of Warren, Water Street construction and decided not to move forward with the replacement of the existing copper services. The construction on Water Street did not consist of full depth restoration. However, after the roadway was milled, there were several leaks detected. The Company made repairs to those leaks prior to the Town of Warren completing its final restoration on the roadway and sidewalks. Since that time, there has been no leak activity on the remaining 48 copper services. Please note, there are only 48 copper services remaining in Warren, not 50. In past conversations between the Company and the Division, the Company has used the phrase "approximately 50 copper services". Going forward, the Company will be more precise and list the number as 48 copper services.

Additionally, the Company continues to monitor the gas pipes on Water Street like any other leak prone pipe on the Rhode Island gas system. Because there has been no new leak activity on the Water Street copper services, which is a guaranteed street, and other mains and services on the Rhode Island gas system are currently presenting a higher risk, the Company does not have any short term plans to replace those copper services. Therefore, the Company has not approached the Town of Warren about the idea of replacing the Water Street copper services.

Division 1-30

Request:

Has the Company assessed the risk of delaying the replacement of these services, and if so, what are the Company's conclusions in that regard?

Response:

Please see the Company's response to Data Request DIV 1-29.

Division 1-31

Request:

Why have "final restoration costs" regarding the 100 services targeted in the Proactive Service Replacement Program required increasing the budget to "an average of \$6,000 per service?"

Response:

The initial unit cost estimate for individual Proactive Service Replacement Program projects was low by a factor of approximately 2 in the FY 2021 budget build. Each project costs approximately \$6,000 to complete, including final restoration. Please see the Company's response to Division 1-32 for a breakdown of this unit cost.

Division 1-32

Request:

What was the "average cost per service" for replacing proactive services in the Proactive Service Replacement Program for FY 2021 and FY 2022.

Response:

FY 2021:

The Company completed 57 proactive services at a total cost of \$224,463. The cost for each service was \$3,938 per service.

FY 2022 through September 30:

The Company completed 39 proactive services at a cost of \$159,703. The cost for each service was \$4,095 per service.

These unit costs do not include final restoration paving costs. Much of the final restoration work for the services completed in FY 2021 has been completed in this fiscal year, and, likewise, much of the work being executed this year will be restored in FY 2023. This makes it difficult to determine a full unit cost per service. However, based on the average patch size for this type of work, the Company expects that a typical final restoration cost will be approximately \$1,700 per service.

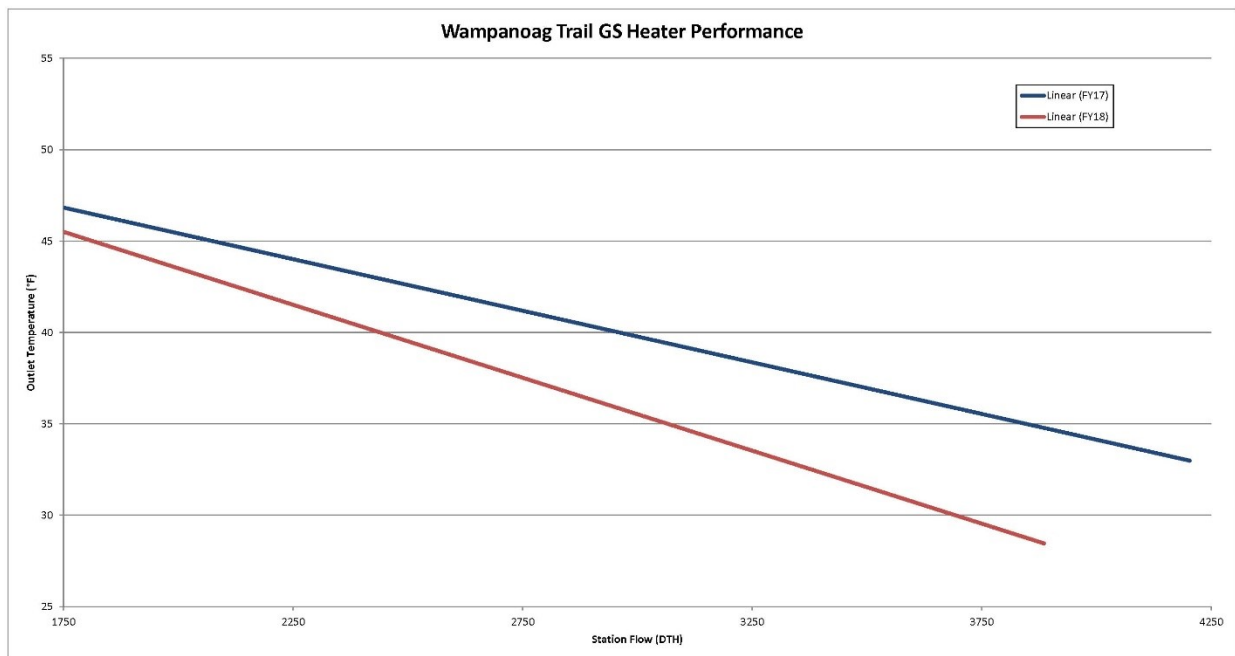
Division 1-33

Request:

Provide a detailed explanation of how the agreement between Enbridge and National Grid for Enbridge to “replace heaters at its Wampanoag Trail and Tiverton gate stations” came about.

Response:

In 2017, National Grid informed Enbridge of low outlet temperatures at the Wampanoag Trail Gate Station. A meeting between both parties in April 2018 presented the performance decline of the heaters in the chart below.



Enbridge verified the data and concluded that the heaters were at the end of their useful life. Enbridge also concluded that it was necessary to overhaul the heaters based on their Standard Operating Procedures.

National Grid expressed interest in owning and maintaining the heaters, which would allow for them to be designed and constructed in accordance with National Grid’s internal design requirements for heaters and safety controls.

Division 1-33, page 2

National Grid and Enbridge then attempted to develop a uniform Master O&M agreement in 2019 for all National Grid/Enbridge take stations in Rhode Island. When a final agreement was not reached, the focus shifted to specific station agreements. Wampanoag Trail and Tiverton specifically became the priority.

In 2020, Enbridge began progressing designs for the Wampanoag Trail heaters and for the Tiverton replacement to allow the scope of work to be established and agreed upon.

Division 1-34

Request:

How old is each heater and why do they need to be replaced? Describe each project in detail and provide a site plan or schematic for both projects defining what will belong to Enbridge and what will belong to National Grid.

Response:

The Wampanoag trail heaters were installed in 1967.
The Tiverton heater installation is estimated between 1983-1989.

Both systems need to be replaced because the expected useful life of a heating system is around 25 years. Also, the safety and controls systems are dated and do not meet National Grid's current standards. For the Wampanoag heaters, existing capacity is a concern.

Wampanoag Trail Scope:

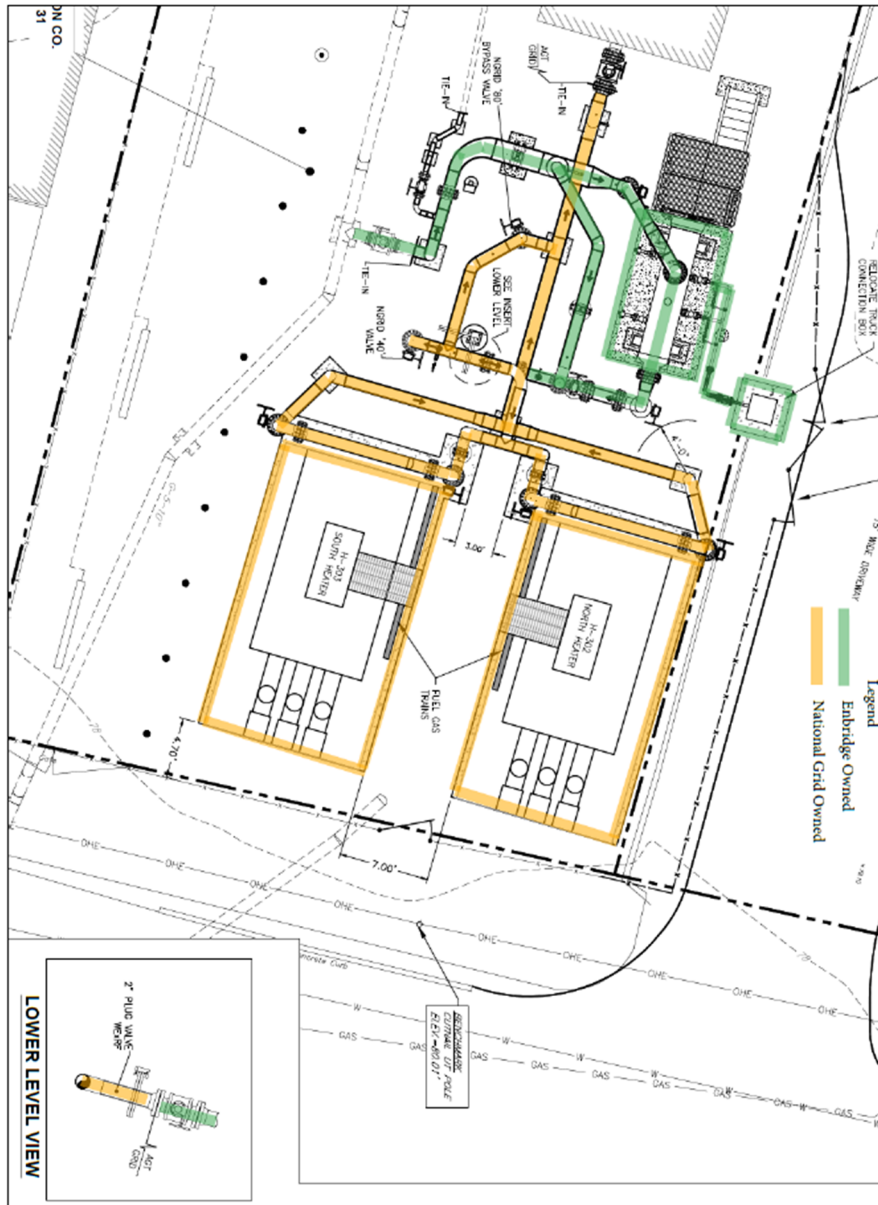
Replace the existing water bath heaters with two new dual burner water bath heaters sized for the current station flows in accordance with current National Grid standards.

Tiverton Scope:

Replace the existing station in its entirety in accordance with current standards and redundancy for Operations and Maintenance, pressure regulation and heat. A new building will be installed with redundant pressure regulation and three layers of overpressure protection. The heating system will be replaced with a hydronic boiler system and heat exchangers. Odorant and telemetry upgrades are also included.

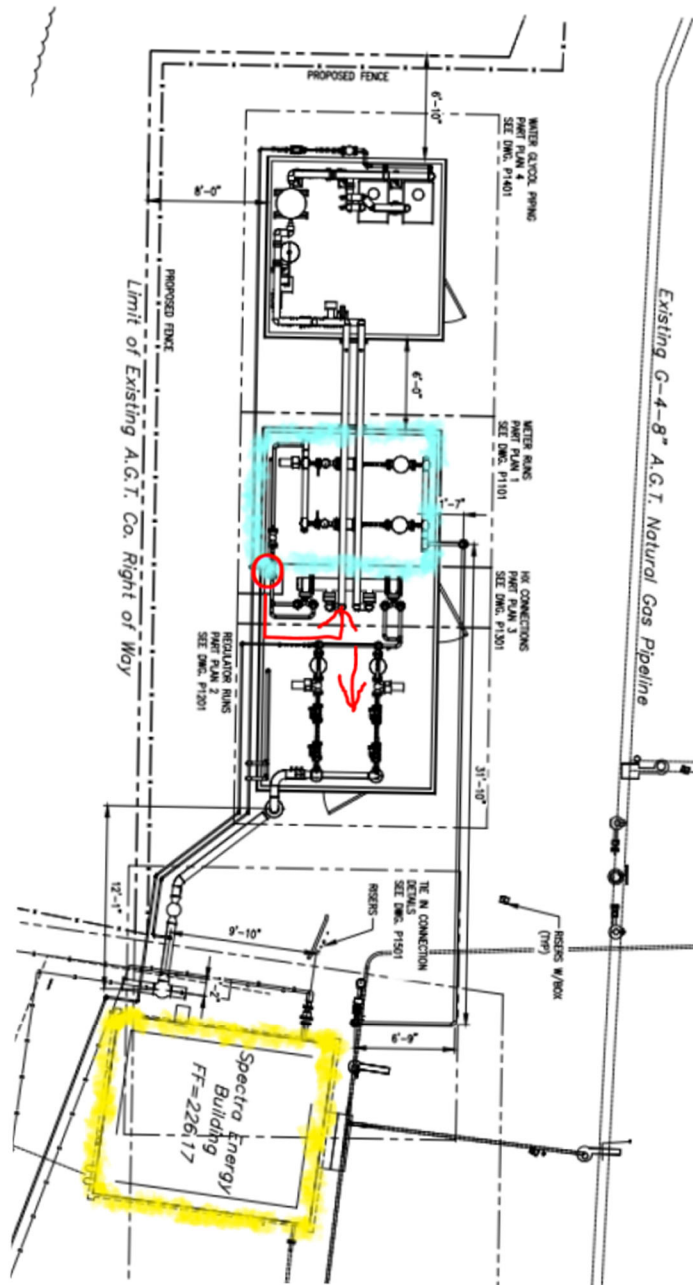
Division 1-34, page 2

Wampanoag Trail: Project Schematic with ownership



Division 1-34, page 3

Tiverton Project Schematic: Enbridge to own metering runs in blue and existing building in yellow. National Grid to own from red circle and everything downstream.



Division 1-35

Request:

Provide documentation of all of the costs that Enbridge will be charging National Grid for replacing the heaters.

Response:

Please see attachment DIV 1-35 for the requested information.

Cost Breakdown East Providence



Cost Component	Class V TIC Estimate (-40% / +50%)	Enbridge Cost (20%)	National Grid Cost (80%)
Project Management Team (PM, Project Controls)	\$94,991	\$18,998	\$75,993
Engineering (Eng. Company, Internal Eng. support)	\$251,808	\$50,362	\$201,446
Operations (Ops. Personnel, Reserve and Venting equipment)	\$88,735	\$17,747	\$70,988
Support groups (SCM, Env., Legal, SCADA, etc.)	\$163,819	\$32,764	\$131,055
Land/ROW related costs	\$257,262	\$51,452	\$205,810
Material & Equipment	\$1,278,881	\$255,776	\$1,023,105
Construction/CSV	\$1,918,675	\$383,735	\$1,534,940
Total Base Cost Estimate	\$4,054,171	\$810,834	\$3,243,337
Contingency	\$443,319	\$88,664	\$354,655
A&G	\$271,589	\$54,318	\$217,271
AFUDC	\$155,021	\$31,004	N/A
Total Estimate	\$4,924,100.00	\$984,820.00	\$3,815,263.20

Cost Breakdown

Tiverton Total Project Cost Split



Cost Component	Total Project Cost (\$USD)	Enbridge Cost (\$USD)	National Grid Cost (\$USD)
Engineered Equipment including buildings	529,000	105,800	423,200
Environmental	115,000	23,000	92,000
Construction	1,176,000	235,200	940,800
Land & ROW	476,000	95,200	380,800
Engineering	250,000	50,000	200,000
Construction Management, Inspection, & Commissioning	804,000	160,800	643,200
Project & Engineering Management, Support Groups, Operations	364,000	72,800	291,200
Contingency and Escalation	632,000	126,400	505,600
Total Cost Estimate	4,346,000	869,200	3,476,800

Division 1-36

Request:

Provide a discussion of the differences between National Grid's "reliability standards" and Enbridge's "standards for heater design."

Response:

National Grid's standards differ from Enbridge's standards in terms of heater sizing and safety controls.

Heater Sizing:

National Grid's standards provide adequate redundancy if a failure were to occur. The design will utilize two waterbath heaters, each providing at least 75% of the maximum heat capacity. Enbridge must only provide the customer with a gas temperature stated in its supply agreement based on design requirements and not redundancy requirements.

Safety Controls:

National Grid's heaters standards incorporate ASME CSD-1 for flame supervision and a process safety requirement for a SIS (Safety Instrumented System) Design.

Some differences include:

- PLC (programmable logic controller) temperature control and status inputs for shutdown and annunciation purposes.
- SIL (Safety Integrity Level) rated components.
- SIF (Safety Integrated Function) failure rate requirements for each potential failure mode.

Division 1-37

Request:

What if anything is imprudent or unreasonable with Enbridge's standards for heater design in National Grid's opinion?

Response:

National Grid does not believe that Enbridge's standards for heater design are either unreasonable or imprudent. However, National Grid has adopted a Process Safety Management approach that the Company believes fully identifies the actual risks associated with operating a pipeline heater and provides the controls necessary to mitigate those risks and provide safe and reliable operation.

Division 1-38

Request:

Provide all written e-mails, correspondence, etc. between Enbridge and National Grid relating to replacement of Enbridge's heaters at the Wampanoag Trail and Tiverton gate stations.

Response:

National Grid has attached all readily available emails in Attachment DIV 1-38. Please note that the internal National Grid lead this project retired in early 2021. National Grid will retrieve, review and produce relevant non-duplicative communications in the event that, after reviewing Attachment DIV 1-38, the Division has additional questions or desires further documentation.

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Attachment DIV 1-38

REDACTED

From: [Matthew Baran](#)
To: [Tim Buzby](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluwemi Oladipo](#); [William Brett](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Haste](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#); [Joseph Bruno](#); [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Williams, Glyn](#); [Bleicken, Joshua](#); [Zaccari, Justin](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [Brennan, Patrick J.](#); [Talbot III, John J.](#); [Romano, Michael](#); [Costa, Jason](#); [DellaCamera, Anthony](#); [Ebert, Gregory](#)
Subject: EXT || 60% Official Design Review - Tiverton MR033 Replacement
Start: Wednesday, March 3, 2021 3:30:00 PM
End: Wednesday, March 3, 2021 5:00:00 PM
Location: Microsoft Teams Meeting

Good Afternoon Team,

This is a placeholder date for the 60% Official Design Review - Tiverton MR033 Replacement Meeting

- * 60% Design Package is set to be distributed to the team on 2/15 allowing for 2 weeks for the team to review and prepare comments
- * We will also be using this package to perform the PHA/LOPA processes deemed necessary by the Enbridge and National Grid Teams
- * Goal is to have those meetings the week following this review in order to gather all the comments necessary to move towards generating a 90% design package on 3/26

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting –

Much Appreciated,

Matthew Baran
Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com <<mailto:Matthew.Baran@enbridge.com>>
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com <[https://urldefense.com/v3/_http://www.enbridge.com/_;!!B3hxM_NYsQ!lt6NiYJTBzvGHXF1EnprWra7pct_T-Bqkd1ehePw-9WXTCM-QJFSE0K_poz-bUgqFQqSaE65\\$](https://urldefense.com/v3/_http://www.enbridge.com/_;!!B3hxM_NYsQ!lt6NiYJTBzvGHXF1EnprWra7pct_T-Bqkd1ehePw-9WXTCM-QJFSE0K_poz-bUgqFQqSaE65$)>
Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

Click here to join the meeting <[https://urldefense.com/v3/_https://teams.microsoft.com/l/meetup-join/19*3ameeting_ZWUyYjI2MGQtYjI3Ny00MGZhLTlhNGMtMmRjNzNmZjExMDE5*40thread.v2/0?context=*7b*22Tid*22*3a*22271df5c2-953a-497b-93ad-7adf7a4b3cd7*22*2c*22Oid*22*3a*22a876ac59-1fe7-4ec6-be81-882a36f4a145*22*7d_;JSUIJSUIJSUIJSUIJSUI!!B3hxM_NYsQ!lt6NiYJTBzvGHXF1EnprWra7pct_T-Bqkd1ehePw-9WXTCM-QJFSE0K_poz-bUgqFCzJ6UOF\\$](https://urldefense.com/v3/_https://teams.microsoft.com/l/meetup-join/19*3ameeting_ZWUyYjI2MGQtYjI3Ny00MGZhLTlhNGMtMmRjNzNmZjExMDE5*40thread.v2/0?context=*7b*22Tid*22*3a*22271df5c2-953a-497b-93ad-7adf7a4b3cd7*22*2c*22Oid*22*3a*22a876ac59-1fe7-4ec6-be81-882a36f4a145*22*7d_;JSUIJSUIJSUIJSUIJSUI!!B3hxM_NYsQ!lt6NiYJTBzvGHXF1EnprWra7pct_T-Bqkd1ehePw-9WXTCM-QJFSE0K_poz-bUgqFCzJ6UOF$)>

Learn More <[https://urldefense.com/v3/_https://aka.ms/JoinTeamsMeeting_;!!B3hxM_NYsQ!lt6NiYJTBzvGHXF1EnprWra7pct_T-Bqkd1ehePw-9WXTCM-QJFSE0K_poz-bUgqFGZXTweNS\\$](https://urldefense.com/v3/_https://aka.ms/JoinTeamsMeeting_;!!B3hxM_NYsQ!lt6NiYJTBzvGHXF1EnprWra7pct_T-Bqkd1ehePw-9WXTCM-QJFSE0K_poz-bUgqFGZXTweNS$)> | Meeting options <[https://urldefense.com/v3/_https://teams.microsoft.com/meetingOptions/?organizerId=a876ac59-1fe7-4ec6-be81-882a36f4a145&tenantId=271df5c2-953a-497b-93ad-7adf7a4b3cd7&threadId=19_meeting_ZWUyYjI2MGQtYjI3Ny00MGZhLTlhNGMtMmRjNzNmZjExMDE5@thread.v2&messageId=0&language=en-US_;!!B3hxM_NYsQ!lt6NiYJTBzvGHXF1EnprWra7pct_T-Bqkd1ehePw-9WXTCM-QJFSE0K_poz-bUgqFJdJdzwz\\$](https://urldefense.com/v3/_https://teams.microsoft.com/meetingOptions/?organizerId=a876ac59-1fe7-4ec6-be81-882a36f4a145&tenantId=271df5c2-953a-497b-93ad-7adf7a4b3cd7&threadId=19_meeting_ZWUyYjI2MGQtYjI3Ny00MGZhLTlhNGMtMmRjNzNmZjExMDE5@thread.v2&messageId=0&language=en-US_;!!B3hxM_NYsQ!lt6NiYJTBzvGHXF1EnprWra7pct_T-Bqkd1ehePw-9WXTCM-QJFSE0K_poz-bUgqFJdJdzwz$)>

From: [Matthew Baran](#)
To: [Tim Buzby](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluyemi Oladipo](#); [William Brett](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Hastey](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#); [Joseph Bruno](#); [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Williams, Glyn](#); [Bleicken, Joshua](#); [Zaccari, Justin](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [Brennan, Patrick J.](#); [Talbot III, John J.](#); [Romano, Michael](#); [Costa, Jason](#); [DellaCamera, Anthony](#); [Ebert, Gregory](#)
Cc: [Kenneth Sokoloski](#); [Helen Wang](#); [Gianni Paradiso](#); [Garry Matocha](#); [Ray Humphreys](#); [John Fanning](#); [William Rogers](#); [Wayne Medeiros](#); [David Gattone](#)
Subject: EXT || 90% Design Package - Tiverton MR033 Replacement
Date: Thursday, April 1, 2021 3:28:14 PM

Good Afternoon Team,

Please see the Tiverton MR033 Replacement – 90% Design Package, generate by CHI –

- The file is greater than 30 MB so I have uploaded it to the project sharepoint and my Enbridge-OneDrive for those who do not have access to the Sharepoint :
 - <https://esites.enbridge.com/eng/lpeng/p/AA622/Docs/06%20Engineering/07%20Drawings>
 - https://enbridge-my.sharepoint.com/:b:/g/personal/baranm_spectraenergy_com/Eful46E2H-pPnJAgZcpW72MBJSnje7NUJlwUcX6h92zJYg?e=SiFNY8
- Please relay if you are unable to access either of those links to access the drawings –
 - For the NG team please relay an FTP site I can upload the package

Please take some time to review the package and provided any comments, I will provide an update on the review and design schedule once I receive directive from the project sponsor.

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Matthew Baran

Sent: Thursday, March 4, 2021 10:38 AM

To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry

Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>
Cc: Kenneth Sokoloski <Kenneth.Sokoloski@enbridge.com>; Helen Wang <helen.wang@enbridge.com>; Gianni Paradiso <Gianni.Paradiso@nv5.com>; Garry Matocha <Garry.Matocha@enbridge.com>; Ray Humphreys <Ray.Humphreys@enbridge.com>; John Fanning <John.Fanning@enbridge.com>; William Rogers <William.Rogers@enbridge.com>; Wayne Medeiros <Wayne.Medeiros@enbridge.com>; David Gattone <David.Gattone@enbridge.com>
Subject: RE: 60% Official Design Review - Tiverton MR033 Replacement

Good Morning Team,

Thanks again for the time and feedback yesterday as we covered the 60% Design Package for Tiverton.

Please see the meeting minutes and marked up package – (blue comments – from NG , red comments from meeting)

- We will work to have these changes implemented as well as continue to follow up on the addressed items.

Please do not hesitate to send over any additional comments that we did not get to address in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Wednesday, February 10, 2021 11:00 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph

Dellaquila; Joseph Bruno; John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; DellaCamera, Anthony; Ebert, Gregory

Cc: Kenneth Sokoloski; Helen Wang; Gianni Paradiso; Garry Matocha; Ray Humphreys; John Fanning; William Rogers; Wayne Medeiros; David Gattone

Subject: 60% Official Design Review - Tiverton MR033 Replacement

When: Wednesday, March 3, 2021 2:30 PM-4:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good Afternoon Team,

This is a placeholder date for the 60% Official Design Review - Tiverton MR033 Replacement Meeting

- 60% Design Package is set to be distributed to the team on 2/15 allowing for 2 weeks for the team to review and prepare comments
- We will also be using this package to perform the PHA/LOPA processes deemed necessary by the Enbridge and National Grid Teams
 - Goal is to have those meetings the week following this review in order to gather all the comments necessary to move towards generating a 90% design package on 3/26

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: [Blair Haste](#)
To: [Bleicken, Joshua](#); [Zaccari, Justin](#)
Subject: EXT || AGT - RI Meter Station Tiverton and East Providence
Date: Thursday, October 7, 2021 6:59:49 PM
Attachments: [Algonquin Gas Transmission, LLC - 0435 - USD - Operating.pdf](#)
[Prefunding Letter - E Providence \(Wampanog Trail\) Executable.docx](#)
[Prefunding Letter - Tiverton Executable.docx](#)
[Prefunding Letter - Tiverton Executable.pdf](#)
[Prefunding Letter - E Providence \(Wampanog Trail\) Executable.pdf](#)

Hi Justin and Josh,

Please see attached execution ready letter agreements for both East Providence (Wampanog Trail) and Tiverton meter station upgrade work. I have also attached the appropriate payment information for the pre payments for each project to be sent to.

Please let me know if you have any questions.

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: [Blair Haste](#)
To: [Jaffe Samara A. \(Marketing\)](#); [Christopher Lombardi](#); [Christopher Redman](#); [Joseph Bruno](#); [Nancy Kist](#); [Shawn Robison](#); [Williams Glyn](#); [Talbot III John J.](#); [Barrett John F.](#); [Bleicken Joshua](#); [Costa Jason](#); [DellaCamera Anthony](#); [Doherty John E.](#); [Ebert Gregory](#); [Konopka Michael](#); [Loiacono Paul J.](#); [Louis Chrisnor](#); [Porcaro Julie](#); [Romano Michael](#); [Simoneau William J.](#); [Zaccari Justin](#); [Soroka Stephen](#); [Brennan Patrick J.](#)
Subject: EXT || East Providence Heater Replacement - Kicking Off Meeting
Start: Wednesday, March 3, 2021 9:00:00 AM
End: Wednesday, March 3, 2021 10:30:00 AM
Location: Microsoft Teams Meeting

Agenda items for our kickoff meeting:

- 1 Introductions of the team
- 2 Scope Overview
- 3 Schedule overview
- 4 Request applicable National Grid Specifications
- 5 Next steps:
 - a Site visit by 03/10/2021
 - b Finalize heater quotes by 3/17/2021

Thanks,

Blair Haste
Business Development

ENBRIDGE
TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com <[Microsoft Teams meeting](https://urldefense.com/v3/_http://www.enbridge.com/_!!B3hxM_NYsQ!ktRyMv1vt6d0ahS8dn3RZ4m6jRbVxMh1iOih8h54E1jmF14Qjk0LjhvbM0Kyp3rXFxCeLe$> Safety Integrity Respect</p></div>
<div data-bbox=)

Join on your computer or mobile app

Click here to join the meeting <[Or call in \(audio only\)](https://urldefense.com/v3/_https://teams.microsoft.com/l/meetup-join/19*3ameeting_N2FhM2RiOTMtNDBIMy00Y2NmLTg2NjMtY2VmZmRkNWQxZGMz*40threadv2/0?context=*7b*22tid*22*3a*22271df5c2-953a-497b-93ad-7ad7a4b3cd7*22*2c*22Oid*22*3a*226289593c-1ce3-4b77-9387-e3b95491059e*22*7d_!JSUJUSUJUSUJUSUJUSU!B3hxM_NYsQ!ktRyMv1vt6d0ahS8dn3RZ4m6jRbVxMh1iOih8h54E1jmF14Qjk0LjhvbM0Kyp3rVxTo-v7$></p></div>
<div data-bbox=)

+1 346-262-0361,,153980793# <tel:+13462620361,,153980793#> United States, Houston

Phone Conference ID: 153 980 793#

Find a local number <

Learn More <

From: [Matthew Baran](#)
To: [Williams Glyn](#); [Bleicken Joshua](#); [Zaccari Justin](#); [Loiacono Paul J.](#); [Porcaro Julie](#)
Cc: [Tim Buzby](#)
Subject: EXT || RE: "Tiverton MR033 Outage Discussion"- Follow Up
Date: Thursday, December 3, 2020 1:24:37 PM
Attachments: [CHI Questions for Tiverton MS Design Rev 1.docx](#)

Good afternoon National Grid Team,

Please review and provide responses to the attached inquiry list from CHI – in order to clarify multiple design aspects for the Tiverton MR033 Station.

Much Appreciated,

Matthew Baran

Pipeline Engineer
Core Projects

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

From: Matthew Baran
Sent: Tuesday, December 1, 2020 1:48 PM
To: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>
Cc: Tim Buzby <tim.buzby@enbridge.com>
Subject: 'Tiverton MR033 Outage Discussion'- Follow Up

Good afternoon,

As a follow up to our meeting last week, please see the attached Meeting Minutes with the following action items below –

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE
1	CHI to generate a primary inquiry list for National Grid to answer	CHI
2	Explore the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans, will it all fit or require too much modification work?	CHI
3	Set up design review in two weeks for the 30% package	Enbridge
4	Identify the skids available that would be sized for this facility if the decision is to reuse the existing buildings	Enbridge
5	Review 30% Design Package for comment	NG
6	Generate a conceptual sketch of the area required to locate the temporary equipment and skid option	NG

Also, I am looking to schedule that official 30% design review early next week – can you please relay any times that need to be scheduled around, I will provide some more specific timeslot options soon.

Additional attachments

- 30% Preliminary Design Package provided by CHI – for National Grid to review for comment
- Tiverton NGrid Picture – Used by Glyn in the meeting (for CHI reference)
- Tiverton OPP Station Evaluation Summary – prepared by Enbridge and used by CHI to size buildings (for NG reference)

Please relay any notes or comments that may have been missed and need to be addressed,

Much Appreciated,

Matthew Baran

Pipeline Engineer
Core Projects

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: [Matthew Baran](#)
To: [Tim Buzby](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluyemi Oladipo](#); [William Brett](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Haste](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#); [Joseph Bruno](#); [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Williams, Glyn](#); [Bleicken, Joshua](#); [Zaccari, Justin](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [Brennan, Patrick J.](#); [Talbot III, John J.](#); [Romano, Michael](#); [Costa, Jason](#); [DellaCamera, Anthony](#); [Ebert, Gregory](#)
Cc: [Kenneth Sokoloski](#); [Helen Wang](#); [Gianni Paradiso](#); [Garry Matocha](#); [Ray Humphreys](#); [John Fanning](#); [William Rogers](#); [Wayne Medeiros](#); [David Gattone](#)
Subject: EXT || RE: 60% Official Design Review - Tiverton MR033 Replacement
Date: Thursday, March 4, 2021 11:43:02 AM
Attachments: [Tiverton MS 60 Percent for Review 2-12-21 -ReviewMeetingComments030321.pdf](#)
[MeetMin-03.03.21-60PerReviewTivertonMR033 \(Final\).docx](#)

Good Morning Team,

Thanks again for the time and feedback yesterday as we covered the 60% Design Package for Tiverton.

Please see the meeting minutes and marked up package – (blue comments – from NG , red comments from meeting)

- We will work to have these changes implemented as well as continue to follow up on the addressed items.

Please do not hesitate to send over any additional comments that we did not get to address in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Wednesday, February 10, 2021 11:00 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila; Joseph Bruno; John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; DellaCamera, Anthony; Ebert, Gregory

Cc: Kenneth Sokoloski; Helen Wang; Gianni Paradiso; Garry Matocha; Ray Humphreys; John Fanning; William Rogers; Wayne Medeiros; David Gattone

Subject: 60% Official Design Review - Tiverton MR033 Replacement

When: Wednesday, March 3, 2021 2:30 PM-4:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good Afternoon Team,

This is a placeholder date for the 60% Official Design Review - Tiverton MR033 Replacement Meeting

- 60% Design Package is set to be distributed to the team on 2/15 allowing for 2 weeks for the team to review and prepare comments
- We will also be using this package to perform the PHA/LOPA processes deemed necessary by the Enbridge and National Grid Teams
 - Goal is to have those meetings the week following this review in order to gather all the comments necessary to move towards generating a 90% design package on 3/26

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: [Blair Haste](#)
To: [Williams, Glyn](#); [Barrett, John F.](#); [Bleicken, Joshua](#); [Brennan, Patrick J.](#); [Costa, Jason](#); [DellaCamera, Anthony](#); [Doherty, John E.](#); [Ebert, Gregory](#); [Konopka, Michael](#); [Loiacono, Paul J.](#); [Louis, Chrisnor](#); [Porcaro, Julie](#); [Romano, Michael](#); [Simoneau, William J.](#); [Talbot III, John J.](#); [Zaccari, Justin](#); [Backus, Katie E.](#); [Jaffe, Samara A. \(Marketing\)](#); [Christopher Lombardi](#); [Tim Buzby](#)
Subject: EXT || RE: ENB - Tiverton Scope review
Date: Tuesday, April 20, 2021 3:30:40 PM
Attachments: [Tiverton RI Boiler Enbridge - National Grid Option Comparison 20 April 21.pdf](#)

All,

Please see attached for your review and discussion on Fridays call.

Thanks,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Blair Haste

Sent: Monday, April 12, 2021 2:35 PM

To: Blair Haste; Williams, Glyn; Barrett, John F.; Bleicken, Joshua; Brennan, Patrick J.; Costa, Jason; DellaCamera, Anthony; Doherty, John E.; Ebert, Gregory; Konopka, Michael; Loiacono, Paul J.; Louis, Chrisnor; Porcaro, Julie; Romano, Michael; Simoneau, William J.; Talbot III, John J.; Zaccari, Justin; Backus, Katie E.; Jaffe, Samara A. (Marketing); Christopher Lombardi; Tim Buzby

Subject: ENB - Tiverton Scope review

When: Friday, April 23, 2021 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

Reschedule due to conflict.

All,

The purpose of this meeting is to discuss the Tiverton M&R project.

Addenda to follow.

Thanks,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

Or call in (audio only)

[+1 346-262-0361,271802803#](#) United States, Houston

Phone Conference ID: 271 802 803#

[Find a local number](#) | [Reset PIN](#)

[Learn More](#) | [Meeting options](#)

From: [Blair Haste](#)
To: [Williams, Glyn](#); [Barrett, John F.](#); [Bleicken, Joshua](#); [Brennan, Patrick J.](#); [Costa, Jason](#); [DellaCamera, Anthony](#); [Doherty, John E.](#); [Ebert, Gregory](#); [Konopka, Michael](#); [Loiacono, Paul J.](#); [Louis, Chrisnor](#); [Porcaro, Julie](#); [Romano, Michael](#); [Simoneau, William J.](#); [Talbot III, John J.](#); [Zaccari, Justin](#); [Backus, Katie E.](#); [Jaffe, Samara A. \(Marketing\)](#)
Cc: [Matthew Baran](#); [Christopher Lombardi](#); [Tim Buzby](#)
Subject: EXT || RE: ENB - Tiverton Scope review
Date: Tuesday, May 4, 2021 5:11:09 PM
Attachments: [Tiverton RI Boiler Enbridge - National Grid Option Comparison R1 4 May 21.pdf](#)
[TIVERTON PID SET NG Requests Updated 4-29-21.pdf](#)

Glyn,

As a follow-up to our meeting on April 23.

Please see attached project estimate in section 4 of the attached file “Tiverton RI Boiler Enbridge - National Grid Option Comparison R1 4 May 21” has been revised to reflect changes to line items (shown in red font) specifically pertaining to the buildings and the switching valves. The building cost was reviewed further, and the revised amount reflects the differential cost between concrete and metal buildings. The switching valves were changed to Enbridge’s account. The associated fabrication and construction cost for National Grid has been lowered to align with the associated material changes.

Please also see attached marked up PID’s showing the components that are specific to National Grid’s specifications and requirements that are additional to the Enbridge option and constitute the material estimate value. The National Grid items are shown within the clouds on the mark up.

Regarding the triple level protection Enbridge does not have any such requirement per PHMSA design requirements. This was an adder as requested by National Grid resulting from PID reviews.

Please let me know if you require any further clarification on the cost breakdown.

Thank,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Blair Haste

Sent: Monday, April 12, 2021 2:35 PM

To: Blair Haste; Williams, Glyn; Barrett, John F.; Bleicken, Joshua; Brennan, Patrick J.; Costa, Jason;

DellaCamera, Anthony; Doherty, John E.; Ebert, Gregory; Konopka, Michael; Loiacono, Paul J.; Louis, Chrisnor; Porcaro, Julie; Romano, Michael; Simoneau, William J.; Talbot III, John J.; Zaccari, Justin; Backus, Katie E.; Jaffe, Samara A. (Marketing); Christopher Lombardi; Tim Buzby

Cc: Matthew Baran

Subject: ENB - Tiverton Scope review

When: Friday, April 23, 2021 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

Reschedule due to conflict.

All,

The purpose of this meeting is to discuss the Tiverton M&R project.

Addenda to follow.

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

Or call in (audio only)

[+1 346-262-0361,,271802803#](#) United States, Houston

Phone Conference ID: 271 802 803#

[Find a local number](#) | [Reset PIN](#)

[Learn More](#) | [Meeting options](#)

From: [Blair Haste](#)
To: [Zaccari, Justin](#); [Bleicken, Joshua](#)
Cc: [Christopher Lombardi](#); [Berdos, Johnathon](#); [Tim Buzby](#)
Subject: EXT || RE: EPV and Tiverton projects
Date: Thursday, July 1, 2021 9:47:27 AM

Hi Justin,

There has been a change in approach for project cost allocation since we last had a call.

The initial approach was to have National Grid pay for the cost differential associated with “upgrading” the replacement scope in both cases to meet National Grid specifications. The cost differential was to be recovered by a rate surcharge to be applied to contracts serving the meter stations.

Early June National Grid asked us to look at the project as a reimbursement as opposed to a surcharge for the cost recovery. With this change our regulatory team advised that the scope cost differential approach would not be appropriate and the costs to be recovered should be in alignment with the project costs associated with the assets ownership once the project is in service. The 80/20 breakdown roughly aligns with the cost relative to the scope associated with the asset ownership upon completion.

If helpful we can have a call to walk you through the ownership delineation and costs associated with that delineation. Let me know what availability works for National Grid.

Thanks,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Sent: Wednesday, June 30, 2021 10:00 AM
To: Blair Haste <Blair.Haste@enbridge.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] EPV and Tiverton projects

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hello Blair,

I have raised these projects up National Grid's chain so I am hoping for a decision soon. I understand the 80/20 cost split was based on ownership split following construction but is the total based on the delta between Ferc reqs vs what National Grid is pushing for a design or did it change to total project cost? If there was a change, can you explain and provide a more detailed explanation and breakdown of the proposal so I can better clarify to our leadership. Due to our current regulatory environment we will need as much detail as possible.

Thank you for your help on this,

Justin Zaccari

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Shawn Robison](#)
To: [Williams, Glyn](#); [Jaffe, Samara A. \(Marketing\)](#); [Blair Hastey](#); [Zaccari, Justin](#); [Bleicken, Joshua](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [DellaCamera, Anthony](#); [Barrett, John F.](#); [Talbot III, John J.](#)
Cc: [Christopher Lombardi](#)
Subject: EXT || RE: Enbridge - East Providence / Wampanoag Heater Project - Latest Status?
Date: Tuesday, February 9, 2021 12:37:44 PM

All,

Chris Lombardi is the PM taking over the project his email is attached above. We had an internal kickoff meeting on our side the other day. If you need any more info feel free to reach out.

Thanks

Shawn T Robison

Project Coordinator

Core Projects

Employee of: MBF Inspection

Assigned to: Enbridge

--

ENBRIDGE

OFFICE: 203-651-2954 CELL: 740-630-6140 | Shawn.Robison@enbridge.com

70 East Johnson Avenue, Cheshire CT 06410

enbridge.com

Integrity. Safety. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>

Sent: Tuesday, February 9, 2021 10:48 AM

To: Shawn Robison <Shawn.Robison@enbridge.com>; Jaffe, Samara A. (Marketing) <Samara.Jaffe@nationalgrid.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>

Subject: [External] Enbridge - East Providence / Wampanoag Heater Project - Latest Status?

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

All,

In talking to gas control this morning, it appears that the AGT East Providence / Wampanoag Trail heaters continue to perform poorly and there are concerns if they will make it through Winter

2021/22.

It's also been a couple of months since we heard any update on either the technical and/or commercial, contractual approach to the new AGT East Providence / Wampanoag Trail heater project.

Samara – Could you give an update as to where you are commercially / contractually with Blair?

Shawn – Can you provide / forward this to the new Enbridge PM who is looking at the East Providence / Wampanoag Trail heater project?

- We would need to have further technical discussion on future heater performance & any temporary heating that may need to be in place to support the site
- It'd be good to have a virtual meeting to kick the project off with all, and set a schedule for this year in terms of project milestones and reviews.

Many Thanks,

Glyn

Glyn Williams

Manager

Gas Engineering Design NE I&R

nationalgrid

1-781-402-4086

glyn.williams2@nationalgrid.com

Reswoods, 40 Sylvan Road, Waltham MA 02451

nationalgridus.com | [Twitter](#) | [LinkedIn](#) | [Facebook](#)

Please consider the environment before printing this email.

Advance notice of vacation: No vacation days booked

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Tim Buzby](#)
To: [William Brett](#); [Barry Goodrich](#); [Matthew Baran](#); [Christopher Redman](#); [Nicholas Marter](#); [Williams, Glyn](#); [William Diaz](#)
Cc: [Timothy Ellis](#); [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Loiacono, Paul J.](#); [Bleicken, Joshua](#); [Zaccari, Justin](#)
Subject: EXT || RE: Outage Discussion for Tiverton MR 00033 Station
Date: Tuesday, November 24, 2020 9:21:15 AM

All,

This email invitation was meant to go to Bill Brett and Barry Goodrich only, so no action required by everyone else. I couldn't recall the message. Sorry for the confusion.

Tim Buzby, PE

Engineering Project Manager III, CORE Project Development - USA

ENBRIDGE

CELL: +1-281-684-6280
 5400 Westheimer Ct, Ste 5I-45, Houston, Texas, 77056

-----Original Appointment-----

From: Tim Buzby
Sent: Tuesday, November 24, 2020 8:07 AM
To: William Brett; Barry Goodrich
Subject: FW: Outage Discussion for Tiverton MR 00033 Station
When: Tuesday, November 24, 2020 10:30 AM-11:30 AM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Gentlemen,

This meeting is to specifically discuss the outage, but I thought you both might want to attend to understand what the alternat source will be and how that affects each of your respective responsibilities. I believe a skid will be positioned on site to replace the equipment while it is being replaced. I don't know that but that is the purpose of today's meeting. The outage or temporary arrangement could be anywhere from 2 weeks to 2 months.

-----Original Appointment-----

From: Tim Buzby
Sent: Thursday, November 19, 2020 4:24 PM
To: Tim Buzby; Matthew Baran; Christopher Redman; Nicholas Marter; Williams, Glyn; William Diaz
Cc: Timothy Ellis; John Tirrell; John E. Scanlon; Derek Smith; Loiacono, Paul J.; Bleicken, Joshua; Zaccari, Justin
Subject: Outage Discussion for Tiverton MR 00033 Station
When: Tuesday, November 24, 2020 10:30 AM-11:30 AM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Gentlemen,

The purpose of this meeting is to specifically discuss taking an outage to tie in the new facility. We are at a point with the design that getting input from the group with options to determine the cost impact has bearing on the direction engineering will take with regards to

modular vs. stick built. Please bring any ideas you have on how we can minimize service interruption.

Glyn,

Please distribute to the appropriate people within your organization.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: [Matthew Baran](#)
To: [Tim Buzby](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluyemi Oladipo](#); [William Brett](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Haste](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#)
Cc: [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Williams, Glyn](#); [Bleicken, Joshua](#); [Zaccari, Justin](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [Brennan, Patrick J.](#); [Talbot III, John J.](#); [Romano, Michael](#); [Costa, Jason](#); [Christopher Redman](#); [Cameron Hall](#); [DellaCamera, Anthony](#); [Ebert, Gregory](#); [Joseph Bruno](#)
Subject: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review
Date: Wednesday, December 9, 2020 6:56:59 PM
Attachments: [MeetMin-12.09.20-30PerReviewTivertonMR033.docx](#)

Good afternoon Team,

Please see the attached Meeting Minutes from the 30% Design Review –

ACTION ITEMS

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE	DUE DATE	STATUS	COMMENTS
1	Provide responses to the CHI inquiry list/ Provide preferred vendors list	NG		Open	
2	Finalize 30% Package Redlines and transmit	NG		Open	
3	Provide NG contact list	NG		Open	
4	Explore the feasibility of fitting the new equipment into the existing buildings	CHI		Open	Site Visit Needed
5	Plan Site Visit	Enbridge		Open	RI may be entering a lockdown
6	Perform Env. Survey to assess usability of existing easement	Enbridge		Open	
7	Identify the temp skids available that would be sized for this facility- if needed	Enbridge		Open	No Temp Skids in storage have heating element

Thanks again all that were able to attend,

Much Appreciated,

Matthew Baran

Pipeline Engineer
 Core Projects

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Friday, December 4, 2020 11:39 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila

Cc: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno

Subject: RI Boiler at Tiverton MR00033 - 30% Design Review

When: Wednesday, December 9, 2020 1:30 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good afternoon Team,

This meeting is to review the CHI generated 30% Design Package (attached) for comment so that we may further

hone in on our detailed design.

- Please keep in mind this is a preliminary design to use as we discuss the outage details vs land acquisition options

The current scope direction is based off –

- Tiverton MR0033 station has never been shut in before – Optimal time of the year for the outage is non-heating season (May-October)
- The only source is Enbridge, thus hot taps will be required and located based on the modular (preferred) vs. stick built solution.
 - Service cannot be interrupted at all, it needs to remain continuous either via hot taps on the existing lines to allow a cutover to a modular system operating both concurrently until it the new system has been proven.
 - The existing system would be taken out of service and demo’d after that point.
- CHI is exploring the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans
 - Temporary LNG operations not preferred due to the amount of outage time, workspace and risks considerations required
 - Temporary skid option to be further explored with Enbridge personnel

There was some difficulty in finding an open window for all the key stakeholders but I believe this is the best option for the Enbridge side

- Apologies to the National Grid Gas Control Folks that cannot make this time due – I am open to setting up a separate meeting to review if needed

On a scheduling note, CHI should incorporate the survey data received this week along with the key stakeholder comments gathered in this meeting, into the 60% drawing package to be issued on 01/06.

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting.

Much Appreciated,

Matthew Baran

Pipeline Engineer
Core Projects

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: [William Brett](#)
To: [Matthew Baran](#); [Tim Buzby](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluoyemi Oladipo](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Hastey](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#); [Denis Blais](#)
Cc: [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Williams Glyn](#); [Bleicken Joshua](#); [Zaccari Justin](#); [Loiacono Paul J.](#); [Porcaro Julie](#); [Brennan Patrick J.](#); [Talbot III John J.](#); [Romano Michael](#); [Costa Jason](#); [Christopher Redman](#); [Cameron Hall](#); [DellaCamera Anthony](#); [Ebert Gregory](#); [Joseph Bruno](#)
Subject: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review
Date: Wednesday, December 9, 2020 8:15:53 PM

Evening, Matt and Tim,

FYI. Denis Blais, copied here, will be managing this for the ENV Projects group. Please include him going forward on all team activities and correspondence.

Thanks very much,
Bill

William Brett

Supervisor
Environment Projects US
—

ENBRIDGE
TEL: 617.560.1371 | CELL: 617.777.3818 | william.brett@enbridge.com
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com
Integrity. Safety. Respect.

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, December 9, 2020 6:54 PM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluoyemi Oladipo <Oluoyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>
Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall <Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>
Subject: RE: RI Boiler at Tiverton MR00033 - 30% Design Review

Good afternoon Team,

Please see the attached Meeting Minutes from the 30% Design Review –

ACTION ITEMS

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE	DUE DATE	STATUS	COMMENTS
1	Provide responses to the CHI inquiry list/	NG		Open	

	Provide preferred vendors list				
2	Finalize 30% Package Redlines and transmit	NG		Open	
3	Provide NG contact list	NG		Open	
4	Explore the feasibility of fitting the new equipment into the existing buildings	CHI		Open	Site Visit Needed
5	Plan Site Visit	Enbridge		Open	RI may be entering a lockdown
6	Perform Env. Survey to assess usability of existing easement	Enbridge		Open	
7	Identify the temp skids available that would be sized for this facility- if needed	Enbridge		Open	No Temp Skids in storage have heating element

Thanks again all that were able to attend,

Much Appreciated,

Matthew Baran

Pipeline Engineer

Core Projects

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Friday, December 4, 2020 11:39 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila

Cc: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno

Subject: RI Boiler at Tiverton MR00033 - 30% Design Review

When: Wednesday, December 9, 2020 1:30 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good afternoon Team,

This meeting is to review the CHI generated 30% Design Package (attached) for comment so that we may further hone in on our detailed design.

- Please keep in mind this is a preliminary design to use as we discuss the outage details vs land acquisition options

The current scope direction is based off –

- Tiverton MR0033 station has never been shut in before – Optimal time of the year for the outage is non-heating season (May-October)
- The only source is Enbridge, thus hot taps will be required and located based on the modular (preferred) vs. stick built solution.
 - Service cannot be interrupted at all, it needs to remain continuous either via hot taps on the existing lines to allow a cutover to a modular system operating both concurrently until it the new system has been proven.
 - The existing system would be taken out of service and demo'd after that point.
- CHI is exploring the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans

Temporary LNG operations not preferred due to the amount of outage time, workspace and risks considerations required

- Temporary skid option to be further explored with Enbridge personnel

There was some difficulty in finding an open window for all the key stakeholders but I believe this is the best option for the Enbridge side

- Apologies to the National Grid Gas Control Folks that cannot make this time due – I am open to setting up a separate meeting to review if needed

On a scheduling note, CHI should incorporate the survey data received this week along with the key stakeholder comments gathered in this meeting, into the 60% drawing package to be issued on 01/06.

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting.

Much Appreciated,

Matthew Baran

Pipeline Engineer

Core Projects

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: [Blair Haste](#)
To: [Zaccari, Justin](#); [Bleicken, Joshua](#); [Coombs, Matthew J.](#); [Fromm, Walter F.](#); [Smith, Amy S.](#); [Kocon, Nathan](#); [Tarmey, Patrick](#); [Currie, John B. \(Distribution Finance\)](#); [Middleton, Michael](#); [Leone, Michele](#); [Christopher Lombardi](#); [Christopher Redman](#); [DeAndra Black](#); [Joseph Bruno](#)
Subject: EXT || RE: Tentative-Meeting with Enbridge to Discuss Take Station Ownership Transfers
Date: Friday, September 17, 2021 1:05:41 PM
Attachments: [RI Meter Station Projects Overview.pdf](#)

All,

Please see attached to support our discussion at 2.

Thanks,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Sent: Tuesday, September 14, 2021 4:05 PM
To: Zaccari, Justin; Bleicken, Joshua; Coombs, Matthew J.; Fromm, Walter F.; Smith, Amy S.; Kocon, Nathan; Tarmey, Patrick; Currie, John B. (Distribution Finance); Middleton, Michael; Leone, Michele; Blair Haste
Subject: Tentative-Meeting with Enbridge to Discuss Take Station Ownership Transfers
When: Friday, September 17, 2021 2:00 PM-3:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Microsoft Teams meeting

Join on your computer or mobile app
[Click here to join the meeting](#)

Join with a video conferencing device

nationalgrid@m.webex.com

Video Conference ID: 111 802 984 2

[Alternate VTC instructions](#)

Or call in (audio only)

[+1 469-312-8116,442905705#](tel:+14693128116442905705) United States, Dallas

Phone Conference ID: 442 905 705#

[Find a local number](#) | [Reset PIN](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Matthew Baran](#)
To: [Tim Buzby](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluwemi Oladipo](#); [William Brett](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Haste](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#)
Cc: [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Williams, Glyn](#); [Bleicken, Joshua](#); [Zaccari, Justin](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [Brennan, Patrick J.](#); [Talbot III, John J.](#); [Romano, Michael](#); [Costa, Jason](#)
Subject: EXT || RI Boiler at Tiverton MR00033 - 30% Design Review
Start: Wednesday, December 9, 2020 2:30:00 PM
End: Wednesday, December 9, 2020 3:30:00 PM
Location: Microsoft Teams Meeting
Attachments: [Tiverton 30 Percent for Review.pdf](#)

Good afternoon Team,

This meeting is to review the CHI generated 30% Design Package (attached) for comment so that we may further hone in on our detailed design.

* Please keep in mind this is a preliminary design to use as we discuss the outage details vs land acquisition options

The current scope direction is based off –

- * Tiverton MR0033 station has never been shut in before – Optimal time of the year for the outage is non-heating season (May-October)
- * The only source is Enbridge, thus hot taps will be required and located based on the modular (preferred) vs. stick built solution.
- * Service cannot be interrupted at all, it needs to remain continuous either via hot taps on the existing lines to allow a cutover to a modular system operating both concurrently until it the new system has been proven.
- * The existing system would be taken out of service and demo'd after that point.
- * CHI is exploring the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans
- * Temporary LNG operations not preferred due to the amount of outage time, workspace and risks considerations required
- * Temporary skid option to be further explored with Enbridge personnel

There was some difficulty in finding an open window for all the key stakeholders but I believe this is the best option for the Enbridge side

* Apologies to the National Grid Gas Control Folks that cannot make this time due – I am open to setting up a separate meeting to review if needed

On a scheduling note, CHI should incorporate the survey data received this week along with the key stakeholder comments gathered in this meeting, into the 60% drawing package to be issued on 01/06.

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting.

Much Appreciated,

Matthew Baran
 Pipeline Engineer
 Core Projects

—

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com <<mailto:Matthew.Baran@enbridge.com>>
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

[enbridge.com <https://urldefense.com/v3/http://www.enbridge.com/;!!B3hxM_NYsQ!jvwBUzQyNmxBC1tGI3SI_fkJFtcQmOkUV-Kky1D4LQBNLML6mCzbXFspYGWZLibBTSWJ9fcs>](https://urldefense.com/v3/http://www.enbridge.com/;!!B3hxM_NYsQ!jvwBUzQyNmxBC1tGI3SI_fkJFtcQmOkUV-Kky1D4LQBNLML6mCzbXFspYGWZLibBTSWJ9fcs)
 Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

Click here to join the meeting <[Learn More <\[https://aka.ms/JoinTeamsMeeting__;!!B3hxM_NYsQ!jvwBUzQyNmxBC1tG13SI_fkJFtcQmOkUV-Kky1D4LQBNLML6mCzbXFspYGWZLibBTahnNfqT\\\$>\]\(https://urldefense.com/v3/https://aka.ms/JoinTeamsMeeting__;!!B3hxM_NYsQ!jvwBUzQyNmxBC1tG13SI_fkJFtcQmOkUV-Kky1D4LQBNLML6mCzbXFspYGWZLibBTahnNfqT\$>\) | Meeting options
<\[https://urldefense.com/v3/https://teams.microsoft.com/meetingOptions/?organizerId=a876ac59-1fe7-4ec6-be81-882a36f4a145&tenantId=271df5c2-953a-497b-93ad-7adf7a4b3cd7&threadId=19_meeting_ZW14Nzk0YTAAtNzIzYS00NGMxLWJlZjctMzYzZjlyOGE4NGYz@thread.v2&messageId=0&language=en-US__;!!B3hxM_NYsQ!jvwBUzQyNmxBC1tG13SI_fkJFtcQmOkUV-Kky1D4LQBNLML6mCzbXFspYGWZLibBTRPWCnge\\\$>\]\(https://urldefense.com/v3/https://teams.microsoft.com/meetingOptions/?organizerId=a876ac59-1fe7-4ec6-be81-882a36f4a145&tenantId=271df5c2-953a-497b-93ad-7adf7a4b3cd7&threadId=19_meeting_ZW14Nzk0YTAAtNzIzYS00NGMxLWJlZjctMzYzZjlyOGE4NGYz@thread.v2&messageId=0&language=en-US__;!!B3hxM_NYsQ!jvwBUzQyNmxBC1tG13SI_fkJFtcQmOkUV-Kky1D4LQBNLML6mCzbXFspYGWZLibBTRPWCnge\$>\)>

---](https://urldefense.com/v3/https://teams.microsoft.com/l/meetup-join/19*3ameeting_ZW14Nzk0YTAAtNzIzYS00NGMxLWJlZjctMzYzZjlyOGE4NGYz*40thread.v2/0?context=*7b*22Tid*22*3a*22271df5c2-953a-497b-93ad-7adf7a4b3cd7*22*2c*22Oid*22*3a*22a876ac59-1fe7-4ec6-be81-882a36f4a145*22*7d__;JSUIJSUIJSUIJSUIJSUI!!B3hxM_NYsQ!jvwBUzQyNmxBC1tG13SI_fkJFtcQmOkUV-Kky1D4LQBNLML6mCzbXFspYGWZLibBTW5ZDXj9$>></p></div>
<div data-bbox=)

From: [Blair Haste](#)
To: [Middleton, Michael](#)
Cc: [Zaccari, Justin](#); [Bleicken, Joshua](#); [DeAndra Black](#)
Subject: EXT || RI-East providence Draft letter
Date: Wednesday, October 6, 2021 1:55:42 PM
Attachments: [Prefunding Letter - E Providence \(Wampanog Trail\) R1.docx](#)

Michael,

Based on our conversation, please see attached revision to the letter agreement. If in agreement with the changes I can finalize and send over an execution ready letter for east providence and tiverton.

Thanks,

Blair Haste

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: [Blair Haste](#)
To: [Zaccari, Justin](#); [Bleicken, Joshua](#)
Subject: EXT || Re: Tentative-Meeting with Enbridge to Discuss Take Station Ownership Transfers
Date: Tuesday, September 14, 2021 5:00:59 PM

I think we should be able to pull the project info together by then but will let you know shortly if not. Also would it be of value to invite Glyn Williams to the event as he has been very engaged throughout the process?

Agenda:

Safety moment

Background

Project overview

Schedule Critical path

Cost Breakdown

Path forward - Letter Agreement, O&M Agreement

Next Steps

Get [Outlook for iOS](#)

From: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Sent: Tuesday, September 14, 2021 4:16:37 PM
To: Blair Haste <Blair.Haste@enbridge.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] RE: Tentative-Meeting with Enbridge to Discuss Take Station Ownership Transfers

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Blair,
Hope this meeting works on short notice. Can you send me the agenda you proposed during our call yesterday?

-----Original Appointment-----

From: Zaccari, Justin
Sent: Tuesday, September 14, 2021 4:05 PM
To: Zaccari, Justin; Bleicken, Joshua; Coombs, Matthew J.; Fromm, Walter F.; Smith, Amy S.; Kocon, Nathan; Tarmey, Patrick; Currie, John B. (Distribution Finance); Middleton, Michael; Leone, Michele; Blair Haste
Subject: Tentative-Meeting with Enbridge to Discuss Take Station Ownership Transfers
When: Monday, September 20, 2021 12:30 PM-1:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

Join with a video conferencing device

nationalgrid@m.webex.com

Video Conference ID: 111 802 984 2

[Alternate VTC instructions](#)

Or call in (audio only)

[+1 469-312-8116,442905705#](tel:+14693128116442905705) United States, Dallas

Phone Conference ID: 442 905 705#

[Find a local number](#) | [Reset PIN](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Williams, Glyn](#)
To: [Shawn Robison](#); [Jaffe, Samara A. \(Marketing\)](#); [Blair Haste](#); [Zaccari, Justin](#); [Bleicken, Joshua](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [DellaCamera, Anthony](#); [Barrett, John F.](#); [Talbot III, John J.](#)
Subject: Enbridge - East Providence / Wampanoag Heater Project - Latest Status?
Date: Tuesday, February 9, 2021 10:47:35 AM

All,

In talking to gas control this morning, it appears that the AGT East Providence / Wampanoag Trail heaters continue to perform poorly and there are concerns if they will make it through Winter 2021/22.

It's also been a couple of months since we heard any update on either the technical and/or commercial, contractual approach to the new AGT East Providence / Wampanoag Trail heater project.

Samara – Could you give an update as to where you are commercially / contractually with Blair?

Shawn – Can you provide / forward this to the new Enbridge PM who is looking at the East Providence / Wampanoag Trail heater project?

- We would need to have further technical discussion on future heater performance & any temporary heating that may need to be in place to support the site
- It'd be good to have a virtual meeting to kick the project off with all, and set a schedule for this year in terms of project milestones and reviews.

Many Thanks,

Glyn

Glyn Williams

Manager
Gas Engineering Design NE I&R
nationalgrid
1-781-402-4086
glyn.williams2@nationalgrid.com
Reswoods, 40 Sylvan Road, Waltham MA 02451
nationalgridus.com | [Twitter](#) | [LinkedIn](#) | [Facebook](#)

Please consider the environment before printing this email.

Advance notice of vacation: No vacation days booked

From: [Williams, Glyn](#)
To: [Barrett, John F.](#); [Talbot III, John J.](#); [Brennan, Patrick J.](#); [Backus, Katie E.](#); [Bleicken, Joshua](#); [Zaccari, Justin](#); [Jaffe, Samara A. \(Marketing\)](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [DellaCamera, Anthony](#)
Cc: [Christopher Redman](#); [Tiffany Martinez](#); [Christopher Lombardi](#); [Blair Haste](#)
Subject: FW: EXT || 30% Review Package - Requesting Review Meeting W/ Glyn & NGRID Team
Date: Wednesday, July 7, 2021 9:37:18 AM
Attachments: [Q104550T_R10_Enbridge_AGT_GSYS_M&R_00010 - East Providence, RI.pdf](#)
[ENB-0030 E Prov Heater Replacement Design Baseline.pdf](#)
[East Providence Heater Replacement Project-30% Review Package.pdf](#)
[East Providence Heater Replacement Project-30% Review Package ENBRIDGE REDLINES 2021-07-07.pdf](#)

All above,

Please see attached latest from Chris Redman (cc'd), Enbridge.

All – a meeting Thursday 15th July 3pm looks to work based on our calendars?

I've sent out a placeholder just to reserve it on our calendars. Please accept / decline.

All – as well as discussing this design, it may be worthwhile to discuss alternate designs in the event the commercial agreement is not approved?

We can discuss on a future 30% design review call, I am aware of other discussions maybe both internally an externally talking to the commercial parts.

Many Thanks,

Glyn

From: Christopher Redman <Christopher.Redman@enbridge.com>
Sent: Wednesday, July 7, 2021 8:53 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Eric Borden <eborden@odinepc.com>; Tiffany Martinez <Tiffany.Martinez@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>
Subject: EXT || 30% Review Package - Requesting Review Meeting W/ Glyn & NGRID Team

Glyn,

Good morning. The Enbridge & ODIN team have advanced the 30% design package to the point where we would like to schedule a review meeting with your team. Deliverables that we would like to discuss and specific contents are:

- **30% Design Package**

File (Clean): [East Providence Heater Replacement Project-30% Review Package.pdf](#)

File (Enbridge Comments): [East Providence Heater Replacement Project-30% Review Package_ENBRIDGE REDLINES 2021-07-07.pdf](#)

I have included both the clean file and the file with Enbridge comments for your reference. I will attach the clean file to the meeting invite when it goes out for the team to access. Key questions for your team:

- NGRID asked the question around access to the heaters. Odin has modified and raised the facility piping to provide personnel walking access around the heaters. **Q:** Does NGRID accept this modified piping design?
- **Q:** Does NGRID want to use [REDACTED] valves for this location? Please advise.
- **Q:** Enbridge will look to install SSDs were possible at [REDACTED]
 [REDACTED]
 [REDACTED] Does NGRID have any considerations or preferences on equipment selection [REDACTED]? Noted regulation offset requirements will be followed.
- **Q:** ODIN has shown the demarcation points between NGRD and AGT. Is NGRID acceptable to these demarcation points?

• **Heater Quote**

File: [Q104550T_R10_Enbridge_AGT GSYS M&R 00010 - East Providence, RI.pdf](#)

Coming out of the 30% review meeting, Enbridge is looking for National Grid technical acceptance or additional comments. Please review and advise if your team has any additional comments or if you can provide technical acceptance.

• **Design Baseline**

File: [ENB-0030 E Prov Heater Replacement Design Baseline.pdf](#)

Note ODIN has specified NGRID piping specifications. Enbridge will discuss with ODIN and breakout AGT piping from NGRID piping in a table as Enbridge operated [REDACTED] piping at 750 psig is not typically [REDACTED].

To coordinate a meeting, does your team have availability next week on any of the days below to meet and talk through the 30% design package? Please advise if you would like to push to the following week to give your team additional time to review.

- Tuesday 7/13
- Wednesday 7/14
- Thursday 7/15 (afternoon)

If possible, please advise what day(s) work best and if morning or afternoon is preferred so we can work towards a time. Please reach out with a call if it is easier to talk through over the phone. Thank you for your team's time and assistance.

Christopher Redman

Engineer, Pipeline Engineering
 Project Operations Management

ENBRIDGE

TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58

enbridge.com

Safety. Integrity. Respect.

From: [Williams, Glyn](#)
To: [Louis, Chrisnor](#); [Simoneau, William J.](#); [Konopka, Michael](#)
Cc: [Loiacono, Paul J.](#); [Porcaro, Julie](#); [DellaCamera, Anthony](#); [Barrett, John F.](#); [Talbot III, John J.](#); [Brennan, Patrick J.](#); [Doherty, John E.](#); [Costa, Jason](#); [Romano, Michael](#); [Bleicken, Joshua](#); [Zaccari, Justin](#)
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Date: Wednesday, February 10, 2021 9:36:40 AM
Importance: High

Hi,

1. It looks like we will see a 60% Tiverton drawing set on 2/12, and a design review meeting on 2/22
2. [@Louis, Chrisnor](#), [@Simoneau, William J.](#), [@Konopka, Michael](#) – Can you let us know more about what you want to see for a check metering signal?

These are two metering runs (primary and secondary), [REDACTED] Rotary meters they are proposing.

Thanks,

Glyn
 781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, February 10, 2021 8:58 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Importance: High

Good Morning Glyn,

Just wanted to touch base regarding Tiverton –

I believe you are aware we are looking to move construction to 2022 , while finishing design by May of 2021.

- 60% Design Package from CHI is set to be transmitted on 2/12 for review and comment – I will set up a design review meeting the week of 2/22
- We will need to start performing our PHA processes using this package as well to ensure there are no issues that would affect further detail design

We have discussed internally the option of concrete buildings being the preferred type for this site and I believe are good to move forward with input from all the key stakeholders. We can further discuss the logistics after the 60% package is developed.

There is discussion that CHI still needs clarification on the "Check Metering Configuration" – has your team come to a conclusion on this? Our operations area manager relayed we have done both ways

in the past

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>

Sent: Friday, January 22, 2021 8:43 AM

To: John Tirrell <John.Tirrell@nv5.com>

Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>

Subject: [External] RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thanks for below questions John,

I've copied in our National Grid team and Blair Hastey:

[Redacted]

- [Redacted] is something we had been discussing and written into future contract O&M agreements.
- The future contract documents state we receive a flow signal from [Redacted]
- Based on the actual rotary meter type, manufacturer and signal type, we have to dig into this a little and see what we want to do.

I&R, Gas Control and SCADA – Adding you in case you have any comments on the flow signal [Redacted] [Redacted] on the future Tiverton project

Loading Lines

- [REDACTED]
- [REDACTED]
- [REDACTED]

Heater Selection

- Thanks for below, [REDACTED] looks to be the one to go for.

Glyn
781-402-4086

From: John Tirrell <John.Tirrell@nv5.com>
Sent: Friday, January 22, 2021 9:05 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Glyn,
We have the following questions on your comments:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Thank you,

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, January 20, 2021 9:29 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>;

Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>

Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Matt and All,

Attached are some comments to the P&IDs and below documents that we discussed at the field visit last Wednesday.

I have also attached a copy of the National Grid piping specification, this is to help on the BOM after the Enbridge / National Grid demarc point.

Great to meet everyone at site last week.

If there are any questions on the National Grid comments, just let me know.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, January 11, 2021 11:59 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Morning Team,

Please see the attached engineering deliverables reflecting last meeting's discussion –

1. Revised conceptual site plan on existing conditions plan
2. Revised P&IDs
3. Revised Design Basis Memo with civil design data added
4. Preliminary Bill of Materials

Please review the preliminary design for comment as we look to generate our 60% Design Package, currently set for transmittal on 1/22 –

Good luck to everyone traveling to the site this week!

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Matthew Baran

Sent: Thursday, January 7, 2021 4:19 PM

To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Patrick.Brennan@nationalgrid.com

Subject: RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Team,

Please see the attached Meeting Minutes from today's discussion –

The primary action items are as followed

- Site Visit planned for 1/13, 10am – Shawn Robison to coordinate with CHI/NG personnel
- ROW to begin contacting site LO's to get permission to Env./Culturally survey the area outside our existing easement – Enbridge
- Now that the site configuration has a starting consensus, project building layouts onto the existing survey conditions for site visit use (rotate buildings to attempt to fit into existing easement) – CHI

Thanks again all that were able to attend,

Much Appreciated,
 Happy New Year!

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Tim Buzby <tim.buzby@enbridge.com>
Sent: Wednesday, January 6, 2021 10:14 AM
To: Tim Buzby; matthew.baran@enbridge.com; Shawn.Robison@enbridge.com;
Denis.Blais@enbridge.com; Joe.Feist@enbridge.com; Christopher.Lombardi@enbridge.com;
Christopher.Redman@enbridge.com; Nancy.Kist@enbridge.com; Barry.Goodrich@enbridge.com;
Blaine.Fritsche@enbridge.com; Max.Bergeron@enbridge.com; Williams, Glyn; John Tirrell; Derek
 Smith; John E. Scanlon
Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; helen.wang@enbridge.com;
Denis.Blais@swca.com; John.Bins@enbridge.com; kristopher.jackson@enbridge.com;
Patrick.Brennan@nationalgrid.com
Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
When: Thursday, January 7, 2021 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Not the most convenient time, but the only one open for the majority of invitees. The purpose of the meeting is to discuss the attached email. The meeting will be led by Matt Baran and CHI.

Microsoft Teams meeting

Join on your computer or mobile app
[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Bleicken, Joshua](#)
To: [Greco, Stephen P.](#); [Zaccari, Justin](#)
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Date: Wednesday, February 24, 2021 9:51:54 AM

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Tuesday, February 23, 2021 1:18 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Soroka, Stephen <Stephen.Soroka@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Guys,

I have sent out the PHA request to our Vendor's relaying to them that we would look to hopefully hold this PHA session the week of 3/8 –

Just wanted to follow up here on the National Grid side and if you believe this NG gating process/PHA session can be complete near this date so we can move towards the 90% package with these requirements complete/be able to implement any necessary changes arising from these sessions.

Much Appreciated,

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, February 17, 2021 8:00 AM
To: Matthew Baran <matthew.baran@enbridge.com>
Cc: Soroka, Stephen <Stephen.Soroka@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt,

I've added Steve Soroka, Justin Zaccari and Josh Bleicken above.

From an asset perspective, they can advise our thoughts on the NG PHA / LOPA requirements.

Glyn
 781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Tuesday, February 16, 2021 4:21 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Glyn,

Hope all is well, I wanted to touch base on the Tiverton scheduling now that we are moving construction to 2022 –

Currently this is the schedule I am looking to lock in, allowing more design review time:

60% Package – 2/12, Start PHA/LOPA processes

60% Review – 3/3

PHA/LOPA Meetings – 3/10

- (4 weeks for NG/Enbridge, PHA/LOPA review to ensure base design is confirmed and no costly rework is needed)

90% Package – 3/3 - 3/26 (3 weeks to generate)

90% Review – 4/7

- (2 weeks for NG/Enbridge to review)

IFB Package – 4/8 – 4/22 (2 weeks to generate)

IFB Review – 4/29

- (1 week for NG/Enbridge to review)

IFC Package – 4/30 – 5/14

- (2 weeks for NG/Enbridge to relay any last minute comments before the package is stamped)

- **Can you provide some context on the NG PHA/LOPA processes and their duration?** Are we able to begin those processes using this package?
- Does this schedule look achievable to ensure those processes are completed and we can move forward with design?

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, February 10, 2021 9:22 AM
To: Matthew Baran <matthew.baran@enbridge.com>
Subject: [External] RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt,

For check metering we are looking at the following:

This would be on each rotary meter run:

uncorrected pulse

- [Redacted]
- [Redacted]

metering pressure

- [Redacted]
- [Redacted]

metering temp

- [Redacted]
- [Redacted]

Just let me know if you need any more information at this stage. We can provide the exact model #'s of pressure and temperature transmitters through the design comments.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, February 10, 2021 8:58 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>

Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Importance: High

Good Morning Glyn,

Just wanted to touch base regarding Tiverton –

I believe you are aware we are looking to move construction to 2022 , while finishing design by May of 2021.

- 60% Design Package from CHI is set to be transmitted on 2/12 for review and comment – I will set up a design review meeting the week of 2/22
- We will need to start performing our PHA processes using this package as well to ensure there are no issues that would affect further detail design

We have discussed internally the option of concrete buildings being the preferred type for this site and I believe are good to move forward with input from all the key stakeholders. We can further discuss the logistics after the 60% package is developed.

There is discussion that CHI still needs clarification on the **“Check Metering Configuration”** – has your team come to a conclusion on this? Our operations area manager relayed we have done both ways in the past

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>

Sent: Friday, January 22, 2021 8:43 AM

To: John Tirrell <John.Tirrell@nv5.com>

Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Blair Hasteley <Blair.Hasteley@enbridge.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; DellaCamera, Anthony

<Anthony.DellaCamera2@nationalgrid.com>; Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>

Subject: [External] RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thanks for below questions John,

I've copied in our National Grid team and Blair Hasteay:

- [Redacted]
- [Redacted]
- [Redacted]

I&R, Gas Control and SCADA – [Redacted]

- [Redacted]
- [Redacted]
- [Redacted]

Heater Selection

- [Redacted]

Glyn
781-402-4086

From: John Tirrell <John.Tirrell@nv5.com>
Sent: Friday, January 22, 2021 9:05 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Glyn,
We have the following questions on your comments:

[Redacted]

[REDACTED]

Thank you,

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, January 20, 2021 9:29 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Matt and All,

Attached are some comments to the P&IDs and below documents that we discussed at the field visit last Wednesday.

I have also attached a copy of the National Grid piping specification, this is to help on the BOM after the Enbridge / National Grid demarc point.

Great to meet everyone at site last week.

If there are any questions on the National Grid comments, just let me know.

Glyn
 781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, January 11, 2021 11:59 AM

To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Morning Team,

Please see the attached engineering deliverables reflecting last meeting's discussion –

1. Revised conceptual site plan on existing conditions plan
2. Revised P&IDs
3. Revised Design Basis Memo with civil design data added
4. Preliminary Bill of Materials

Please review the preliminary design for comment as we look to generate our 60% Design Package, currently set for transmittal on 1/22 –

Good luck to everyone traveling to the site this week!

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Matthew Baran

Sent: Thursday, January 7, 2021 4:19 PM

To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich

<Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Patrick.Brennan@nationalgrid.com

Subject: RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Team,

Please see the attached Meeting Minutes from today's discussion –

The primary action items are as followed

- Site Visit planned for 1/13, 10am – Shawn Robison to coordinate with CHI/NG personnel
- ROW to begin contacting site LO's to get permission to Env./Culturally survey the area outside our existing easement – Enbridge
- Now that the site configuration has a starting consensus, project building layouts onto the existing survey conditions for site visit use (rotate buildings to attempt to fit into existing easement) – CHI

Thanks again all that were able to attend,

Much Appreciated,
Happy New Year!

Matthew Baran

Pipeline Engineer
Project Operations Management
—

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Tim Buzby <tim.buzby@enbridge.com>

Sent: Wednesday, January 6, 2021 10:14 AM

To: Tim Buzby; matthew.baran@enbridge.com; Shawn.Robison@enbridge.com; Denis.Blais@enbridge.com; Joe.Feist@enbridge.com; Christopher.Lombardi@enbridge.com; Christopher.Redman@enbridge.com; Nancy.Kist@enbridge.com; Barry.Goodrich@enbridge.com; Blaine.Fritsche@enbridge.com; Max.Bergeron@enbridge.com; Williams, Glyn; John Tirrell; Derek Smith; John E. Scanlon

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; helen.wang@enbridge.com; Denis.Blais@swca.com; John.Bins@enbridge.com; kristopher.jackson@enbridge.com; Patrick.Brennan@nationalgrid.com

Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

When: Thursday, January 7, 2021 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Not the most convenient time, but the only one open for the majority of invitees. The purpose of the meeting is to discuss the attached email. The meeting will be led by Matt Baran and CHI.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Williams Glyn](#)
To: [Matthew Baran](#); [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Bleicken Joshua](#); [Zaccari Justin](#); [Loiacono Paul J.](#); [Porcaro Julie](#)
Cc: [Tim Buzby](#)
Subject: RE: EXT || "Tiverton MR033 Outage Discussion"- Follow Up
Date: Thursday, December 3, 2020 1:40:05 PM
Attachments: [Tiverton OPP Station Evaluation Summary.pdf](#)
[Tiverton 30 Percent for Review.pdf](#)
[Tiverton NGrid ARCFM.JPG](#)
[MeetMin-11.24.20-TivertonMR033Outage.docx](#)
[CHI Questions for Tiverton MS Design Rev 1.docx](#)

Thanks Matt,

Now that we have a 30% design set, Please start to include National Grid Instrumentation & Regulation (I&R) operations group in future meetings.

Best contacts are:

- Pat Brennan (I&R Regulation Lead)
- John Talbot (I&R Manager)
- Mike Romano (I&R area supervisor)

I have cc'd them.

Pat, John and Mike, attached drawings are a 30% design of the new Tiverton station.

I'm free Wed 9th Dec 11am, unsure if that suits anyone else?

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Tuesday, December 01, 2020 2:48 PM
To: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>
Cc: Tim Buzby <tim.buzby@enbridge.com>
Subject: EXT || 'Tiverton MR033 Outage Discussion'- Follow Up

Good afternoon,

As a follow up to our meeting last week, please see the attached Meeting Minutes with the following action items below –

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE
1	CHI to generate a primary inquiry list for National Grid to answer	CHI
2	Explore the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans, will it all fit or require too much modification work?	CHI
3	Set up design review in two weeks for the 30% package	Enbridge
4	Identify the skids available that would be sized for this facility if the decision is to reuse the existing buildings	Enbridge
5	Review 30% Design Package for comment	NG
6	Generate a conceptual sketch of the area required to locate the temporary equipment and skid option	NG

Also, I am looking to schedule that official 30% design review early next week – can you please relay any times that need to be scheduled around, I will provide some more specific timeslot options soon.

Additional attachments

- 30% Preliminary Design Package provided by CHI – for National Grid to review for comment
- Tiverton NGrid Picture – Used by Glyn in the meeting (for CHI reference)
- Tiverton OPP Station Evaluation Summary – prepared by Enbridge and used by CHI to size buildings (for NG reference)

Please relay any notes or comments that may have been missed and need to be addressed,

Much Appreciated,

Matthew Baran

Pipeline Engineer

Core Projects

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: [Williams, Glyn](#)
To: [Matthew Baran](#); [Tim Buzby](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluyemi Oladipo](#); [William Brett](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Hastey](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#); [Joseph Bruno](#); [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Bleicken, Joshua](#); [Zaccari, Justin](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [Brennan, Patrick J.](#); [Talbot III, John J.](#); [Romano, Michael](#); [Costa, Jason](#); [DellaCamera, Anthony](#); [Ebert, Gregory](#)
Cc: [Kenneth Sokoloski](#); [Helen Wang](#); [Gianni Paradiso](#); [Garry Matocha](#); [Ray Humphreys](#); [John Fanning](#); [William Rogers](#); [Wayne Medeiros](#); [David Gattone](#)
Subject: RE: EXT || 90% Design Package - Tiverton MR033 Replacement
Date: Monday, April 5, 2021 12:06:24 PM

Thanks Matt,

I have the CHI sharepoint link, and can send the 90% drawings for comment around NGrid via onedrive.

Glyn

Glyn Williams

Manager
Gas Engineering Design NE I&R
nationalgrid
1-781-402-4086
glyn.williams2@nationalgrid.com
Reswoods, 40 Sylvan Road, Waltham MA 02451
nationalgridus.com | [Twitter](#) | [LinkedIn](#) | [Facebook](#)

Please consider the environment before printing this email.

Advance notice of vacation: No vacation days booked

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Thursday, April 01, 2021 3:27 PM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; John Tirrell <john.tirrell@nv5.com>; John E. Scanlon <john.scanlon@nv5.com>; Derek Smith <derek.smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>
Cc: Kenneth Sokoloski <Kenneth.Sokoloski@enbridge.com>; Helen Wang

<helen.wang@enbridge.com>; Gianni Paradiso <gianni.paradiso@nv5.com>; Garry Matocha <Garry.Matocha@enbridge.com>; Ray Humphreys <Ray.Humphreys@enbridge.com>; John Fanning <John.Fanning@enbridge.com>; William Rogers <William.Rogers@enbridge.com>; Wayne Medeiros <Wayne.Medeiros@enbridge.com>; David Gattone <David.Gattone@enbridge.com>

Subject: EXT || 90% Design Package - Tiverton MR033 Replacement

Good Afternoon Team,

Please see the Tiverton MR033 Replacement – 90% Design Package, generate by CHI –

- The file is greater than 30 MB so I have uploaded it to the project sharepoint and my Enbridge-OneDrive for those who do not have access to the Sharepoint :
 - <https://esites.enbridge.com/eng/lpeng/p/AA622/Docs/06%20Engineering/07%20Drawings>
 - https://enbridge-my.sharepoint.com/:b/g/personal/baranm_spectraenergy_com/EfuL46E2H-pPnJAgZcpW72MBJSnje7NUJlwUcX6h92zJYg?e=SiFNY8
- Please relay if you are unable to access either of those links to access the drawings –
 - For the NG team please relay an FTP site I can upload the package

Please take some time to review the package and provided any comments, I will provide an update on the review and design schedule once I receive directive from the project sponsor.

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
Safety. Integrity. Respect.

From: Matthew Baran
Sent: Thursday, March 4, 2021 10:38 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari,

Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>

Cc: Kenneth Sokoloski <Kenneth.Sokoloski@enbridge.com>; Helen Wang <helen.wang@enbridge.com>; Gianni Paradiso <Gianni.Paradiso@nv5.com>; Garry Matocha <Garry.Matocha@enbridge.com>; Ray Humphreys <Ray.Humphreys@enbridge.com>; John Fanning <John.Fanning@enbridge.com>; William Rogers <William.Rogers@enbridge.com>; Wayne Medeiros <Wayne.Medeiros@enbridge.com>; David Gattone <David.Gattone@enbridge.com>

Subject: RE: 60% Official Design Review - Tiverton MR033 Replacement

Good Morning Team,

Thanks again for the time and feedback yesterday as we covered the 60% Design Package for Tiverton. Please see the meeting minutes and marked up package – (blue comments – from NG , red comments from meeting)

- We will work to have these changes implemented as well as continue to follow up on the addressed items.

Please do not hesitate to send over any additional comments that we did not get to address in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Wednesday, February 10, 2021 11:00 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Hastey; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila; Joseph Bruno; John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; DellaCamera, Anthony; Ebert, Gregory

Cc: Kenneth Sokoloski; Helen Wang; Gianni Paradiso; Garry Matocha; Ray Humphreys; John Fanning; William Rogers; Wayne Medeiros; David Gattone

Subject: 60% Official Design Review - Tiverton MR033 Replacement

When: Wednesday, March 3, 2021 2:30 PM-4:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good Afternoon Team,

This is a placeholder date for the 60% Official Design Review - Tiverton MR033 Replacement Meeting

- 60% Design Package is set to be distributed to the team on 2/15 allowing for 2 weeks for the team to review and prepare comments
- We will also be using this package to perform the PHA/LOPA processes deemed necessary by the Enbridge and National Grid Teams
 - Goal is to have those meetings the week following this review in order to gather all the comments necessary to move towards generating a 90% design package on 3/26

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: [Williams, Glyn](#)
To: [Matthew Baran](#)
Cc: [Soroka, Stephen](#); [Zaccari, Justin](#); [Bleicken, Joshua](#)
Subject: RE: EXT || 90% Design Package - Tiverton MR033 Replacement
Date: Tuesday, July 6, 2021 6:41:00 AM

Hi Matt,

I wanted to check in on the project and also the process safety / PHA part.

Do you have any future date for the Enbridge PHA?

Many Thanks,

Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Thursday, April 1, 2021 3:27 PM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; John Tirrell <john.tirrell@nv5.com>; John E. Scanlon <john.scanlon@nv5.com>; Derek Smith <derek.smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>
Cc: Kenneth Sokoloski <Kenneth.Sokoloski@enbridge.com>; Helen Wang <helen.wang@enbridge.com>; Gianni Paradiso <gianni.paradiso@nv5.com>; Garry Matocha <Garry.Matocha@enbridge.com>; Ray Humphreys <Ray.Humphreys@enbridge.com>; John Fanning <John.Fanning@enbridge.com>; William Rogers <William.Rogers@enbridge.com>; Wayne Medeiros <Wayne.Medeiros@enbridge.com>; David Gattone <David.Gattone@enbridge.com>
Subject: EXT || 90% Design Package - Tiverton MR033 Replacement

Good Afternoon Team,

Please see the Tiverton MR033 Replacement – 90% Design Package, generate by CHI –

- The file is greater than 30 MB so I have uploaded it to the project sharepoint and my Enbridge-

OneDrive for those who do not have access to the Sharepoint :

- <https://esites.enbridge.com/eng/lpeng/p/AA622/Docs/06%20Engineering/07%20Drawings>
- https://enbridge-my.sharepoint.com/:b/g/person/baranm_spectraenergy_com/Eful46E2H-pPnJAgZcpW72MBJSnje7NUJlwUcX6h92zJYg?e=SiFNY8
- Please relay if you are unable to access either of those links to access the drawings –
 - For the NG team please relay an FTP site I can upload the package

Please take some time to review the package and provided any comments, I will provide an update on the review and design schedule once I receive directive from the project sponsor.

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Matthew Baran

Sent: Thursday, March 4, 2021 10:38 AM

To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>

Cc: Kenneth Sokoloski <Kenneth.Sokoloski@enbridge.com>; Helen Wang <helen.wang@enbridge.com>; Gianni Paradiso <Gianni.Paradiso@nv5.com>; Garry Matocha <Garry.Matocha@enbridge.com>; Ray Humphreys <Ray.Humphreys@enbridge.com>; John Fanning <John.Fanning@enbridge.com>; William Rogers <William.Rogers@enbridge.com>; Wayne Medeiros

<Wayne.Medeiros@enbridge.com>; David Gattone <David.Gattone@enbridge.com>

Subject: RE: 60% Official Design Review - Tiverton MR033 Replacement

Good Morning Team,

Thanks again for the time and feedback yesterday as we covered the 60% Design Package for Tiverton. Please see the meeting minutes and marked up package – (blue comments – from NG , red comments from meeting)

- We will work to have these changes implemented as well as continue to follow up on the addressed items.

Please do not hesitate to send over any additional comments that we did not get to address in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Wednesday, February 10, 2021 11:00 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Hastey; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila; Joseph Bruno; John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; DellaCamera, Anthony; Ebert, Gregory

Cc: Kenneth Sokoloski; Helen Wang; Gianni Paradiso; Garry Matocha; Ray Humphreys; John Fanning; William Rogers; Wayne Medeiros; David Gattone

Subject: 60% Official Design Review - Tiverton MR033 Replacement

When: Wednesday, March 3, 2021 2:30 PM-4:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good Afternoon Team,

This is a placeholder date for the 60% Official Design Review - Tiverton MR033 Replacement Meeting

- 60% Design Package is set to be distributed to the team on 2/15 allowing for 2 weeks for the team to review and prepare comments
- We will also be using this package to perform the PHA/LOPA processes deemed necessary by

the Enbridge and National Grid Teams

- Goal is to have those meetings the week following this review in order to gather all the comments necessary to move towards generating a 90% design package on 3/26

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: [Blair Haste](#)
To: [Bleicken, Joshua](#)
Cc: [Zaccari, Justin](#)
Subject: RE: EXT || AGT - RI Meter Station Tiverton and East Providence
Date: Friday, October 8, 2021 2:11:01 PM

Thanks Joshua, will get fully executed agreement back to you shortly.

Blair Haste

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Friday, October 8, 2021 1:27 PM
To: Blair Haste <Blair.Haste@enbridge.com>
Cc: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Subject: [External] FW: EXT || AGT - RI Meter Station Tiverton and East Providence

CAUTION: EXTERNAL EMAIL

This email originated from outside Enbridge and could be a phish. Criminals can pretend to be anyone. Do not interact with the email unless you are 100% certain it is legitimate. Report any suspicious emails.

Blair,
 Please see signed prefunding agreements for both Tiverton and East Providence.

Thank you,

Joshua Bleicken

Manager
 Pressure Regulation
nationalgrid
 1-781-491-7710
 1-781-907-1977
Joshua.Bleicken@nationalgrid.com
 Reservoir Woods, 40 Sylvan Rd
nationalgridus.com

From: Hennessey, Heather <Heather.Hennessey@nationalgrid.com>
Sent: Friday, October 8, 2021 1:09 PM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>

Cc: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Coombs, Matthew J. <Matthew.Coombs@nationalgrid.com>; Fromm, Walter F. <Walter.Fromm@nationalgrid.com>
Subject: RE: EXT || AGT - RI Meter Station Tiverton and East Providence

Hi Joshua,
Here are those 2 agreement letters e-signed by Walter. Thank you.

Heather

Heather Hennessey, EA to:

Fred Amaral

V.P., NE Gas Operations & Programs

Walter Fromm

V.P., NE Gas Complex Capital Construction & Interim V.P., NE Gas Asset & Design Engineering

nationalgrid

heather.hennessey@nationalgrid.com

978-944-5257

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Friday, October 8, 2021 7:30 AM
To: Hennessey, Heather <Heather.Hennessey@nationalgrid.com>
Cc: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Subject: FW: EXT || AGT - RI Meter Station Tiverton and East Providence

Good morning Heather,
Attached are two Prefunding agreements requiring Walter's signature.

Thank you,

Joshua Bleicken

Manager

Pressure Regulation

nationalgrid

1-781-491-7710

1-781-907-1977

Joshua.Bleicken@nationalgrid.com

Reservoir Woods, 40 Sylvan Rd

nationalgridus.com

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Thursday, October 7, 2021 6:57 PM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin

<Justin.Zaccari@nationalgrid.com>

Subject: EXT || AGT - RI Meter Station Tiverton and East Providence

Hi Justin and Josh,

Please see attached execution ready letter agreements for both East Providence (Wampanog Trail) and Tiverton meter station upgrade work. I have also attached the appropriate payment information for the pre payments for each project to be sent to.

Please let me know if you have any questions.

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Blair Hasty](#)
To: [Bleicken, Joshua](#)
Cc: [Zaccari, Justin](#)
Subject: RE: EXT || AGT - RI Meter Station Tiverton and East Providence
Date: Friday, October 8, 2021 3:44:03 PM
Attachments: [Prefunding Letter - E Providence \(Wampanog Trail\) ExecutableFINAL_RMP.pdf](#)
[Prefunding Letter - Tiverton Executable FINAL_RMP.pdf](#)

Joshua,

Please see attached fully executed agreements.

Thanks,

Blair Hasty

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Friday, October 8, 2021 1:27 PM
To: Blair Hasty <Blair.Hasty@enbridge.com>
Cc: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Subject: [External] FW: EXT || AGT - RI Meter Station Tiverton and East Providence

CAUTION: EXTERNAL EMAIL

This email originated from outside Enbridge and could be a phish. Criminals can pretend to be anyone. Do not interact with the email unless you are 100% certain it is legitimate. Report any suspicious emails.

Blair,

Please see signed prefunding agreements for both Tiverton and East Providence.

Thank you,

Joshua Bleicken

Manager
Pressure Regulation

nationalgrid

1-781-491-7710
1-781-907-1977

Joshua.Bleicken@nationalgrid.com
Reservoir Woods, 40 Sylvan Rd

nationalgridus.com

From: Hennessey, Heather <Heather.Hennessey@nationalgrid.com>
Sent: Friday, October 8, 2021 1:09 PM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Cc: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Coombs, Matthew J. <Matthew.Coombs@nationalgrid.com>; Fromm, Walter F. <Walter.Fromm@nationalgrid.com>
Subject: RE: EXT || AGT - RI Meter Station Tiverton and East Providence

Hi Joshua,
Here are those 2 agreement letters e-signed by Walter. Thank you.

Heather

Heather Hennessey, EA to:

Fred Amaral

V.P., NE Gas Operations & Programs

Walter Fromm

V.P., NE Gas Complex Capital Construction & Interim V.P., NE Gas Asset & Design Engineering

nationalgrid

heather.hennessey@nationalgrid.com

978-944-5257

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Friday, October 8, 2021 7:30 AM
To: Hennessey, Heather <Heather.Hennessey@nationalgrid.com>
Cc: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Subject: FW: EXT || AGT - RI Meter Station Tiverton and East Providence

Good morning Heather,
Attached are two Prefunding agreements requiring Walter's signature.

Thank you,

Joshua Bleicken

Manager

Pressure Regulation

nationalgrid

1-781-491-7710

1-781-907-1977

Joshua.Bleicken@nationalgrid.com

Reservoir Woods, 40 Sylvan Rd

nationalgridus.com

From: Blair Hasteley <Blair.Hasteley@enbridge.com>
Sent: Thursday, October 7, 2021 6:57 PM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Subject: EXT || AGT - RI Meter Station Tiverton and East Providence

Hi Justin and Josh,

Please see attached execution ready letter agreements for both East Providence (Wampanog Trail) and Tiverton meter station upgrade work. I have also attached [REDACTED]

Please let me know if you have any questions.

Blair Hasteley

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Williams, Glyn](#)
To: [Matthew Baran](#)
Cc: [Barrett, John F.](#); [Bleicken, Joshua](#); [Brennan, Patrick J.](#); [Costa, Jason](#); [DellaCamera, Anthony](#); [Doherty, John E.](#); [Ebert, Gregory](#); [Konopka, Michael](#); [Loiacono, Paul J.](#); [Louis, Chrisnor](#); [Porcaro, Julie](#); [Romano, Michael](#); [Simoneau, William J.](#); [Talbot III, John J.](#); [Zaccari, Justin](#)
Subject: RE: EXT || RE: 60% Official Design Review - Tiverton MR033 Replacement
Date: Wednesday, March 3, 2021 7:43:29 AM
Attachments: [Tiverton MS 60 Percent for Review 2-12-21 - NGrid Comments 030321.pdf](#)

Hi Matt,

Please see attached comments from National Grid.

Just let us know any design review meeting dates.

Many Thanks,

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, February 15, 2021 11:32 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; John Tirrell <john.tirrell@nv5.com>; john.scanlon <john.scanlon@nv5.com>; Derek Smith <derek.smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>
Cc: Kenneth Sokoloski <Kenneth.Sokoloski@enbridge.com>
Subject: EXT || RE: 60% Official Design Review - Tiverton MR033 Replacement

Good Morning Team,

See the attached 60% Design Package for the AGT Tiverton MR00033 Replacement Project generated by CHI.

Please review this package and prepare any markups/comments for the Design Review set for 3/3 –

- I will use this package to start the necessary Enbridge PHA Processes

Please do not hesitate to contact me regarding any initial comments before the review meeting,

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Wednesday, February 10, 2021 11:00 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila; Joseph Bruno; John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; DellaCamera, Anthony; Ebert, Gregory

Cc: Kenneth Sokoloski

Subject: 60% Official Design Review - Tiverton MR033 Replacement

When: Wednesday, March 3, 2021 2:30 PM-4:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good Afternoon Team,

This is a placeholder date for the 60% Official Design Review - Tiverton MR033 Replacement Meeting

- 60% Design Package is set to be distributed to the team on 2/15 allowing for 2 weeks for the team to review and prepare comments
- We will also be using this package to perform the PHA/LOPA processes deemed necessary by the Enbridge and National Grid Teams
 - Goal is to have those meetings the week following this review in order to gather all the comments necessary to move towards generating a 90% design package on 3/26

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: [Blair Haste](#)
To: [Bleicken, Joshua](#); [Zaccari, Justin](#)
Subject: RE: EXT || RE: NGRID & Enbridge Joint Discussion
Date: Tuesday, October 5, 2021 1:15:13 PM

Hey Josh – She will be calling him shortly.

Blair Haste

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Tuesday, October 5, 2021 12:25 PM
To: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Blair Haste <Blair.Haste@enbridge.com>
Subject: [External] RE: EXT || RE: NGRID & Enbridge Joint Discussion

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Blair,
 Do you know if DeAndra is going to contact Mike Middleton?

Thanks,

Joshua Bleicken

Manager
 Pressure Regulation
nationalgrid
 1-781-491-7710
 1-781-907-1977
Joshua.Bleicken@nationalgrid.com
 Reservoir Woods, 40 Sylvan Rd
nationalgridus.com

From: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Sent: Friday, October 1, 2021 3:38 PM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Blair Haste <Blair.Haste@enbridge.com>
Subject: Re: EXT || RE: NGRID & Enbridge Joint Discussion

I reached out and he left a message with DeAndra. Hopefully we can finalize it soon.

Justin Zaccari

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Friday, October 1, 2021 11:59:21 AM
To: Blair Hasteley <Blair.Hasteley@enbridge.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Subject: RE: EXT || RE: NGRID & Enbridge Joint Discussion

Hi Blair,
 After seeing your last email I set up a meeting with our Legal. He is supposed to be getting in touch with your legal. We can follow up on our side.

Thanks,

Joshua Bleicken
 Manager
 Pressure Regulation
nationalgrid
 1-781-491-7710
 1-781-907-1977
Joshua.Bleicken@nationalgrid.com
 Reservoir Woods, 40 Sylvan Rd
nationalgridus.com

From: Blair Hasteley <Blair.Hasteley@enbridge.com>
Sent: Friday, October 1, 2021 11:31 AM
To: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: RE: EXT || RE: NGRID & Enbridge Joint Discussion

Hey Justin and Joshua – checking in to see if you had any feedback from legal. If none I can have an execution ready letter prepared for East Providence and Tiverton.

Thanks,

Blair Hasteley
 Business Development

ENBRIDGE
 TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451
enbridge.com
Safety. Integrity. Respect.

From: Blair Hasteley
Sent: Wednesday, September 29, 2021 11:49 AM
To: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: RE: EXT || RE: NGRID & Enbridge Joint Discussion

Justin and Joshua,

Our Legal was able to make contact with Mike Middleton, he did not seem to have awareness of the project. Might be worth circling with him on your side to make sure he does not have any concerns.

Let me know if any follow-up is necessary on my end and if you have any feedback on the draft letter agreement.

Thanks,

Blair Hasteley

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Blair Hasteley
Sent: Tuesday, September 28, 2021 2:46 PM
To: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: RE: EXT || RE: NGRID & Enbridge Joint Discussion

Justin,

Legal is reaching out to Mike today to make sure his concerns are dealt with.

I have attached a redline and draft of the letter agreement for the East Providence (Wampanog Trail) station. If you are comfortable with the draft let me know and I can prepare an execution ready copy for east providence and Tiverton stations.

Thanks,

Blair Hasteley

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Sent: Friday, September 24, 2021 8:21 AM
To: Blair Hastey <Blair.Hastey@enbridge.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] Re: EXT || RE: NGRID & Enbridge Joint Discussion

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hello Blair,
 We have full support from our leadership to sign the agreement as long as legal's concerns are addressed. Can you have your legal rep provide you an update and see if she has spoken to Mike Middleton?

Thanks,
 Justin Zaccari

Justin Zaccari

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Tuesday, September 21, 2021 9:01:18 AM
To: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: EXT || RE: NGRID & Enbridge Joint Discussion

Hey Justin,

We are following up on the two items relating to schedule of Tiverton and Cost impact of transferred assets. Just touching base to see if any additional feedback was received on items discussed or path forward.

Thanks,

Blair Hastey
 Business Development
 —

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Sent: Thursday, September 9, 2021 1:12 PM
To: Blair Hastey <Blair.Hastey@enbridge.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] NGRID & Enbridge Joint Discussion

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hello Blair,

I think we are at the point where we should set up a call with Enbridge's leaders and representatives. I have included who we would invite to the meeting if you could send an equivalent list of people you would like to be there that would be great and we can put together a list of emails for a Team's meeting. How does that sound?

- Justin Zaccari-Sr. Pressure Regulation Asset Engineer
- Josh Bleicken-Manager Pressure Regulation Assets
- Matt Coombs-Director Engineering and Asset Management
- Walter Fromm-VP Engineering, Asset, and Construction
- Michele Leone-VP PPL Ops and Engineering
- John Currie-Director Gas Business Planning
- Amy Smith-Director Rhode Island Regulatory
- Nathan Kocan-ISR Gas Lead
- Patrick Tarmey-Legal Regulatory FERC
- Mike Middleton-Director Legal Commercial

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail

reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Blair Haste](#)
To: [Zaccari, Justin](#); [Bleicken, Joshua](#)
Subject: RE: EXT || RE: NGRID & Enbridge Joint Discussion
Date: Thursday, September 30, 2021 4:49:55 PM
Attachments: [Algonquin Gas Transmission, LLC - 0435 - USD - Operating.pdf](#)

Hi Justin,

Please see attached .

Thanks,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Blair Haste

Sent: Wednesday, September 29, 2021 11:49 AM

To: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>

Subject: RE: EXT || RE: NGRID & Enbridge Joint Discussion

Justin and Joshua,

Our Legal was able to make contact with Mike Middleton, he did not seem to have awareness of the project. Might be worth circling with him on your side to make sure he does not have any concerns.

Let me know if any follow-up is necessary on my end and if you have any feedback on the draft letter agreement.

Thanks,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Blair Hasteley
Sent: Tuesday, September 28, 2021 2:46 PM
To: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: RE: EXT || RE: NGRID & Enbridge Joint Discussion

Justin,

Legal is reaching out to Mike today to make sure his concerns are dealt with.

I have attached a redline and draft of the letter agreement for the East Providence (Wampanog Trail) station. If you are comfortable with the draft let me know and I can prepare an execution ready copy for east providence and Tiverton stations.

Thanks,

Blair Hasteley

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Sent: Friday, September 24, 2021 8:21 AM
To: Blair Hasteley <Blair.Hasteley@enbridge.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] Re: EXT || RE: NGRID & Enbridge Joint Discussion

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hello Blair,

We have full support from our leadership to sign the agreement as long as legal's concerns are addressed. Can you have your legal rep provide you an update and see if she has spoken to Mike Middleton?

Thanks,
Justin Zaccari

Justin Zaccari

From: Blair Hasteley <Blair.Hasteley@enbridge.com>
Sent: Tuesday, September 21, 2021 9:01:18 AM
To: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: EXT || RE: NGRID & Enbridge Joint Discussion

Hey Justin,

We are following up on the two items relating to schedule of Tiverton and Cost impact of transferred assets. Just touching base to see if any additional feedback was received on items discussed or path forward.

Thanks,

Blair Hasteley

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Sent: Thursday, September 9, 2021 1:12 PM
To: Blair Hasteley <Blair.Hasteley@enbridge.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] NGRID & Enbridge Joint Discussion

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hello Blair,

I think we are at the point where we should set up a call with Enbridge's leaders and representatives. I have included who we would invite to the meeting if you could send an equivalent list of people you would like to be there that would be great and we can put together a list of emails for a Team's meeting. How does that sound?

Justin Zaccari-Sr. Pressure Regulation Asset Engineer
 Josh Bleicken-Manager Pressure Regulation Assets
 Matt Coombs-Director Engineering and Asset Management
 Walter Fromm-VP Engineering, Asset, and Construction

Michele Leone-VP PPL Ops and Engineering
John Currie-Director Gas Business Planning
Amy Smith-Director Rhode Island Regulatory
Nathan Kocan-ISR Gas Lead
Patrick Tarmey-Legal Regulatory FERC
Mike Middleton-Director Legal Commercial

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Tim Buzby](#)
To: [Williams Glyn](#); [Matthew Baran](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluyemi Oladipo](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Haste](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#)
Cc: [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Bleicken Joshua](#); [Zaccari Justin](#); [Loiacono Paul J.](#); [Porcaro Julie](#); [Brennan Patrick J.](#); [Talbot III John J.](#); [Romano Michael](#); [Costa Jason](#); [Christopher Redman](#); [Cameron Hall](#); [DellaCamera Anthony](#); [Ebert Gregory](#); [Joseph Bruno](#); [Max Bergeron](#); [Denis Blais](#)
Subject: RE: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review
Date: Monday, January 4, 2021 1:38:38 PM
Attachments: [RI Boiler Tiverton MR 00033 Project Contact List.xlsx](#)

Glyn,

Finally got around to adding the Enbridge folks to the list with their email addresses, for project use going forward.

Tim Buzby, PE

Engineering Project Manager III, CORE Project Development - USA

ENBRIDGE

CELL: +1-281-684-6280
5400 Westheimer Ct, Ste 5I-45, Houston, Texas, 77056

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Thursday, December 10, 2020 5:48 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Haste <Blair.Haste@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>
Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall <Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>
Subject: [External] RE: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt and All,

Please see attached National Grid Contacts List.

Glyn
781-402-4086

Sent: Wednesday, December 09, 2020 6:54 PM

To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>

Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall <Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>

Subject: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

Good afternoon Team,

Please see the attached Meeting Minutes from the 30% Design Review –

ACTION ITEMS

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE	DUE DATE	STATUS	COMMENTS
1	Provide responses to the CHI inquiry list/ Provide preferred vendors list	NG		Open	
2	Finalize 30% Package Redlines and transmit	NG		Open	
3	Provide NG contact list	NG		Open	
4	Explore the feasibility of fitting the new equipment into the existing buildings	CHI		Open	Site Visit Needed
5	Plan Site Visit	Enbridge		Open	RI may be entering a lockdown
6	Perform Env. Survey to assess usability of existing easement	Enbridge		Open	
7	Identify the temp skids available that would be sized for this facility- if needed	Enbridge		Open	No Temp Skids in storage have heating element

Thanks again all that were able to attend,

Much Appreciated,

Matthew Baran

Pipeline Engineer
Core Projects
—

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Friday, December 4, 2020 11:39 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila

Cc: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno

Subject: RI Boiler at Tiverton MR00033 - 30% Design Review

When: Wednesday, December 9, 2020 1:30 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good afternoon Team,

This meeting is to review the CHI generated 30% Design Package (attached) for comment so that we may further hone in on our detailed design.

- Please keep in mind this is a preliminary design to use as we discuss the outage details vs land acquisition options

The current scope direction is based off –

- Tiverton MR0033 station has never been shut in before – Optimal time of the year for the outage is non-heating season (May-October)
- The only source is Enbridge, thus hot taps will be required and located based on the modular (preferred) vs. stick built solution.
 - Service cannot be interrupted at all, it needs to remain continuous either via hot taps on the existing lines to allow a cutover to a modular system operating both concurrently until it the new system has been proven.
 - The existing system would be taken out of service and demo'd after that point.
- CHI is exploring the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans
 - Temporary LNG operations not preferred due to the amount of outage time, workspace and risks considerations required
 - Temporary skid option to be further explored with Enbridge personnel

There was some difficulty in finding an open window for all the key stakeholders but I believe this is the best option for the Enbridge side

- Apologies to the National Grid Gas Control Folks that cannot make this time due – I am open to setting up a separate meeting to review if needed

On a scheduling note, CHI should incorporate the survey data received this week along with the key stakeholder comments gathered in this meeting, into the 60% drawing package to be issued on 01/06.

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting.

Much Appreciated,

Matthew Baran

Pipeline Engineer

Core Projects

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Williams, Glyn](#)
To: [Matthew Baran](#); [Tim Buzby](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluyemi Oladipo](#); [William Brett](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Haste](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#)
Cc: [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Bleicken, Joshua](#); [Zaccari, Justin](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [Brennan, Patrick J.](#); [Talbot III, John J.](#); [Romano, Michael](#); [Costa, Jason](#); [Christopher Redman](#); [Cameron Hall](#); [DellaCamera, Anthony](#); [Ebert, Gregory](#); [Joseph Bruno](#)
Subject: RE: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review
Date: Thursday, December 10, 2020 6:47:58 AM
Attachments: [Tiverton - National Grid Contacts List.xlsx](#)

Hi Matt and All,

Please see attached National Grid Contacts List.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, December 09, 2020 6:54 PM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Haste <Blair.Haste@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>
Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall <Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>
Subject: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

Good afternoon Team,

Please see the attached Meeting Minutes from the 30% Design Review –

ACTION ITEMS

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE	DUE DATE	STATUS	COMMENTS
1	Provide responses to the CHI inquiry list/ Provide preferred vendors list	NG		Open	
2	Finalize 30% Package Redlines and transmit	NG		Open	
3	Provide NG contact list	NG		Open	
4	Explore the feasibility of fitting the new equipment into the existing buildings	CHI		Open	Site Visit Needed
5	Plan Site Visit	Enbridge		Open	RI may be entering a lockdown
6	Perform Env. Survey to assess usability of existing easement	Enbridge		Open	
7	Identify the temp skids available that would be sized for this facility- if needed	Enbridge		Open	No Temp Skids in storage have heating element

Thanks again all that were able to attend,

Much Appreciated,

Matthew Baran

Pipeline Engineer
Core Projects

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Friday, December 4, 2020 11:39 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Hastey; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila

Cc: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno

Subject: RI Boiler at Tiverton MR00033 - 30% Design Review

When: Wednesday, December 9, 2020 1:30 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good afternoon Team,

This meeting is to review the CHI generated 30% Design Package (attached) for comment so that we may further hone in on our detailed design.

- Please keep in mind this is a preliminary design to use as we discuss the outage details vs land acquisition options

The current scope direction is based off –

- Tiverton MR0033 station has never been shut in before – Optimal time of the year for the outage is non-heating season (May-October)
- The only source is Enbridge, thus hot taps will be required and located based on the modular (preferred) vs. stick built solution.
 - Service cannot be interrupted at all, it needs to remain continuous either via hot taps on the existing lines to allow a cutover to a modular system operating both concurrently until it the new system has been proven.
 - The existing system would be taken out of service and demo'd after that point.
- CHI is exploring the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans
 - Temporary LNG operations not preferred due to the amount of outage time, workspace and risks considerations required
 - Temporary skid option to be further explored with Enbridge personnel

There was some difficulty in finding an open window for all the key stakeholders but I believe this is the best option for the Enbridge side

- Apologies to the National Grid Gas Control Folks that cannot make this time due – I am open to setting up a separate meeting to review if needed

On a scheduling note, CHI should incorporate the survey data received this week along with the key stakeholder comments gathered in this meeting, into the 60% drawing package to be issued on 01/06.

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting.

Much Appreciated,

Matthew Baran

Pipeline Engineer

Core Projects

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: [Williams, Glyn](#)
To: [Matthew Baran](#); [Tim Buzby](#); [Tom Tirlia](#); [Christopher Lombardi](#); [Shawn Robison](#); [Joseph Feist](#); [Oluoyemi Oladipo](#); [William Brett](#); [William Diaz](#); [George Migrants](#); [Mitchell McNally](#); [Nicholas Marter](#); [Blair Hastey](#); [Blaine Fritsche](#); [Brendan Boyce](#); [Nancy Kist](#); [Barry Goodrich](#); [John Bins](#); [Joseph Dellaquila](#)
Cc: [John Tirrell](#); [John E. Scanlon](#); [Derek Smith](#); [Bleicken Joshua](#); [Zaccari Justin](#); [Loiacono Paul J.](#); [Porcaro Julie](#); [Brennan Patrick J.](#); [Talbot III John J.](#); [Romano Michael](#); [Costa Jason](#); [Christopher Redman](#); [Cameron Hall](#); [DellaCamera Anthony](#); [Ebert Gregory](#); [Joseph Bruno](#)
Subject: RE: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review
Date: Thursday, December 10, 2020 6:29:12 AM

Thanks Matt and All,

One additional action from me was to provide the main records. I have those.

Can you setup a suitable sharepoint / dropbox or other fileshare to store project documents?

I could be around 50MB for the scanned records.

Many Thanks,

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, December 09, 2020 6:54 PM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluoyemi Oladipo <Oluoyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>
Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall <Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>
Subject: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

Good afternoon Team,

Please see the attached Meeting Minutes from the 30% Design Review –

ACTION ITEMS

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE	DUE DATE	STATUS	COMMENTS
1	Provide responses to the CHI inquiry list/ Provide preferred vendors list	NG		Open	
2	Finalize 30% Package Redlines and transmit	NG		Open	
3	Provide NG contact list	NG		Open	
	Explore the feasibility of fitting the new				

4	equipment into the existing buildings	CHI		Open	Site Visit Needed
5	Plan Site Visit	Enbridge		Open	RI may be entering a lockdown
6	Perform Env. Survey to assess usability of existing easement	Enbridge		Open	
7	Identify the temp skids available that would be sized for this facility- if needed	Enbridge		Open	No Temp Skids in storage have heating element

Thanks again all that were able to attend,

Much Appreciated,

Matthew Baran

Pipeline Engineer
Core Projects
—

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran
Sent: Friday, December 4, 2020 11:39 AM
To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila
Cc: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno
Subject: RI Boiler at Tiverton MR00033 - 30% Design Review
When: Wednesday, December 9, 2020 1:30 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Good afternoon Team,

This meeting is to review the CHI generated 30% Design Package (attached) for comment so that we may further hone in on our detailed design.

- Please keep in mind this is a preliminary design to use as we discuss the outage details vs land acquisition options

The current scope direction is based off –

- Tiverton MR0033 station has never been shut in before – Optimal time of the year for the outage is non-heating season (May-October)
- The only source is Enbridge, thus hot taps will be required and located based on the modular (preferred) vs. stick built solution.
 - Service cannot be interrupted at all, it needs to remain continuous either via hot taps on the existing lines to allow a cutover to a modular system operating both concurrently until it the new system has been proven.
 - The existing system would be taken out of service and demo'd after that point.
- CHI is exploring the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans
 - Temporary LNG operations not preferred due to the amount of outage time, workspace and risks considerations required
 - Temporary skid option to be further explored with Enbridge personnel

There was some difficulty in finding an open window for all the key stakeholders but I believe this is the best option for the Enbridge side

- Apologies to the National Grid Gas Control Folks that cannot make this time due – I am open to setting up a separate meeting to review if needed

On a scheduling note, CHI should incorporate the survey data received this week along with the key stakeholder comments gathered in this meeting, into the 60% drawing package to be issued on 01/06.

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting.

Much Appreciated,

Matthew Baran

Pipeline Engineer

Core Projects

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

From: Denis Blais
To: Tim Buzby; Williams Glyn; Matthew Baran; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila
Cc: John Tirrell; John E. Scanlon; Derek Smith; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno; Max Bergeron; Chase Bernier; Travis Yandow; Gregory R. Dubell; Denis Blais
Subject: RE: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review
Date: Tuesday, February 2, 2021 8:08:31 AM
Attachments: [image001.png](#)
[Field Map_20210126_CBTY_WetDelin-NLEB.pdf](#)
[TivertonRI_GIS.zip](#)

Tim,

Here is the wetland shapefile and a map showing the wetland boundary for the plan and workspace development. A "50-foot Perimeter Wetland Boundary" should be added offset from the wetland boundary.

Any workspace or work in this area or the wetland will require permitting. Hope this helps, Denis

Regards,

Denis Blais

Senior Environmental Project Manager

SWCA Environmental Consultants

8 Science Park Road, 2nd Floor
Scarborough, Maine 04074
C 207-205-1362

denis.blais@swca.com

www.swca.com



The contents of this email and any associated emails, information, and attachments are CONFIDENTIAL. Use or disclosure without sender's authorization is prohibited. If you are not an authorized recipient, please notify the sender and then immediately delete the email and any attachments

From: Tim Buzby <tim.buzby@enbridge.com>
Sent: Monday, January 4, 2021 1:36 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Matthew Baran <matthew.baran@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Haste <Blair.Haste@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@Enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <barry.goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>
Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall

<Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Denis Blais <Denis.Blais@swca.com>
Subject: RE: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

EXTERNAL: This email originated from outside SWCA. Please use caution when replying.

Glyn,
Finally got around to adding the Enbridge folks to the list with their email addresses, for project use going forward.

Tim Buzby, PE

Engineering Project Manager III, CORE Project Development - USA

ENBRIDGE
CELL: +1-281-684-6280
5400 Westheimer Ct, Ste 51-45, Houston, Texas, 77056

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Thursday, December 10, 2020 5:48 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>
Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall <Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>
Subject: [External] RE: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt and All,

Please see attached National Grid Contacts List.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, December 09, 2020 6:54 PM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>
Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall <Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>
Subject: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

Good afternoon Team,

Please see the attached Meeting Minutes from the 30% Design Review –

ACTION ITEMS

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE	DUE DATE	STATUS	COMMENTS
1	Provide responses to the CHI inquiry list/ Provide preferred vendors list	NG		Open	
2	Finalize 30% Package Redlines and transmit	NG		Open	
3	Provide NG contact list	NG		Open	
4	Explore the feasibility of fitting the new equipment into the existing buildings	CHI		Open	Site Visit Needed
5	Plan Site Visit	Enbridge		Open	RI may be entering a lockdown
6	Perform Env. Survey to assess usability of existing easement	Enbridge		Open	
7	Identify the temp skids available that would be sized for this facility- if needed	Enbridge		Open	No Temp Skids in storage have heating element

Thanks again all that were able to attend,

Much Appreciated,

Matthew Baran

Pipeline Engineer

Core Projects

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Friday, December 4, 2020 11:39 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila

Cc: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno

Subject: RI Boiler at Tiverton MR00033 - 30% Design Review

When: Wednesday, December 9, 2020 1:30 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good afternoon Team,

This meeting is to review the CHI generated 30% Design Package (attached) for comment so that we may further hone in on our detailed design.

- Please keep in mind this is a preliminary design to use as we discuss the outage details vs land acquisition options

The current scope direction is based off –

- Tiverton MR0033 station has never been shut in before – Optimal time of the year for the outage is non-heating season (May-October)
- The only source is Enbridge, thus hot taps will be required and located based on the modular (preferred) vs. stick built solution.
 - Service cannot be interrupted at all, it needs to remain continuous either via hot taps on the existing lines to allow a cutover to a modular system operating both concurrently until it the new system has been proven.
 - The existing system would be taken out of service and demo'd after that point.
- CHI is exploring the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans
 - Temporary LNG operations not preferred due to the amount of outage time, workspace and risks considerations required
 - Temporary skid option to be further explored with Enbridge personnel

There was some difficulty in finding an open window for all the key stakeholders but I believe this is the best option for the Enbridge side

- Apologies to the National Grid Gas Control Folks that cannot make this time due – I am open to setting up a separate meeting to review if needed

On a scheduling note, CHI should incorporate the survey data received this week along with the key stakeholder comments gathered in this meeting, into the 60% drawing package to be issued on 01/06.

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting.

Much Appreciated,

Matthew Baran

Pipeline Engineer

Core Projects

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Williams, Glyn](#)
To: [Matthew Baran](#)
Cc: [Soroka, Stephen](#); [Zaccari, Justin](#); [Bleicken, Joshua](#)
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Date: Wednesday, February 17, 2021 8:59:40 AM

Hi Matt,

I've added Steve Soroka, Justin Zaccari and Josh Bleicken above.

From an asset perspective, they can advise our thoughts on the NG PHA / LOPA requirements.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Tuesday, February 16, 2021 4:21 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Glyn,

Hope all is well, I wanted to touch base on the Tiverton scheduling now that we are moving construction to 2022 –

Currently this is the schedule I am looking to lock in, allowing more design review time:

60% Package – 2/12, Start PHA/LOPA processes

60% Review – 3/3

PHA/LOPA Meetings – 3/10

- (4 weeks for NG/Enbridge, PHA/LOPA review to ensure base design is confirmed and no costly rework is needed)

90% Package – 3/3 - 3/26 (3 weeks to generate)

90% Review – 4/7

- (2 weeks for NG/Enbridge to review)

IFB Package – 4/8 – 4/22 (2 weeks to generate)

IFB Review – 4/29

- (1 week for NG/Enbridge to review)

IFC Package – 4/30 – 5/14

- (2 weeks for NG/Enbridge to relay any last minute comments before the package is stamped)

- **Can you provide some context on the NG PHA/LOPA processes and their duration?** Are we able to begin those processes using this package?
- Does this schedule look achievable to ensure those processes are completed and we can move forward with design?

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, February 10, 2021 9:22 AM
To: Matthew Baran <matthew.baran@enbridge.com>
Subject: [External] RE: EXT | | RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt,

For check metering we are looking at the following:

This would be on each [REDACTED]

uncorrected pulse

- [REDACTED]
- [REDACTED]

metering pressure

- [REDACTED]
- [REDACTED]

metering temp

- [REDACTED]
- [REDACTED]

[REDACTED] let me know if you need any more information at this stage. We can provide the exact model #'s of pressure and temperature transmitters through the design comments.

Glyn

781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, February 10, 2021 8:58 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Importance: High

Good Morning Glyn,

Just wanted to touch base regarding Tiverton –

I believe you are aware we are looking to move construction to 2022 , while finishing design by May of 2021.

- 60% Design Package from CHI is set to be transmitted on 2/12 for review and comment – I will set up a design review meeting the week of 2/22
- We will need to start performing our PHA processes using this package as well to ensure there are no issues that would affect further detail design

We have discussed internally the option of concrete buildings being the preferred type for this site and I believe are good to move forward with input from all the key stakeholders. We can further discuss the logistics after the 60% package is developed.

There is discussion that CHI still needs clarification on the “Check Metering Configuration” – has your team come to a conclusion on this? Our operations area manager relayed we have done both ways in the past

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Friday, January 22, 2021 8:43 AM
To: John Tirrell <John.Tirrell@nv5.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Brennan, Patrick J.

<Patrick.Brennan@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>;
Costa, Jason <Jason.Costa@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>;
Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Blair Hasteley <Blair.Hasteley@enbridge.com>;
Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Loiacono, Paul J.
<Paul.Loiacono@nationalgrid.com>; DellaCamera, Anthony
<Anthony.DellaCamera2@nationalgrid.com>; Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>
Subject: [External] RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thanks for below questions John,

I've copied in our National Grid team and Blair Hasteley:

- [Redacted]
- [Redacted]
- [Redacted]

I&R, Gas Control and SCADA – [Redacted]

- [Redacted]
- [Redacted]
- [Redacted]

Heater Selection

- [Redacted]

Glyn
781-402-4086

From: John Tirrell <John.Tirrell@nv5.com>
Sent: Friday, January 22, 2021 9:05 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

[Redacted]

Thank you,

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, January 20, 2021 9:29 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Matt and All,

Attached are some comments to the P&IDs and below documents that we discussed at the field visit last Wednesday.

I have also attached a copy of the National Grid piping specification, this is to help on the BOM after the Enbridge / National Grid demarc point.

Great to meet everyone at site last week.

If there are any questions on the National Grid comments, just let me know.

Glyn
 781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, January 11, 2021 11:59 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Morning Team,

Please see the attached engineering deliverables reflecting last meeting's discussion –

1. Revised conceptual site plan on existing conditions plan
2. Revised P&IDs
3. Revised Design Basis Memo with civil design data added
4. Preliminary Bill of Materials

Please review the preliminary design for comment as we look to generate our 60% Design Package, currently set for transmittal on 1/22 –

Good luck to everyone traveling to the site this week!

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Matthew Baran
Sent: Thursday, January 7, 2021 4:19 PM

To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Patrick.Brennan@nationalgrid.com

Subject: RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Team,

Please see the attached Meeting Minutes from today's discussion –

The primary action items are as followed

- Site Visit planned for 1/13, 10am – Shawn Robison to coordinate with CHI/NG personnel
- ROW to begin contacting site LO's to get permission to Env./Culturally survey the area outside our existing easement – Enbridge
- Now that the site configuration has a starting consensus, project building layouts onto the existing survey conditions for site visit use (rotate buildings to attempt to fit into existing easement) – CHI

Thanks again all that were able to attend,

Much Appreciated,
 Happy New Year!

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Tim Buzby <tim.buzby@enbridge.com>
Sent: Wednesday, January 6, 2021 10:14 AM
To: Tim Buzby; matthew.baran@enbridge.com; Shawn.Robison@enbridge.com; Denis.Blais@enbridge.com; Joe.Feist@enbridge.com; Christopher.Lombardi@enbridge.com; Christopher.Redman@enbridge.com; Nancy.Kist@enbridge.com; Barry.Goodrich@enbridge.com;

Blaine.Fritsche@enbridge.com; Max.Bergeron@enbridge.com; Williams, Glyn; John Tirrell; Derek Smith; John E. Scanlon

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; helen.wang@enbridge.com; Denis.Blais@swca.com; John.Bins@enbridge.com; kristopher.jackson@enbridge.com; Patrick.Brennan@nationalgrid.com

Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

When: Thursday, January 7, 2021 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Not the most convenient time, but the only one open for the majority of invitees. The purpose of the meeting is to discuss the attached email. The meeting will be led by Matt Baran and CHI.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Williams, Glyn](#)
To: [Konopka, Michael](#); [Louis, Chrisnor](#); [Simoneau, William J.](#)
Cc: [Loiacono, Paul J.](#); [Porcaro, Julie](#); [DellaCamera, Anthony](#); [Barrett, John F.](#); [Talbot III, John J.](#); [Brennan, Patrick J.](#); [Doherty, John E.](#); [Costa, Jason](#); [Romano, Michael](#); [Bleicken, Joshua](#); [Zaccari, Justin](#)
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Date: Wednesday, February 10, 2021 10:08:39 AM

Many Thanks Mike,

I'll get this back to Enbridge.

Glyn
781-402-4086

From: Konopka, Michael <Michael.Konopka@nationalgrid.com>
Sent: Wednesday, February 10, 2021 10:02 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>; Simoneau, William J. <William.Simoneau@nationalgrid.com>
Cc: Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Hey Glyn,
In regards to the check metering we would minimally need the following for each run to perform the AGA
-uncorrected pulse
-metering pressure
-metering temp
Please feel free to contact me if you have any questions.
Thanks
Mike Konopka
617-839-8497

From: Williams, Glyn
Sent: Wednesday, February 10, 2021 9:37 AM
To: Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>; Simoneau, William J. <William.Simoneau@nationalgrid.com>; Konopka, Michael <Michael.Konopka@nationalgrid.com>
Cc: Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>;

Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>

Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Importance: High

Hi,

1. It looks like we will see a 60% Tiverton drawing set on 2/12, and a design review meeting on 2/22
2. [@Louis, Chrisnor](#), [@Simoneau, William J.](#), [@Konopka, Michael](#) – Can you let us know more about what you want to see for a check metering signal?

These are two metering runs (primary and secondary), [REDACTED] meters they are proposing.

Thanks,

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, February 10, 2021 8:58 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Importance: High

Good Morning Glyn,

Just wanted to touch base regarding Tiverton –

I believe you are aware we are looking to move construction to 2022 , while finishing design by May of 2021.

- 60% Design Package from CHI is set to be transmitted on 2/12 for review and comment – I will set up a design review meeting the week of 2/22
- We will need to start performing our PHA processes using this package as well to ensure there are no issues that would affect further detail design

We have discussed internally the option of concrete buildings being the preferred type for this site and I believe are good to move forward with input from all the key stakeholders. We can further discuss the logistics after the 60% package is developed.

There is discussion that CHI still needs clarification on the "Check Metering Configuration" – has your team come to a conclusion on this? Our operations area manager relayed we have done both ways in the past

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Friday, January 22, 2021 8:43 AM
To: John Tirrell <John.Tirrell@nv5.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Blair Hasteley <Blair.Hasteley@enbridge.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>
Subject: [External] RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thanks for below questions John,

I've copied in our National Grid team and Blair Hasteley:

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

[REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

- [REDACTED]

Glyn
781-402-4086

From: John Tirrell <John.Tirrell@nv5.com>
Sent: Friday, January 22, 2021 9:05 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Glyn,
We have the following questions on your comments:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Thank you,

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, January 20, 2021 9:29 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Matt and All,

Attached are some comments to the P&IDs and below documents that we discussed at the field visit last Wednesday.

I have also attached a copy of the National Grid piping specification, this is to help on the BOM after the Enbridge / National Grid demarc point.

Great to meet everyone at site last week.

If there are any questions on the National Grid comments, just let me know.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, January 11, 2021 11:59 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Morning Team,

Please see the attached engineering deliverables reflecting last meeting's discussion –

1. Revised conceptual site plan on existing conditions plan
2. Revised P&IDs

3. Revised Design Basis Memo with civil design data added
4. Preliminary Bill of Materials

Please review the preliminary design for comment as we look to generate our 60% Design Package, currently set for transmittal on 1/22 –

Good luck to everyone traveling to the site this week!

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Matthew Baran

Sent: Thursday, January 7, 2021 4:19 PM

To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Patrick.Brennan@nationalgrid.com

Subject: RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Team,

Please see the attached Meeting Minutes from today's discussion –

The primary action items are as followed

- Site Visit planned for 1/13, 10am – Shawn Robison to coordinate with CHI/NG personnel
- ROW to begin contacting site LO's to get permission to Env./Culturally survey the area outside our existing easement – Enbridge
- Now that the site configuration has a starting consensus, project building layouts onto the existing survey conditions for site visit use (rotate buildings to attempt to fit into existing

easement) – CHI

Thanks again all that were able to attend,

Much Appreciated,
 Happy New Year!

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Tim Buzby <tim.buzby@enbridge.com>
Sent: Wednesday, January 6, 2021 10:14 AM
To: Tim Buzby; matthew.baran@enbridge.com; Shawn.Robison@enbridge.com; Denis.Blais@enbridge.com; Joe.Feist@enbridge.com; Christopher.Lombardi@enbridge.com; Christopher.Redman@enbridge.com; Nancy.Kist@enbridge.com; Barry.Goodrich@enbridge.com; Blaine.Fritsche@enbridge.com; Max.Bergeron@enbridge.com; Williams, Glyn; John Tirrell; Derek Smith; John E. Scanlon
Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; helen.wang@enbridge.com; Denis.Blais@swca.com; John.Bins@enbridge.com; kristopher.jackson@enbridge.com; Patrick.Brennan@nationalgrid.com
Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
When: Thursday, January 7, 2021 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Not the most convenient time, but the only one open for the majority of invitees. The purpose of the meeting is to discuss the attached email. The meeting will be led by Matt Baran and CHI.

Microsoft Teams meeting

Join on your computer or mobile app
[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Konopka, Michael](#)
To: [Williams, Glyn](#); [Louis, Chrisnor](#); [Simoneau, William J.](#)
Cc: [Loiacono, Paul J.](#); [Porcaro, Julie](#); [DellaCamera, Anthony](#); [Barrett, John F.](#); [Talbot III, John J.](#); [Brennan, Patrick J.](#); [Doherty, John E.](#); [Costa, Jason](#); [Romano, Michael](#); [Bleicken, Joshua](#); [Zaccari, Justin](#)
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Date: Wednesday, February 10, 2021 10:02:27 AM

Hey Glyn,
 In regards to the check metering we would minimally need the following for each run to perform the AGA
 -uncorrected pulse
 -metering pressure
 -metering temp
 Please feel free to contact me if you have any questions.
 Thanks
 Mike Konopka
 617-839-8497

From: Williams, Glyn
Sent: Wednesday, February 10, 2021 9:37 AM
To: Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>; Simoneau, William J. <William.Simoneau@nationalgrid.com>; Konopka, Michael <Michael.Konopka@nationalgrid.com>
Cc: Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Importance: High

Hi,

1. It looks like we will see a 60% Tiverton drawing set on 2/12, and a design review meeting on 2/22
2. [@Louis, Chrisnor](#), [@Simoneau, William J.](#), [@Konopka, Michael](#) – Can you let us know more about what you want to see for a check metering signal?

These are two metering runs (primary and secondary), [REDACTED] meters they are proposing.

Thanks,

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, February 10, 2021 8:58 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Importance: High

Good Morning Glyn,

Just wanted to touch base regarding Tiverton –

I believe you are aware we are looking to move construction to 2022 , while finishing design by May of 2021.

- 60% Design Package from CHI is set to be transmitted on 2/12 for review and comment – I will set up a design review meeting the week of 2/22
- We will need to start performing our PHA processes using this package as well to ensure there are no issues that would affect further detail design

We have discussed internally the option of concrete buildings being the preferred type for this site and I believe are good to move forward with input from all the key stakeholders. We can further discuss the logistics after the 60% package is developed.

There is discussion that CHI still needs clarification on the "Check Metering Configuration" – has your team come to a conclusion on this? Our operations area manager relayed we have done both ways in the past

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Friday, January 22, 2021 8:43 AM
To: John Tirrell <John.Tirrell@nv5.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>;

Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Brennan, Patrick J.
<Patrick.Brennan@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>;
Costa, Jason <Jason.Costa@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>;
Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Blair Hasteley <Blair.Hasteley@enbridge.com>;
Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Loiacono, Paul J.
<Paul.Loiacono@nationalgrid.com>; DellaCamera, Anthony
<Anthony.DellaCamera2@nationalgrid.com>; Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>
Subject: [External] RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thanks for below questions John,

I've copied in our National Grid team and Blair Hasteley:

- [Redacted]
- [Redacted]
- [Redacted]

I&R, Gas Control and SCADA – [Redacted]

- [Redacted]
- [Redacted]
- [Redacted]

Heater Selection

- [Redacted]

Glyn
781-402-4086

From: John Tirrell <John.Tirrell@nv5.com>
Sent: Friday, January 22, 2021 9:05 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>

Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Glyn,

We have the following questions on your comments:

[REDACTED]

Thank you,

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>

Sent: Wednesday, January 20, 2021 9:29 AM

To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>

Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Matt and All,

Attached are some comments to the P&IDs and below documents that we discussed at the field visit last Wednesday.

I have also attached a copy of the National Grid piping specification, this is to help on the BOM after the Enbridge / National Grid demarc point.

Great to meet everyone at site last week.

If there are any questions on the National Grid comments, just let me know.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, January 11, 2021 11:59 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Morning Team,

Please see the attached engineering deliverables reflecting last meeting's discussion –

1. Revised conceptual site plan on existing conditions plan
2. Revised P&IDs
3. Revised Design Basis Memo with civil design data added
4. Preliminary Bill of Materials

Please review the preliminary design for comment as we look to generate our 60% Design Package, currently set for transmittal on 1/22 –

Good luck to everyone traveling to the site this week!

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
Safety. Integrity. Respect.

From: Matthew Baran

Sent: Thursday, January 7, 2021 4:19 PM

To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Patrick.Brennan@nationalgrid.com

Subject: RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Team,

Please see the attached Meeting Minutes from today's discussion –

The primary action items are as followed

- Site Visit planned for 1/13, 10am – Shawn Robison to coordinate with CHI/NG personnel
- ROW to begin contacting site LO's to get permission to Env./Culturally survey the area outside our existing easement – Enbridge
- Now that the site configuration has a starting consensus, project building layouts onto the existing survey conditions for site visit use (rotate buildings to attempt to fit into existing easement) – CHI

Thanks again all that were able to attend,

Much Appreciated,
 Happy New Year!

Matthew Baran

Pipeline Engineer
 Project Operations Management
 —

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Tim Buzby <tim.buzby@enbridge.com>

Sent: Wednesday, January 6, 2021 10:14 AM

To: Tim Buzby; matthew.baran@enbridge.com; Shawn.Robison@enbridge.com; Denis.Blais@enbridge.com; Joe.Feist@enbridge.com; Christopher.Lombardi@enbridge.com;

Christopher.Redman@enbridge.com; Nancy.Kist@enbridge.com; Barry.Goodrich@enbridge.com; Blaine.Fritsche@enbridge.com; Max.Bergeron@enbridge.com; Williams, Glyn; John Tirrell; Derek Smith; John E. Scanlon

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; helen.wang@enbridge.com; Denis.Blais@swca.com; John.Bins@enbridge.com; kristopher.jackson@enbridge.com; Patrick.Brennan@nationalgrid.com

Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

When: Thursday, January 7, 2021 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Not the most convenient time, but the only one open for the majority of invitees. The purpose of the meeting is to discuss the attached email. The meeting will be led by Matt Baran and CHI.

Microsoft Teams meeting

Join on your computer or mobile app
[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Matthew Baran](#)
To: [Williams, Glyn](#)
Cc: [Soroka, Stephen](#); [Zaccari, Justin](#); [Bleicken, Joshua](#)
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Date: Tuesday, February 23, 2021 1:21:44 PM

Good Afternoon Guys,

I have sent out the PHA request to our Vendor's relaying to them that we would look to hopefully hold this PHA session the week of 3/8 –

Just wanted to follow up here on the National Grid side and if you believe this NG gating process/PHA session can be complete near this date so we can move towards the 90% package with these requirements complete/be able to implement any necessary changes arising from these sessions.

Much Appreciated,

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, February 17, 2021 8:00 AM
To: Matthew Baran <matthew.baran@enbridge.com>
Cc: Soroka, Stephen <Stephen.Soroka@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt,

I've added Steve Soroka, Justin Zaccari and Josh Bleicken above.

From an asset perspective, they can advise our thoughts on the NG PHA / LOPA requirements.

Glyn
 781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Tuesday, February 16, 2021 4:21 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Glyn,

Hope all is well, I wanted to touch base on the Tiverton scheduling now that we are moving construction to 2022 –

Currently this is the schedule I am looking to lock in, allowing more design review time:

60% Package – 2/12, Start PHA/LOPA processes

60% Review – 3/3

PHA/LOPA Meetings – 3/10

- (4 weeks for NG/Enbridge, PHA/LOPA review to ensure base design is confirmed and no costly rework is needed)

90% Package – 3/3 - 3/26 (3 weeks to generate)

90% Review – 4/7

- (2 weeks for NG/Enbridge to review)

IFB Package – 4/8 – 4/22 (2 weeks to generate)

IFB Review – 4/29

- (1 week for NG/Enbridge to review)

IFC Package – 4/30 – 5/14

- (2 weeks for NG/Enbridge to relay any last minute comments before the package is stamped)

- **Can you provide some context on the NG PHA/LOPA processes and their duration?** Are we able to begin those processes using this package?
- Does this schedule look achievable to ensure those processes are completed and we can move forward with design?

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, February 10, 2021 9:22 AM
To: Matthew Baran <matthew.baran@enbridge.com>

Subject: [External] RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt,

For check metering we are looking at the following:

This would be on each rotary meter run:

uncorrected pulse

- [Redacted]
- [Redacted]

metering pressure

- [Redacted]
- [Redacted]

metering temp

- [Redacted]
- [Redacted]

Just let me know if you need any more information at this stage. We can provide the exact model #'s of pressure and temperature transmitters through the design comments.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, February 10, 2021 8:58 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Importance: High

Good Morning Glyn,

Just wanted to touch base regarding Tiverton –

I believe you are aware we are looking to move construction to 2022 , while finishing design by May

of 2021.

- 60% Design Package from CHI is set to be transmitted on 2/12 for review and comment – I will set up a design review meeting the week of 2/22
- We will need to start performing our PHA processes using this package as well to ensure there are no issues that would affect further detail design

We have discussed internally the option of concrete buildings being the preferred type for this site and I believe are good to move forward with input from all the key stakeholders. We can further discuss the logistics after the 60% package is developed.

There is discussion that CHI still needs clarification on the "Check Metering Configuration" – has your team come to a conclusion on this? Our operations area manager relayed we have done both ways in the past

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>

Sent: Friday, January 22, 2021 8:43 AM

To: John Tirrell <John.Tirrell@nv5.com>

Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>

Subject: [External] RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thanks for below questions John,

I've copied in our National Grid team and Blair Hasteley:

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]

I&R, Gas Control and SCADA – [Redacted]
[Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]

Heater Selection

- [Redacted]

Glyn
781-402-4086

From: John Tirrell <John.Tirrell@nv5.com>
Sent: Friday, January 22, 2021 9:05 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Glyn,
We have the following questions on your comments:

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Thank you,

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, January 20, 2021 9:29 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Matt and All,

Attached are some comments to the P&IDs and below documents that we discussed at the field visit last Wednesday.

I have also attached a copy of the National Grid piping specification, this is to help on the BOM after the Enbridge / National Grid demarc point.

Great to meet everyone at site last week.

If there are any questions on the National Grid comments, just let me know.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, January 11, 2021 11:59 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F.

<John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>;
Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson
<kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>

Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Morning Team,

Please see the attached engineering deliverables reflecting last meeting's discussion –

1. Revised conceptual site plan on existing conditions plan
2. Revised P&IDs
3. Revised Design Basis Memo with civil design data added
4. Preliminary Bill of Materials

Please review the preliminary design for comment as we look to generate our 60% Design Package, currently set for transmittal on 1/22 –

Good luck to everyone traveling to the site this week!

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Matthew Baran

Sent: Thursday, January 7, 2021 4:19 PM

To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Patrick.Brennan@nationalgrid.com

Subject: RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Team,

Please see the attached Meeting Minutes from today's discussion –

The primary action items are as followed

- Site Visit planned for 1/13, 10am – Shawn Robison to coordinate with CHI/NG personnel
- ROW to begin contacting site LO's to get permission to Env./Culturally survey the area outside our existing easement – Enbridge
- Now that the site configuration has a starting consensus, project building layouts onto the existing survey conditions for site visit use (rotate buildings to attempt to fit into existing easement) – CHI

Thanks again all that were able to attend,

Much Appreciated,
Happy New Year!

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Tim Buzby <tim.buzby@enbridge.com>
Sent: Wednesday, January 6, 2021 10:14 AM
To: Tim Buzby; matthew.baran@enbridge.com; Shawn.Robison@enbridge.com; Denis.Blais@enbridge.com; Joe.Feist@enbridge.com; Christopher.Lombardi@enbridge.com; Christopher.Redman@enbridge.com; Nancy.Kist@enbridge.com; Barry.Goodrich@enbridge.com; Blaine.Fritsche@enbridge.com; Max.Bergeron@enbridge.com; Williams, Glyn; John Tirrell; Derek Smith; John E. Scanlon
Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; helen.wang@enbridge.com; Denis.Blais@swca.com; John.Bins@enbridge.com; kristopher.jackson@enbridge.com; Patrick.Brennan@nationalgrid.com
Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
When: Thursday, January 7, 2021 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Not the most convenient time, but the only one open for the majority of invitees. The purpose of the meeting is to discuss the attached email. The meeting will be led by Matt Baran and CHI.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Blair Hastey](#)
To: [Bleicken Joshua](#)
Cc: [Backus Katie E.](#); [Zaccari Justin](#); [DeAndra Black](#)
Subject: RE: EXT || RI - Wampanoag and Tiverton Heater Replacement
Date: Thursday, September 9, 2021 12:25:53 PM
Attachments: [image001.png](#)
[DeAndra Black.vcf](#)

Joshua,

Per our earlier conversation please have your inhouse counsel reach out to DeAndra Black, Enbridge in house counsel with any questions or concerns they may have. Contact information below:



DeAndra Black
PanEnergy Services, LP
Legal Counsel
Assoc General Counsel - NE US
+1 (713) 627-6053 Work
800-5350 Work
+1 (281) 299-4028 Mobile
DeAndra.Black@enbridge.com
5400 Westheimer Ct
Houston, TX 77056

Thanks,

Blair Hastey

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Blair Hastey

Sent: Monday, August 23, 2021 1:30 PM

To: 'Bleicken, Joshua' <Joshua.Bleicken@nationalgrid.com>

Cc: Backus, Katie E. <Katie.Backus@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>

Subject: RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

Joshua,

Following up on our conversation last week. please see attached prefunding letters for tiverton and wampanog trail.

In the interest of maintaining project in service of 2022 ISD, this would allow for funding of the projects projects through the remainder of 2021. Primary activities would include the procurement of long lead items, deign continuation, and file for air permits. Prior to the end of ye year we would execute O&M agreements that would govern the Operation and Maintenance of the facilities, deal with the transfer of ownership, and the remaining funding for the completion of the project.

Thanks,

Blair Hastey

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>

Sent: Tuesday, July 27, 2021 3:47 PM

To: Blair Hastey <Blair.Hastey@enbridge.com>

Cc: Backus, Katie E. <Katie.Backus@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>

Subject: [External] RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize

the sender or know the content is safe.

Discussions are occurring with senior leadership on this topic and we need their approval before we can move forward. We want to move this forward as quickly as we can, but we need to make sure on our side that we work through any cost and rate issues before entering into the agreement.

Thank you,

Joshua Bleicken
 Manager
 Pressure Regulation
nationalgrid
 1-781-491-7710
 1-781-907-1977
Joshua.Bleicken@nationalgrid.com
 Reservoir Woods, 40 Sylvan Rd
nationalgridus.com

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Tuesday, July 27, 2021 10:36 AM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Cc: Backus, Katie E. <Katie.Backus@nationalgrid.com>
Subject: RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

Hi Joshua – just touching base on this to see if there is any clarity on path forward. ideally we would find some path forward in the coming weeks as if we push much beyond that we could be at risk of putting our 2022 ISD in jeopardy.

Blair Hastey
 Business Development

ENBRIDGE
 TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451
enbridge.com
 Safety. Integrity. Respect.

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Thursday, June 24, 2021 1:37 PM
To: Blair Hastey <Blair.Hastey@enbridge.com>
Cc: Backus, Katie E. <Katie.Backus@nationalgrid.com>
Subject: [External] RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Joshua Bleicken
 Manager
 Pressure Regulation
nationalgrid
 1-781-491-7710
 1-781-907-1977
Joshua.Bleicken@nationalgrid.com
 Reservoir Woods, 40 Sylvan Rd
nationalgridus.com

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Thursday, June 24, 2021 1:26 PM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

Hi Josh,

The [REDACTED] range is an estimate of cost allocation based on asset ownership. We have not looked at the total break down of cost allocation based on asset allocation so this was a quick look and felt best to represent as a range.

We will be able to refine the cost allocation over the coming months as the design and project cost is firmed up but the Project Manager felt tha [REDACTED] NG ownership was in the ballpark.

Blair Haste

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Thursday, June 24, 2021 1:20 PM
To: Blair Haste <Blair.Haste@enbridge.com>
Subject: [External] RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

at is the difference in the ownership asset wise?

Thank you,

Joshua Bleicken

Manager

Pressure Regulation

nationalgrid

1-781-491-7710

1-781-907-1977

Joshua.Bleicken@nationalgrid.com

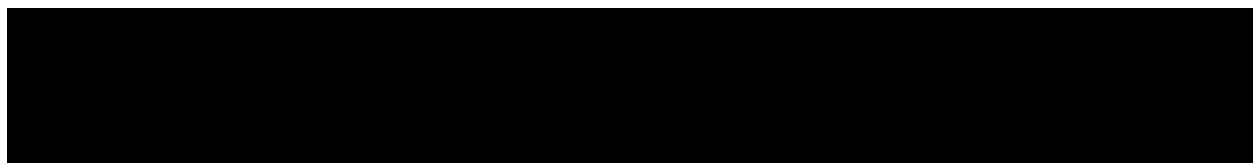
Reservoir Woods, 40 Sylvan Rd

nationalgridus.com

From: Blair Haste <Blair.Haste@enbridge.com>
Sent: Thursday, June 24, 2021 11:19 AM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: EXT || RI - Wampanoag and Tiverton Heater Replacement

Josh,

Following up on our earlier conversation, based on asset ownership when projects are complete, the approximate project cost breakdown would be as shown below. These are rough numbers based on our current Class 5 estimate +/-50% and would be refined as we advance through the project development process.



The intent on path forward at this time would be to execute a letter agreement between National Grid and AGT recognizing the reimbursement . To maintain a 2022 ISD for these projects it would be ideal to have this executed in July. Prior tin Inservice Enbridge and National grid would work to execute a O&M agreement reflective of the ownership arrangement and facilitate the transfer of asset ownership.

Let me know if you have any questions or concerns on approach. If none I can work with Legal to get you an updated letter agreement

reflective of the reimbursement approach.

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link:

<https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Blair Hastey](#)
To: [Bleicken, Joshua](#)
Cc: [Backus, Katie E.](#); [Zaccari, Justin](#)
Subject: RE: EXT || RI - Wampanoag and Tiverton Heater Replacement
Date: Tuesday, July 27, 2021 4:41:37 PM
Attachments: [image001.png](#)

Understood. Let me know if there is anything more I can provide to support your discussions.

Blair Hastey

Business Development

ENBRIDGE
TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

[enbridge.com](#)
Safety. Integrity. Respect.

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Tuesday, July 27, 2021 3:47 PM
To: Blair Hastey <Blair.Hastey@enbridge.com>
Cc: Backus, Katie E. <Katie.Backus@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Subject: [External] RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Blair,
Discussions are occurring with senior leadership on this topic and we need their approval before we can move forward. We want to move this forward as quickly as we can, but we need to make sure on our side that we work through any cost and rate issues before entering into the agreement.

Thank you,

Joshua Bleicken
Manager
Pressure Regulation
nationalgrid
1-781-491-7710
1-781-907-1977
Joshua.Bleicken@nationalgrid.com
Reservoir Woods, 40 Sylvan Rd
nationalgridus.com

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Tuesday, July 27, 2021 10:36 AM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Cc: Backus, Katie E. <Katie.Backus@nationalgrid.com>
Subject: RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

Hi Joshua – just touching base on this to see if there is any clarity on path forward. ideally we would find some path forward in the coming weeks as if we push much beyond that we could be at risk of putting our 2022 ISD in jeopardy.

Blair Hastey

Business Development

ENBRIDGE
TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

[enbridge.com](#)
Safety. Integrity. Respect.

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Thursday, June 24, 2021 1:37 PM
To: Blair Hastey <Blair.Hastey@enbridge.com>

Cc: Backus, Katie E. <Katie.Backus@nationalgrid.com>
Subject: [External] RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thank you Blair.

Joshua Bleicken
Manager
Pressure Regulation
nationalgrid
1-781-491-7710
1-781-907-1977
Joshua.Bleicken@nationalgrid.com
Reservoir Woods, 40 Sylvan Rd
nationalgridus.com

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Thursday, June 24, 2021 1:26 PM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

Hi Josh,

The [REDACTED] is an estimate of cost allocation based on asset ownership. We have not looked at the total break down of cost allocation based on asset allocation so this was a quick look and felt best to represent as a range.

We will be able to refine the cost allocation over the coming months as the design and project cost is firmed up but the Project Manager felt that [REDACTED] NG ownership was in the ballpark.

Blair Hastey
Business Development
—
ENBRIDGE
TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451
enbridge.com
Safety. Integrity. Respect.

From: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Sent: Thursday, June 24, 2021 1:20 PM
To: Blair Hastey <Blair.Hastey@enbridge.com>
Subject: [External] RE: EXT || RI - Wampanoag and Tiverton Heater Replacement

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thank you Blair. For clarity on my end, in this table are there two options for each project? One where National Grid would own [REDACTED] and the other scenario would be that National Grid would own [REDACTED]. If that is the case what is the difference in the ownership asset wise?

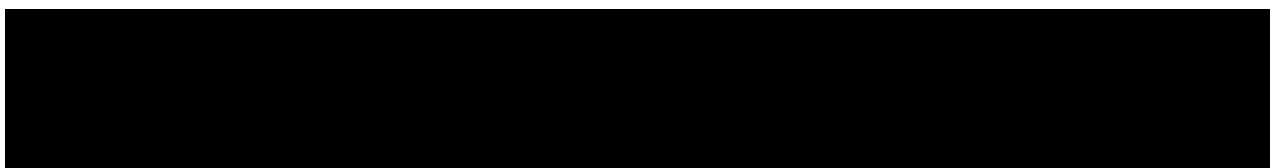
Thank you,

Joshua Bleicken
Manager
Pressure Regulation
nationalgrid
1-781-491-7710
1-781-907-1977
Joshua.Bleicken@nationalgrid.com
Reservoir Woods, 40 Sylvan Rd
nationalgridus.com

From: Blair Hasteley <Blair.Hasteley@enbridge.com>
Sent: Thursday, June 24, 2021 11:19 AM
To: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: EXT || RI - Wampanoag and Tiverton Heater Replacement

Josh,

Following up on our earlier conversation, based on asset ownership when projects are complete, the approximate project cost breakdown would be as shown below. These are rough numbers based on our current Class 5 estimate +/-50% and would be refined as we advance through the project development process.



The intent on path forward at this time would be to execute a letter agreement between National Grid and AGT recognizing the reimbursement . To maintain a 2022 ISD for these projects it would be ideal to have this executed in July. Prior tin Inservice Enbridge and National grid would work to execute a O&M agreement reflective of the ownership arrangement and facilitate the transfer of asset ownership.

Let me know if you have any questions or concerns on approach. If none I can work with Legal to get you an updated letter agreement reflective of the reimbursement approach.

Thanks,

Blair Hasteley

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link:

<https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Williams, Glyn](#)
To: [Barrett, John F.](#); [Bleicken, Joshua](#); [Brennan, Patrick J.](#); [DellaCamera, Anthony](#); [Loiacono, Paul J.](#); [Porcaro, Julie](#); [Romano, Michael](#); [Talbot III, John J.](#); [Zaccari, Justin](#); [Jaffe, Samara A. \(Marketing\)](#)
Cc: [Blair Haste](#); [Backus, Katie E.](#)
Subject: RE: EXT || Tiverton - Project Review
Date: Monday, April 12, 2021 12:49:34 PM

Hello All,

Blair Haste (cc'd) is looking to organize a meeting to confirm the approach and path forward on Tiverton M&R station work.

Looking at our calendars, does **Friday April 16th 1pm to 2:30pm suit?**

Glyn
 781-402-4086

From: Blair Haste <Blair.Haste@enbridge.com>
Sent: Friday, April 09, 2021 12:47 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: EXT || Tiverton - Project Review

Hey Glyn,

Our engineering Development group has finalized the project proposal for the Tiverton M&R station work. I would like to review with you and your team to confirm approach and path forward.

We have the following availability:

Wednesday April 14 2:30-4PM
 Thursday April 15 10AM – 11Am or 1PM – 2 PM
 Friday April 16 9AM – 2PM

Let me know what works best for your team and I will send out an invite.

Thanks,

Blair Haste
 Business Development
 —

ENBRIDGE
 TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: [Iman Khosravifard](#)
To: [Williams, Glyn](#); [Blair Hastey](#); [Bleicken, Joshua](#); [Greco, Stephen P.](#); [Zaccari, Justin](#)
Cc: [Joseph Dellaquila](#); [William Diaz](#); [Jaffe, Samara A. \(Marketing\)](#); [Christopher Lombardi](#)
Subject: RE: RE: EXT || East Providence AGT MR010 (Wampanoag Trail) – Heater Replacement Project - NGRID Questions
Date: Thursday, November 26, 2020 8:22:18 PM
Attachments: [External RE RE EXT East Providence AGT MR010 \(Wampanoag Trail\) Heater Replacement Project - NGRID Questions.msg](#)
[Enbridge \[REDACTED\] Heater Quote East Providence 11-5-20.pdf](#)

Hi Glyn,

We have received quotation for now form [REDACTED] based on the information below. Cost of the heaters dropped by ~9% per attached email. Suggest we keep the original pricing as part of the project budget since during detail design, there could be additions or further changes which will impact the cost.

Happy thanksgiving .

Please let us know if there are nay further comments at this point. Thanks

Iman Khosravifard, P.Eng., M.Eng., PMP

Project Development Engineer,
 Core Projects

ENBRIDGE

CELL: 778-889-4942 | Iman.Khosravifard@Enbridge.com
 Suite 2600, 425 1st Street SW, Fifth Avenue Place, East Tower, Calgary AB T2P 3L8
www.enbridge.com
Integrity. Safety. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, October 28, 2020 5:38 AM
To: Blair Hastey <Blair.Hastey@enbridge.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Greco, Stephen P. <Stephen.Greco@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Cc: Iman Khosravifard <Iman.Khosravifard@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; Jaffe, Samara A. (Marketing) <Samara.Jaffe@nationalgrid.com>
Subject: [External] Re: RE: EXT || East Providence AGT MR010 (Wampanoag Trail) – Heater Replacement Project - NGRID Questions

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thanks Blair and All,

From a technical perspective we have now agreed our newer [REDACTED] controls design for waterbath hears with [REDACTED]. This is relevant to a number of heater projects we have and would look to use the design for the two heaters on this project.

Please see attached. Ignore the "Milton" reference

This has been discussed on other projects with Peter Udoenko and Mike Ingle at [REDACTED].

When it is time to purchase these heaters, it should be specced per the attached P&ID (rather than the older quote in the E. Prov MR report.).

From what we are getting back, this heater design is also less expensive than the Crary St vintage, due to a more streamlined controls package.

We can discuss more, I wanted to let you know initially.

Glyn

From: Blair Hasteley <Blair.Hasteley@enbridge.com>
Sent: Tuesday, October 27, 2020 6:57 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Greco, Stephen P. <Stephen.Greco@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Cc: Iman Khosravifard <Iman.Khosravifard@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; Jaffe, Samara A. (Marketing) <Samara.Jaffe@nationalgrid.com>
Subject: RE: RE: EXT || East Providence AGT MR010 (Wampanoag Trail) – Heater Replacement Project - NGRID Questions

Glyn,

As a follow-up to our meeting in September we have updated the heater proposal to reflect the agreed upon 2022 ISD and a few other items as discussed. Please see attached with revisions indicated in red.

Please let me know if you have any questions.

Thanks,

Blair Hasteley
 Business Development

ENBRIDGE
 TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Blair Hastey

Sent: Monday, September 14, 2020 10:08 AM

To: Blair Hastey; Williams, Glyn; Bleicken, Joshua; Greco, Stephen P.; Zaccari, Justin

Cc: Iman Khosravifard; Joseph Dellaquila; William Diaz

Subject: RE: EXT || East Providence AGT MR010 (Wampanoag Trail) – Heater Replacement Project - NGRID Questions

When: Thursday, September 17, 2020 11:30 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

All,

Please see attached RI heater replacement proposal for your review. Would like to use the time to provide a brief overview of the proposal and discuss schedule and next steps.

Agenda

- Proposal overview – 15 min – Iman
- Schedule discussion – 10 min – Iman/ group
- Next steps – 5 min – Group

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

[Join Microsoft Teams Meeting](#)

[Learn more about Teams](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the

intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Williams, Glyn](#)
To: [John Tirrell](#)
Cc: [Matthew Baran](#); [Derek Smith](#); [Bruce T. Madore](#); [Talbot III, John J.](#); [Barrett, John F.](#); [Doherty, John E.](#); [Ebert, Gregory](#); [Brennan, Patrick J.](#); [Romano, Michael](#); [Costa, Jason](#); [Zaccari, Justin](#); [Bleicken, Joshua](#); [Blair Hastey](#); [Porcaro, Julie](#); [Loiacono, Paul J.](#); [DellaCamera, Anthony](#); [Louis, Chrisnor](#)
Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Date: Friday, January 22, 2021 9:42:55 AM

Thanks for below questions John,

I've copied in our National Grid team and Blair Hastey:

- [REDACTED]
- [REDACTED]
 - [REDACTED]
 - [REDACTED]

I&R, Gas Control and SCADA – [REDACTED]

- [REDACTED]
- [REDACTED]
 - [REDACTED]
 - [REDACTED]

Heater Selection

- [REDACTED].

Glyn
781-402-4086

From: John Tirrell <John.Tirrell@nv5.com>
Sent: Friday, January 22, 2021 9:05 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Glyn,
We have the following questions on your comments:

- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

Thank you,

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, January 20, 2021 9:29 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Matt and All,

Attached are some comments to the P&IDs and below documents that we discussed at the field visit last Wednesday.

I have also attached a copy of the National Grid piping specification, this is to help on the BOM after the Enbridge / National Grid demarc point.

Great to meet everyone at site last week.

If there are any questions on the National Grid comments, just let me know.

Glyn
 781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, January 11, 2021 11:59 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison

<Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>

Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Morning Team,

Please see the attached engineering deliverables reflecting last meeting's discussion –

1. Revised conceptual site plan on existing conditions plan
2. Revised P&IDs
3. Revised Design Basis Memo with civil design data added
4. Preliminary Bill of Materials

Please review the preliminary design for comment as we look to generate our 60% Design Package, currently set for transmittal on 1/22 –

Good luck to everyone traveling to the site this week!

Much Appreciated,

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

From: Matthew Baran

Sent: Thursday, January 7, 2021 4:19 PM

To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron

<Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Patrick.Brennan@nationalgrid.com

Subject: RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Team,

Please see the attached Meeting Minutes from today's discussion –

The primary action items are as followed

- Site Visit planned for 1/13, 10am – Shawn Robison to coordinate with CHI/NG personnel
- ROW to begin contacting site LO's to get permission to Env./Culturally survey the area outside our existing easement – Enbridge
- Now that the site configuration has a starting consensus, project building layouts onto the existing survey conditions for site visit use (rotate buildings to attempt to fit into existing easement) – CHI

Thanks again all that were able to attend,

Much Appreciated,
Happy New Year!

Matthew Baran

Pipeline Engineer

Project Operations Management

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Tim Buzby <tim.buzby@enbridge.com>

Sent: Wednesday, January 6, 2021 10:14 AM

To: Tim Buzby; matthew.baran@enbridge.com; Shawn.Robison@enbridge.com; Denis.Blais@enbridge.com; Joe.Feist@enbridge.com; Christopher.Lombardi@enbridge.com; Christopher.Redman@enbridge.com; Nancy.Kist@enbridge.com; Barry.Goodrich@enbridge.com; Blaine.Fritsche@enbridge.com; Max.Bergeron@enbridge.com; Williams, Glyn; John Tirrell; Derek Smith; John E. Scanlon

Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; helen.wang@enbridge.com; Denis.Blais@swca.com; John.Bins@enbridge.com; kristopher.jackson@enbridge.com; Patrick.Brennan@nationalgrid.com

Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

When: Thursday, January 7, 2021 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Not the most convenient time, but the only one open for the majority of invitees. The purpose of the meeting is to discuss the attached email. The meeting will be led by Matt Baran and CHI.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

From: [Alex Ahlstedt](#)
To: [Williams, Glyn](#); [Steven Flanagan](#); [Charles Peabody](#); [Mitchell McNally](#); [Nikki Bruno](#); [William Diaz](#); [Blair Haste](#)
Cc: [Romano, Michael](#); [Talbot III, John J.](#); [Loiacono, Paul J.](#); [Zaccari, Justin](#); [Brennan, Patrick J.](#); [Calliri, Stephen A.](#); [Porcaro, Julie](#); [Barrett, John F.](#)
Subject: EXT || [WARNING: ATTACHMENT(S) MAY CONTAIN MALWARE]East Providence Heater Replacement Kickoff
Attachments: [RFQ Bath Heater EPV 02152019.doc](#)

Agenda

- * Existing Scope of Work
- * Enbridge Team

- * Chuck Peabody (PM)
- * Alex Ahlstedt (SME)
- * Mitch McNally (Tech Specialist)
- * William Diaz (Area Supv)
- * Nikki Bruno/Blair Haste (Business Development)

- * Confirmation of National Grid Team
- * National Grid Specification (Provided to Enbridge by Matt Coombs, National Grid)



- * Quantity of 2 independent units with 2 burners each
- * Each unit sized for 75% capacity

- * Enbridge Specification
- * Cost
- * Additional Scope of Work

- * Yard Piping
- * Work Space

- * Moving Forward

- * Schedule
- * Third Party Engineering Services

Join Skype Meeting <+1-403-910-1272 Calgary, AB <tel:+1-403-910-1272 Calgary, AB> (All - Enbridge (condensed)) English (United States)
+1-226-312-2069 Chatham, ON <tel:+1-226-312-2069 Chatham, ON> (All - Enbridge (condensed)) English (United States)
+1-587-773-1984 Edmonton, AB <tel:+1-587-773-1984 Edmonton, AB> (All - Enbridge (condensed)) English (United States)
+1-647-317-0410 Toronto, ON (GTA) <tel:+1-647-317-0410 Toronto, ON (GTA)> (All - Enbridge (condensed)) English (United States)
+1-713-904-7540 Houston, TX <tel:+1-713-904-7540 Houston, TX> (All - Enbridge (condensed)) English (United States)
+1-715-718-3265 Superior, WI <tel:+1-715-718-3265 Superior, WI> (All - Enbridge (condensed)) English (United States)
+1-855-342-0119 Toll Free North America <tel:+1-855-342-0119 Toll Free North America> (All - Enbridge (condensed)) English (United States)
*CONF (*2663) - Enbridge Cisco Phone <tel:*CONF (*2663) - Enbridge Cisco Phone> (All - Enbridge (condensed)) English (United States)
Find a local number <[256](https://urldefense.proofpoint.com/v2/url?u=https-3A__o15.officeredir.microsoft.com_r_rlidLync15-3Fclid-3D1033-26p1-3D5-26p2-3D2009&d=DwMFAw&c=WbK6BDuf146pNwv5f7dvs35K1Thiirbhi_liRKAf80c&r=DcNxazi51ms92m3p-Ftel-EAjanL-CN4VF0En4Vx500&m=qez5wfUPGNGTqlErbBZdWsdJRoBqJcgSuRmj9Oon514&s=fwzUbdDA7kpYjwiNEecaNCBIVpDsnRRXThnB6YiLXY&e=> [!OC([1033])!]</p></div>
<div data-bbox=)

Williams, Glyn

From: Tim Buzby <tim.buzby@enbridge.com>
Sent: Tuesday, November 24, 2020 9:21 AM
To: William Brett; Barry Goodrich; Matthew Baran; Christopher Redman; Nicholas Marter; Williams, Glyn; William Diaz
Cc: Timothy Ellis; John Tirrell; John E. Scanlon; Derek Smith; Loiacono, Paul J.; Bleicken, Joshua; Zaccari, Justin
Subject: EXT || RE: Outage Discussion for Tiverton MR 00033 Station

All,
 This email invitation was meant to go to Bill Brett and Barry Goodrich only, so no action required by everyone else. I couldn't recall the message. Sorry for the confusion.

Tim Buzby, PE

Engineering Project Manager III, CORE Project Development - USA

ENBRIDGE
 CELL: +1-281-684-6280
 5400 Westheimer Ct, Ste 5I-45, Houston, Texas, 77056

-----Original Appointment-----

From: Tim Buzby
Sent: Tuesday, November 24, 2020 8:07 AM
To: William Brett; Barry Goodrich
Subject: FW: Outage Discussion for Tiverton MR 00033 Station
When: Tuesday, November 24, 2020 10:30 AM-11:30 AM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Gentlemen,
 This meeting is to specifically discuss the outage, but I thought you both might want to attend to understand what the alternat source will be and how that affects each of your respective responsibilities. I believe a skid will be positioned on site to replace the equipment while it is being replaced. I don't know that but that is the purpose of today's meeting. The outage or temporary arrangement could be anywhere from 2 weeks to 2 months.

-----Original Appointment-----

From: Tim Buzby
Sent: Thursday, November 19, 2020 4:24 PM
To: Tim Buzby; Matthew Baran; Christopher Redman; Nicholas Marter; Williams, Glyn; William Diaz
Cc: Timothy Ellis; John Tirrell; John E. Scanlon; Derek Smith; Loiacono, Paul J.; Bleicken, Joshua; Zaccari, Justin
Subject: Outage Discussion for Tiverton MR 00033 Station
When: Tuesday, November 24, 2020 10:30 AM-11:30 AM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Gentlemen,
 The purpose of this meeting is to specifically discuss taking an outage to tie in the new facility. We are at a point with the design that getting input from the group with options to determine the cost impact has bearing on the direction engineering will take with regards to modular vs. stick built. Please bring any ideas you have on how we can minimize service interruption.

Glyn,

Please distribute to the appropriate people within your organization.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

Williams, Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, December 9, 2020 6:54 PM
To: Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila
Cc: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno
Subject: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review
Attachments: MeetMin-12.09.20-30PerReviewTivertonMR033.docx

Good afternoon Team,

Please see the attached Meeting Minutes from the 30% Design Review –

ACTION ITEMS

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE	DUE DATE	STATUS	COMMENTS
1	Provide responses to the CHI inquiry list/ Provide preferred vendors list	NG		Open	
2	Finalize 30% Package Redlines and transmit	NG		Open	
3	Provide NG contact list	NG		Open	
4	Explore the feasibility of fitting the new equipment into the existing buildings	CHI		Open	Site Visit Needed
5	Plan Site Visit	Enbridge		Open	RI may be entering a lockdown
6	Perform Env. Survey to assess usability of existing easement	Enbridge		Open	
7	Identify the temp skids available that would be sized for this facility- if needed	Enbridge		Open	No Temp Skids in storage have heating element

Thanks again all that were able to attend,

Much Appreciated,

Matthew Baran

Pipeline Engineer
 Core Projects

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
 Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran
Sent: Friday, December 4, 2020 11:39 AM
To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo;

William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila
Cc: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno
Subject: RI Boiler at Tiverton MR00033 - 30% Design Review
When: Wednesday, December 9, 2020 1:30 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Good afternoon Team,

This meeting is to review the CHI generated 30% Design Package (attached) for comment so that we may further hone in on our detailed design.

- Please keep in mind this is a preliminary design to use as we discuss the outage details vs land acquisition options

The current scope direction is based off –

- o Tiverton MR0033 station has never been shut in before – Optimal time of the year for the outage is non-heating season (May-October)
- o The only source is Enbridge, thus hot taps will be required and located based on the modular (preferred) vs. stick built solution.
 - Service cannot be interrupted at all, it needs to remain continuous either via hot taps on the existing lines to allow a cutover to a modular system operating both concurrently until it the new system has been proven.
 - The existing system would be taken out of service and demo'd after that point.
- o CHI is exploring the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans
 - Temporary LNG operations not preferred due to the amount of outage time, workspace and risks considerations required
 - Temporary skid option to be further explored with Enbridge personnel

There was some difficulty in finding an open window for all the key stakeholders but I believe this is the best option for the Enbridge side

- Apologies to the National Grid Gas Control Folks that cannot make this time due – I am open to setting up a separate meeting to review if needed

On a scheduling note, CHI should incorporate the survey data received this week along with the key stakeholder comments gathered in this meeting, into the 60% drawing package to be issued on 01/06.

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting.

Much Appreciated,

Matthew Baran

Pipeline Engineer
 Core Projects
 —

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
 Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

Williams, Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Friday, November 22, 2019 3:50 PM
To: Day, Alexander J.
Cc: Brennan, Patrick J.; Romano, Michael; Barrett, John F.; Williams, Glyn; Brendan Boyce; Zaccari, Justin; Talbot III, John J.; Nikki Bruno; Greco, Stephen P.; William Diaz; Joseph Dellaquila; Joseph Bruno; MA-3Beacon Hill; Soroka, Stephen; Jaffe, Samara A. (Marketing); Alex Ahlstedt
Subject: EXT || RE: RI Master Review
Attachments: NG Markup of BB8216A BH.docx

Alec,
Please see updated RI Master agreement based on our meeting Thursday February 14th. Remaining comments are in relation to land ownership and N Grid Review of Sections 1-3 by Legal. We will require a separate session with a smaller group to work through some of the land clarifications. Give me a call at your earliest convenience to discuss best approach.

Thanks,
Blair Hastey
Business Development
—

ENBRIDGE
TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Blair Hastey
Sent: Wednesday, October 30, 2019 8:52 AM
To: Barrett, John F.; Williams, Glyn; Brendan Boyce; Zaccari, Justin; Talbot III, John J.; Nikki Bruno; Greco, Stephen P.; William Diaz; Joseph Dellaquila; Joseph Bruno; MA-3Beacon Hill (MA-3BCH@enbridge.com); Day, Alexander J.; Soroka, Stephen; Jaffe, Samara A. (Marketing); Alex Ahlstedt
Cc: Brennan, Patrick J.; Romano, Michael
Subject: RI Master Review
When: Thursday, November 14, 2019 1:30 PM-3:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where:

All,
The purpose of this meeting is to the RI master O&M agreement as modified in our June 12th meeting. The clean and redline versions attached are the same rev distributed August 9th. Please review or provide clarifying comments prior to meeting.

Thanks,
Blair Hastey
Business Development
—

ENBRIDGE
TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com
Safety. Integrity. Respect.

[Join Skype Meeting](#)

Trouble Joining? [Try Skype Web App](#)

Join by phone

[+1-403-910-1272 Calgary, AB](#) (All - Enbridge (condensed)) English (United States)

[+1-226-312-2069 Chatham, ON](#) (All - Enbridge (condensed)) English (United States)

[+1-587-773-1984 Edmonton, AB](#) (All - Enbridge (condensed)) English (United States)

[+1-647-317-0410 Toronto, ON \(GTA\)](#) (All - Enbridge (condensed)) English (United States)

[+1-713-904-7540 Houston, TX](#) (All - Enbridge (condensed)) English (United States)

[+1-715-718-3265 Superior, WI](#) (All - Enbridge (condensed)) English (United States)

[+1-855-342-0119 Toll Free North America](#) (All - Enbridge (condensed)) English (United States)

[*CONF \(*2663\) - Enbridge Cisco Phone](#) (All - Enbridge (condensed)) English (United States)

[Find a local number](#)

Conference ID: 36880584

[Forgot your dial-in PIN?](#) | [Help](#)

.....

Williams, Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Thursday, January 7, 2021 5:19 PM
To: Tim Buzby; Tim Buzby; Matthew Baran; Shawn Robison; Denis Blais; Joseph Feist; Christopher Lombardi; Christopher Redman; Nancy Kist; Barry Goodrich; Blaine Fritsche; Max Bergeron; Williams, Glyn; John Tirrell; Derek Smith; John E. Scanlon
Cc: Bleicken, Joshua; Barrett, John F.; Helen Wang; Denis.Blais@swca.com; John Bins; Kristopher Jackson; Brennan, Patrick J.
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Attachments: MeetMin-01.07.20-TivertonMR033.docx; Tiverton RI Conceptual Site Plan 1-4-20.pdf; Tiverton Gate Station Existing Conditions Rev1.pdf; Tiverton RI Design Basis Memorandum.docx

Good Afternoon Team,

Please see the attached Meeting Minutes from today's discussion –

The primary action items are as followed

- Site Visit planned for 1/13, 10am – Shawn Robison to coordinate with CHI/NG personnel
- ROW to begin contacting site LO's to get permission to Env./Culturally survey the area outside our existing easement – Enbridge
- Now that the site configuration has a starting consensus, project building layouts onto the existing survey conditions for site visit use (rotate buildings to attempt to fit into existing easement) – CHI

Thanks again all that were able to attend,

Much Appreciated,
Happy New Year!

Matthew Baran
Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Tim Buzby <tim.buzby@enbridge.com>
Sent: Wednesday, January 6, 2021 10:14 AM
To: Tim Buzby; matthew.baran@enbridge.com; Shawn.Robison@enbridge.com; Denis.Blais@enbridge.com; Joe.Feist@enbridge.com; Christopher.Lombardi@enbridge.com; Christopher.Redman@enbridge.com; Nancy.Kist@enbridge.com; Barry.Goodrich@enbridge.com; Blaine.Fritsche@enbridge.com; Max.Bergeron@enbridge.com; Williams, Glyn; John Tirrell; Derek Smith; John E. Scanlon
Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; helen.wang@enbridge.com; Denis.Blais@swca.com; John.Bins@enbridge.com; kristopher.jackson@enbridge.com; Patrick.Brennan@nationalgrid.com
Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
When: Thursday, January 7, 2021 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Not the most convenient time, but the only one open for the majority of invitees. The purpose of the meeting is to discuss the attached email. The meeting will be led by Matt Baran and CHI.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

Williams, Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, December 23, 2020 12:14 PM
To: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn
Subject: EXT || RE: Tiverton MR033-60% Package Development-Engineering Meeting
Attachments: MeetMin-12.23.20-60PerDevelopTivertonMR033.docx

Good afternoon Gentleman,

Thanks again for the time – please see the attached meeting minutes and have a happy holidays!

Much Appreciated,

Matthew Baran
Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran
Sent: Monday, December 21, 2020 2:27 PM
To: Matthew Baran; John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn
Subject: Tiverton MR033-60% Package Development-Engineering Meeting
When: Wednesday, December 23, 2020 10:00 AM-11:00 AM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Good Afternoon Gentleman,

This meeting would be to review/clarify the National Grid comments and touch base on the development of the 60% design package and scheduling the necessary on-site visit.

Thanks again for fitting this in before the holidays,

Microsoft Teams meeting

Join on your computer or mobile app
[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

Williams, Glyn

Subject: EXT || Tiverton Meter Station Work 2020
Location: Skype Call Only Conference ID: 576905

Start: Mon 10/7/2019 2:30 PM
End: Mon 10/7/2019 3:30 PM
Show Time As: Tentative

Recurrence: (none)

Organizer: Alex Ahlstedt

Agenda

- Discuss Scope of Work
- Enbridge Team
- Chuck Peabody (PM)
- Alex Ahlstedt (SME)
- Mitch McNally (Tech Specialist)
- William Diaz (Area Supv.)
- Nikki Bruno/Blair Hastey (Business Development)
- Confirmation of National Grid Team
- National Grid Specification
- Enbridge Specification
- Moving Forward
- Schedule

[Join Skype Meeting](#)

Trouble Joining? [Try Skype Web App](#)

Join by phone

- [+1-403-910-1272 Calgary, AB](#) (All - Enbridge (condensed)) English (United States)
- [+1-226-312-2069 Chatham, ON](#) (All - Enbridge (condensed)) English (United States)
- [+1-587-773-1984 Edmonton, AB](#) (All - Enbridge (condensed)) English (United States)
- [+1-647-317-0410 Toronto, ON \(GTA\)](#) (All - Enbridge (condensed)) English (United States)
- [+1-713-904-7540 Houston, TX](#) (All - Enbridge (condensed)) English (United States)
- [+1-715-718-3265 Superior, WI](#) (All - Enbridge (condensed)) English (United States)
- [+1-855-342-0119 Toll Free North America](#) (All - Enbridge (condensed)) English (United States)
- [*CONF \(*2663\) - Enbridge Cisco Phone](#) (All - Enbridge (condensed)) English (United States)

[Find a local number](#)

Conference ID: 576905

[Forgot your dial-in PIN?](#) | [Help](#)

Williams, Glyn

From: Alex Ahlstedt <Alex.Ahlstedt@enbridge.com>
Sent: Tuesday, March 3, 2020 8:37 AM
To: Megan Whalen; Charles Peabody; Joseph Dellaquila; Blair Hastey; William Diaz; Mitchell McNally
Cc: Williams, Glyn; Talbot III, John J.; Barrett, John F.
Subject: EXT || Tiverton MR 33

Hi Glyn,

Nice talking with you this morning. Again, Megan Whalen will be the new measurement engineer covering the Tiverton project this year. Chuck Peabody will still be the Project Manager.

Could you please reconfirm National Grid's specifications for the boiler and heat exchanger at this station? The last time we spoke, Grid was looking at:

• [REDACTED]

I know there was talk about potential deviating away from this route and installing an indirect gas fired heater.

Could you please confirm which route we are going, so we can begin scoping out the design, cost and schedule?

We appreciate the help.

Thanks,

Alex Ahlstedt, EIT
Project Development Lead
Gas Transmission

ENBRIDGE
TEL: 617-560-1397 | CELL: 617-831-3273 | alex.ahlstedt@enbridge.com
890 Winter Street #300, Waltham, MA 02451
enbridge.com
Integrity. Safety. Respect.

Williams, Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, January 6, 2021 10:18 AM
To: Williams, Glyn
Subject: EXT || TivertonMR033-Conceptual Site Plan/Site Visit
Attachments: Tiverton RI Conceptual Site Plan 1-4-20.pdf; Tiverton RI Design Basis Memorandum.docx; Tiverton Gate Station Existing Conditions Rev1.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good Morning Glyn,
 Hope the break was enjoyable,

Thanks again for getting together before the break and uploading those files to the sharepoint, as we move towards the 60% Design Package.

I received the revised Tiverton RI Conceptual Site Plan (attached) from CHI

- note this drawing is only to present the two-building concept as discussed at the design meeting.

We need to reach agreement on the concept before we proceed with the 60% design site plan.

- CHI noted that *future site plans will be based on the existing conditions survey* so this layout will match the existing survey conditions once this building design is agreed upon.

The revised P&IDs based off the Enbridge and NG clarifications are to follow this Friday.

Please advise on if this building site plan looks constructible

- I believe the initial plan here is to utilize metal buildings rather than precast, to ensure the lift plan is less hazardous

The second note in moving towards the 60% Design is to get the appropriate parties on site for an assessment of the conditions, agree on the site layout etc.,

- I am trying to lock down a date for next week but am circulating with in the Enbridge team to confirm
- CHI seems to be pretty open to any date next week at least, **do you have any dates we should look to avoid, also do you know who all from your team would look to attend?**
- Not sure who from Enbridge can make it up in terms of the travel restrictions, it was relayed that I cannot get approval
 - o Was hoping to time this up with the Env Survey we were planning (confirming the date with Enbridge Env.)
 - If it would be possible to get everyone up there at the same time to discuss the lift plan etc.,
 - CHI noted that the snow is clearing this next week and would be an ideal time if possible

Additionally, there were a few additional questions when generating the DBM (attached)

1. Does the [REDACTED] super monitor valve require a catalytic heater on the supply gas?
2. One gas detector and one flame detector in the regulator room? What Mfg. and Model?
3. Smoke detector in the boiler room? Gas detector?
4. Regulator sizing indicates 35% trim in the [REDACTED] will flow more than 100 mcfh with 300 psig inlet. Is this preferred?

5. National Grid preferred rep for the boilers? [REDACTED]

Lastly, was hoping to get some further clarification on the National Grid

- PHA/HASP requirements, The Gating Process timing
- If we are looking to perform some soft digs or boreholes/vacuum excavation on site, what permits would we need to satiate?

Much Appreciated,
Happy New Years!

Matthew Baran
Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
Safety. Integrity. Respect.

Williams, Glyn

From: Williams, Glyn
Sent: Thursday, August 6, 2020 7:10 AM
To: Blair Haste; Bleicken, Joshua; Greco, Stephen P.
Cc: Elihu Castaneda; Megan Whalen; Joseph Dellaquila
Subject: Re: EXT || M&R 33 - National Grid RI - Tiverton Heater Replacement

Hi Blair and Eli,

Adding my contact details to below.

I remember discussing the Tiverton scope a little with Alex Ahlstedt in the past.

Just let us know what the questions are. I remember that as this is essentially very small boilers and hairpin heat exchangers, requirements are different to waterbaths or larger boilers.

Thanks,

Glyn

Glyn Williams

Manager
 Gas Engineering Design NE I&R
nationalgrid
 1-781-402-4086
glyn.williams2@nationalgrid.com
 Reswoods, 40 Sylvan Road, Waltham MA 02451
nationalgridus.com | [Twitter](#) | [LinkedIn](#) | [Facebook](#)
Please consider the environment before printing this email.
 Advance notice of vacation: No vacation days booked

From: Blair Haste <Blair.Haste@enbridge.com>
Sent: Wednesday, August 5, 2020 12:25 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Greco, Stephen P. <Stephen.Greco@nationalgrid.com>
Cc: Elihu Castaneda <elihu.castaneda@enbridge.com>; Megan Whalen <Megan.Whalen@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>
Subject: EXT || M&R 33 - National Grid RI - Tiverton Heater Replacement

Good Afternoon Glyn,

I would like to make an intro to Eli Castaneda, PM overseeing the Tiverton heater replacement. Eli has a few clarifying questions in regards to specifications for the project.

For background for the group – Same path as East providence, the intent is to design to National Grids specs to facilitate the eventual handover of the asset to National Grid for Operation and Maintenance responsibilities. The project will also be estimated in parallel as a replacement to meet Enbridge specs. The cost and scope differential will be reviewed with National Grid at which point an O&M agreement would be executed reflective of the O&M arrangement and the incremental cost associated with the Grid requested Scope.

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

Williams, Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Thursday, December 17, 2020 5:40 PM
To: Williams, Glyn; Tim Buzby
Subject: RE: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review
Attachments: Tiverton Gate Station Existing Conditions Rev 2020-12-11.pdf

Good afternoon Glyn,
 I too hope your lead into Christmas is faring well,

First off, thanks for the NG contact list.

I need to work with CHI on setting up a filessharing FTP site –
 (getting 3rd party access to the Enbridge sharepoint is a longer process but it can be done if CHI is for some reason unable to provide a site)

In terms of the next meeting, I was awaiting to see if those redlines and question sheet would be returned to digest first, but if we'd like to go through them together in a meeting I will gladly set that up.

- I am set to have a bi-weekly meeting with CHI at 10am CT on 12/22 if you are working during that time to discuss
- or possibly 12/28 or after the break on 1/4?

We are set to have the 60% Drawing Package distributed 1/8, so it would be best to have either the redlines or a meeting set to discuss before then.

Let me know your thoughts,

Also, please see the revised survey plot for the Tiverton site for review –

Much Appreciated,

Matthew Baran
 Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
 Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Thursday, December 17, 2020 10:33 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>
Subject: [External] Re: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt and Tim,

Hope things are going ok in the run up to Christmas.

Could you advise on:

- an appropriate sharepoint or fileshearing site?
- any next meeting where we can share and disucss design comments and CHI questions?

many Thanks,

Glyn

From: Williams, Glyn

Sent: Thursday, December 10, 2020 6:29 AM

To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hasteley <Blair.Hasteley@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>

Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall <Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>

Subject: RE: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

Thanks Matt and All,

One additional action from me was to provide the main records. I have those.

Can you setup a suitable sharepoint / dropbox or other fileshearing to store project documents?

I could be around 50MB for the scanned records.

Many Thanks,

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>

Sent: Wednesday, December 09, 2020 6:54 PM

To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi

<Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>

Cc: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Cameron Hall <Cameron.Hall@enbridge.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>

Subject: EXT || RE: RI Boiler at Tiverton MR00033 - 30% Design Review

Good afternoon Team,

Please see the attached Meeting Minutes from the 30% Design Review –

ACTION ITEMS

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE	DUE DATE	STATUS	COMMENTS
1	Provide responses to the CHI inquiry list/ Provide preferred vendors list	NG		Open	
2	Finalize 30% Package Redlines and transmit	NG		Open	
3	Provide NG contact list	NG		Open	
4	Explore the feasibility of fitting the new equipment into the existing buildings	CHI		Open	Site Visit Needed
5	Plan Site Visit	Enbridge		Open	RI may be entering a lockdown
6	Perform Env. Survey to assess usability of existing easement	Enbridge		Open	
7	Identify the temp skids available that would be sized for this facility- if needed	Enbridge		Open	No Temp Skids in storage have heating element

Thanks again all that were able to attend,

Much Appreciated,

Matthew Baran

Pipeline Engineer
Core Projects

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Friday, December 4, 2020 11:39 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila

Cc: John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; Christopher Redman; Cameron Hall; DellaCamera, Anthony; Ebert, Gregory; Joseph Bruno

Subject: RI Boiler at Tiverton MR00033 - 30% Design Review

When: Wednesday, December 9, 2020 1:30 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good afternoon Team,

This meeting is to review the CHI generated 30% Design Package (attached) for comment so that we may further hone in on our detailed design.

- Please keep in mind this is a preliminary design to use as we discuss the outage details vs land acquisition options

The current scope direction is based off –

- Tiverton MR0033 station has never been shut in before – Optimal time of the year for the outage is non-heating season (May-October)
- The only source is Enbridge, thus hot taps will be required and located based on the modular (preferred) vs. stick built solution.
 - Service cannot be interrupted at all, it needs to remain continuous either via hot taps on the existing lines to allow a cutover to a modular system operating both concurrently until it the new system has been proven.
 - The existing system would be taken out of service and demo'd after that point.
- CHI is exploring the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans
 - Temporary LNG operations not preferred due to the amount of outage time, workspace and risks considerations required
 - Temporary skid option to be further explored with Enbridge personnel

There was some difficulty in finding an open window for all the key stakeholders but I believe this is the best option for the Enbridge side

- Apologies to the National Grid Gas Control Folks that cannot make this time due – I am open to setting up a separate meeting to review if needed

On a scheduling note, CHI should incorporate the survey data received this week along with the key stakeholder comments gathered in this meeting, into the 60% drawing package to be issued on 01/06.

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting.

Much Appreciated,

Matthew Baran

Pipeline Engineer
Core Projects

—

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Williams, Glyn
Sent: Thursday, December 3, 2020 1:40 PM
To: Matthew Baran; John Tirrell; John E. Scanlon; Derek Smith; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie
Cc: Tim Buzby
Subject: RE: EXT || 'Tiverton MR033 Outage Discussion'- Follow Up
Attachments: Tiverton OPP Station Evaluation Summary.pdf; Tiverton 30 Percent for Review.pdf; Tiverton NGrid ARCFM.JPG; MeetMin-11.24.20-TivertonMR033Outage.docx; CHI Questions for Tiverton MS Design Rev 1.docx

Thanks Matt,

Now that we have a 30% design set, Please start to include National Grid Instrumentation & Regulation (I&R) operations group in future meetings.

Best contacts are:

- Pat Brennan (I&R Regulation Lead)
- John Talbot (I&R Manager)
- Mike Romano (I&R area supervisor)

I have cc'd them.

Pat, John and Mike, attached drawings are a 30% design of the new Tiverton station.

I'm free Wed 9th Dec 11am, unsure if that suits anyone else?

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Tuesday, December 01, 2020 2:48 PM
To: John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>
Cc: Tim Buzby <tim.buzby@enbridge.com>
Subject: EXT || 'Tiverton MR033 Outage Discussion'- Follow Up

Good afternoon,

As a follow up to our meeting last week, please see the attached Meeting Minutes with the following action items below

—

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE
1	CHI to generate a primary inquiry list for National Grid to answer	CHI
2	Explore the feasibility of fitting the new equipment into the existing buildings and evaluate the complexity of retrofitting with the existing building floor plans, will it all fit or require too much modification work?	CHI

ITEM	DISCUSSION & ACTIONS	RESPONSIBLE
3	Set up design review in two weeks for the 30% package	Enbridge
4	Identify the skids available that would be sized for this facility if the decision is to reuse the existing buildings	Enbridge
5	Review 30% Design Package for comment	NG
6	Generate a conceptual sketch of the area required to locate the temporary equipment and skid option	NG

Also, I am looking to schedule that official 30% design review early next week – can you please relay any times that need to be scheduled around, I will provide some more specific timeslot options soon.

Additional attachments

- 30% Preliminary Design Package provided by CHI – for National Grid to review for comment
- Tiverton NGrid Picture – Used by Glyn in the meeting (for CHI reference)
- Tiverton OPP Station Evaluation Summary – prepared by Enbridge and used by CHI to size buildings (for NG reference)

Please relay any notes or comments that may have been missed and need to be addressed,

Much Appreciated,

Matthew Baran

Pipeline Engineer
Core Projects

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

Williams, Glyn

From: Williams, Glyn
Sent: Thursday, April 8, 2021 1:57 PM
To: Christopher Redman; Shawn Robison; Eric Borden; Bleicken, Joshua; Zaccari, Justin; Barrett, John F.; Talbot III, John J.
Subject: East Providence Meeting Action Items
Attachments: Enbridge [REDACTED] Heater Quote East Providence 11-5-20.pdf; GA200903-REV-B - GEW comments 022621 - Copy.PDF

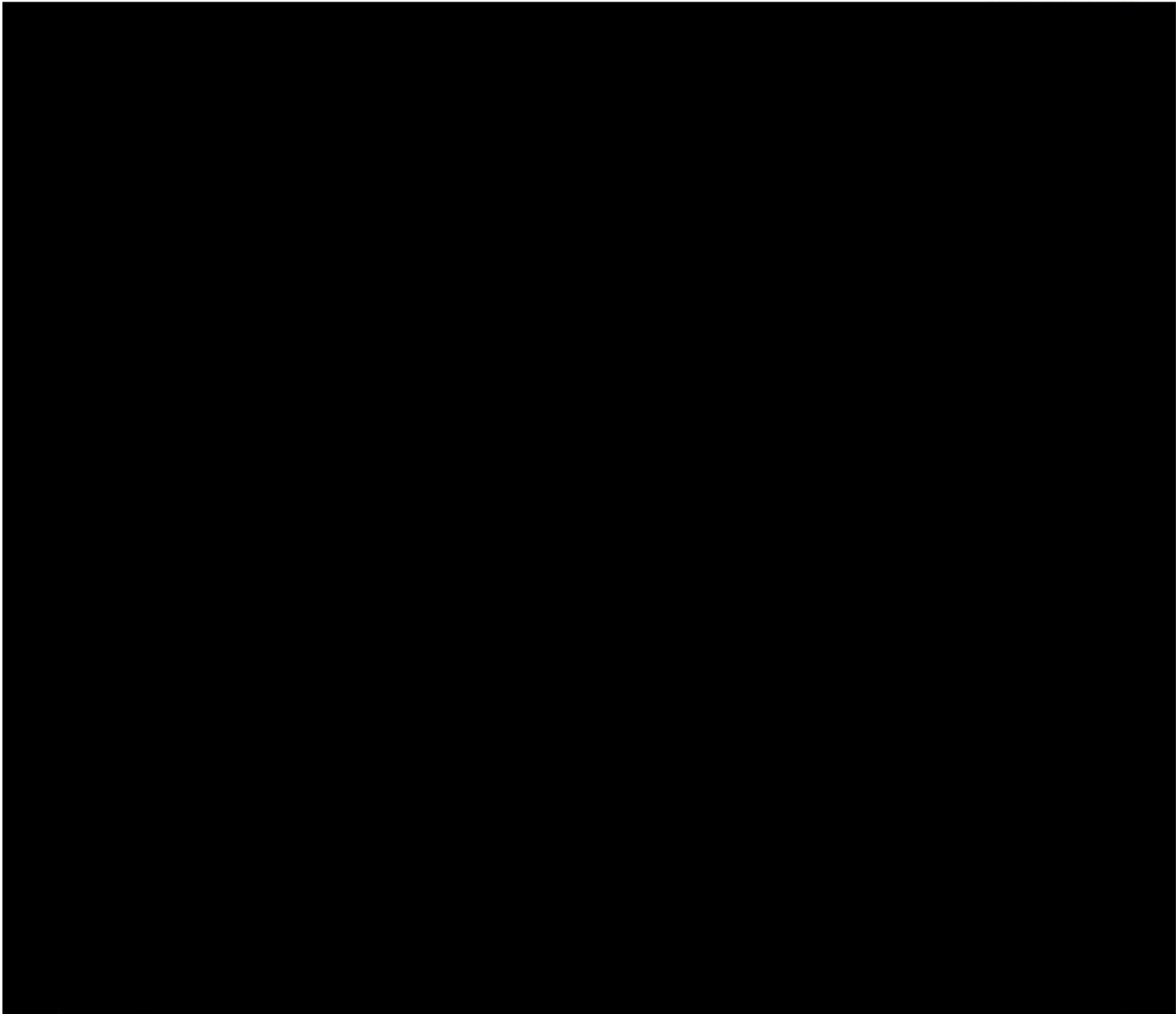
Hi Chris and All,

Technical actions I took for NGrid were:

- 1) Provide [REDACTED] contacts for further discussion:
 - [REDACTED]

- 2) Provide / Confirm process conditions:
 - Each heater is sized for 75% of the process flow
 - Each burner is sized to add up to heat 100% of the max load on each heater
 - 4,000 MCFH max design flow – overall – this is 150%, worst case, both heater on, all burners firing
 - 3,000 MCFH max design flow – each heater
 - Max inlet 750 psig
 - Min Inlet 200 psig (350 psig also stated in Enbridge documents)
 - Please note that three burners was only a means to decrease heater length.
 - Ideally we would not want three burner per heater, just 2x 50% or the required firing rate to get to 3,000 MCFH
 - Latest heater quote provided with 3 burners.

- 3) Example heaters
 - Please see below screenshot for the Milton heaters.
 - They may be slightly bigger than East Providence (4.2 MMBTU/HR MILTON vs 3.5 MMBTU/HR EAST PROVIDENCE) transferred heat
 - But show the typical footprint that may change +/-5'



Glyn Williams

Manager

Gas Engineering Design NE I&R

nationalgrid

1-781-402-4086

glyn.williams2@nationalgrid.com

Reswoods, 40 Sylvan Road, Waltham MA 02451

nationalgridus.com | [Twitter](#) | [LinkedIn](#) | [Facebook](#)

Please consider the environment before printing this email.

Advance notice of vacation: No vacation days booked

Williams, Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Wednesday, February 24, 2021 8:24 AM
To: Williams, Glyn
Cc: Jaffe, Samara A. (Marketing); Christopher Lombardi; Christopher Redman; Joseph Bruno
Subject: EXT || East Providence Heater Replacement - Kicking Off Project

Good Morning Glyn,

Enbridge would like to set up a kickoff meeting for the East Providence Heater Project Execution. Looking ahead, I am requesting that Enbridge and National Grid can:

1. Kickoff project w/ a meeting by Wednesday 03/03/2021
2. Meet onsite for a visit by 3/10/2021

Engineering is looking to focus on locking down the scope and ordering the heaters within the next month if possible.

Agenda items for our kickoff meeting:

1. Introductions of the team
2. Scope Overview
3. Schedule overview
4. Request applicable National Grid Specifications
5. Next steps:
 - a. Site visit by 03/10/2021
 - b. Finalize heater quotes by 3/17/2021

Thank you for the assistance setting this up. If the 3/3 and 3/10 dates don't work then we will take the earliest dates available. Please reach out with any follow up questions.

Thanks,

Blair Hastey

Business Development
 —

ENBRIDGE
 TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451
enbridge.com
 Safety. Integrity. Respect.

Williams, Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Friday, February 12, 2021 12:55 PM
To: Williams, Glyn; Jaffe, Samara A. (Marketing)
Subject: EXT || East Providence Survey Access

Hey Gyn and Samara,

We are looking to gain access to the E Providence site for heater project survey purposes. Do either of you have a contact our ROW folks can coordinate with?

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

Williams, Glyn

From: Bill Batson <bbatson@odinepc.com>
Sent: Thursday, July 22, 2021 1:11 PM
To: Christopher Redman; Williams, Glyn
Cc: Eric Borden
Subject: EXT || East Providence Tripps Ln - Current Markup Set
Attachments: 2020-07-22 E PROV PID MARKUP.pdf; EAST PROV - ADDED GRID VALVE.pdf

Chris and Glynn,

Latest set of markups for E. Providence is attached, incorporating comments from our recent call. Any comments please let us know.

Thanks,

Bill Batson, PE

Senior Mechanical Engineer

ODIN

m: 781-325-5768

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com **e:** bbatson@odinepc.com



Williams, Glyn

From: Christopher Redman <Christopher.Redman@enbridge.com>
Sent: Wednesday, May 26, 2021 11:44 AM
To: Williams, Glyn
Cc: Christopher Lombardi; Eric Borden
Subject: EXT || Enbridge (AGT) + National Grid - East Providence Site Layout Meeting
Attachments: ENB-0030-Heater Sketch 1_REV A.pdf

Glyn,

Good morning. The Enbridge team has worked through known constraints for the East Providence site and is ready to meet again with your team to discuss the attached layout: [ENB-0030-Heater Sketch 1 REV A.pdf](#). This discussion will be to review the attached layout and identify if this setup is feasible for National Grid. Note Enbridge thinks we have identified a layout to make the dual heaters work.

I will follow up with a call to discuss your team's availability. If you are still on leave and need to designate then please advise and I can check in with the appropriate contact. Thank you for your team's support and assistance to date.

Christopher Redman

Engineer, Pipeline Engineering
 Project Operations Management

ENBRIDGE

TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58

enbridge.com

Safety. Integrity. Respect.

Williams, Glyn

From: Christopher Redman <Christopher.Redman@enbridge.com>
Sent: Friday, April 30, 2021 1:32 PM
To: Williams, Glyn
Cc: Eric Borden; Christopher Lombardi
Subject: EXT || FW: East Providence Revised Layouts
Attachments: ENB0030-SS-1.pdf; ENB0030-SS-2.pdf; ENB0030-SS-3.pdf

Glyn,

Good afternoon. This email is a follow up to my call yesterday 4/29. I would like to setup a brief meeting to discuss Enbridge's progress on the footprint design for the [REDACTED] heaters and to also present a potential alternative option ODIN prepared that may benefit your team regarding site footprint. This option would consist of a boiler + heat exchanger combination (if redundant heat exchanger is needed in addition to redundant boilers then we can discuss).

I will go ahead and schedule a meeting for next week. If the slot does not work then please advise and we can adjust accordingly.

Thank you for the time and assistance to date.

Christopher Redman

Engineer, Pipeline Engineering
 Project Operations Management

ENBRIDGE
 TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58
 enbridge.com
 Safety. Integrity. Respect.

From: Eric Borden <eborden@odinepc.com>
Sent: Friday, April 30, 2021 12:10 PM
To: Christopher Redman <Christopher.Redman@enbridge.com>
Cc: Bill Batson <bbatson@odinepc.com>
Subject: [External] East Providence Revised Layouts

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Good Afternoon Chris,

As discussed on our call earlier this week we have cleaned up our first two water bath options and added a third layout option utilizing the hydronic boilers with heat exchanger set up. Overall the water bath drawings show that there will be space concerns which may be able to be addressed with obtaining additional easement to gain more room in the upper left corner or relocate the existing regulation vaults at the site, or a combination of both. We can also work with the [REDACTED] to see if they can alter the overall footprint of the heaters so they could be more site friendly. The boiler option looks good, and seems to work well on the site from a layout sense. The building should be viewed as approximately but I think that we'd be able to work with [REDACTED] and come up with a pre-cast concrete solution if we were to move forward with that option.

If you have any comments or questions please let use know. We'll also be available next week to support a call with Grid if you like, we'll just have to coordinate schedules.

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: http://secure-web.cisco.com/1ITmScAoPbWjqbQvEMlJPjbka_3SZSc3cfWH3NdKXI5fcvKJ7YcgmV9EGM1cJNElqCYzRbpbT2sTcPEnd2Ou5YEwxPOikJwYdpqgq2N8fQyLGYxsLCU2wxTp5pHzG8_Pd4lgh1gX80GCqDdcxXbcf70FITXfctGQ_saxzbJM2Ed6288f6vT_15ef2_QePqF4ieJl-rfPXuCizaowNUE8dgu33lbJ6W5D-JaVmhmupKnhGglvgQd



Williams, Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Thursday, July 8, 2021 8:54 AM
To: Williams, Glyn
Subject: EXT || FW: EPV and Tiverton projects

Blair Hastey

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Blair Hastey
Sent: Thursday, July 1, 2021 9:47 AM
To: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Cc: Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Berdos, Johnathon <Johnathon.Berdos@nationalgrid.com>; Tim Buzby <tim.buzby@enbridge.com>
Subject: RE: EPV and Tiverton projects

Hi Justin,

There has been a change in approach for project cost allocation since we last had a call.

The initial approach was to have National Grid pay for the cost differential associated with “upgrading” the replacement scope in both cases to meet National Grid specifications. The cost differential was to be recovered by a rate surcharge to be applied to contracts serving the meter stations.

Early June National Grid asked us to look at the project as a reimbursement as opposed to a surcharge for the cost recovery. With this change our regulatory team advised that the scope cost differential approach would not be appropriate and the costs to be recovered should be in alignment with the project costs associated with the assets ownership once the project is in service. The [REDACTED] breakdown roughly aligns with the cost relative to the scope associated with the asset ownership upon completion.

If helpful we can have a call to walk you through the ownership delineation and costs associated with that delineation. Let me know what availability works for National Grid.

Thanks,

Blair Hastey

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com
 Safety. Integrity. Respect.

From: Zaccari, Justin <Justin.Zaccari@nationalgrid.com>
Sent: Wednesday, June 30, 2021 10:00 AM
To: Blair Hasteley <Blair.Hasteley@enbridge.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] EPV and Tiverton projects

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hello Blair,
 I have raised these projects up National Grid's chain so I am hoping for a decision soon. I understand the [REDACTED] cost split was based on ownership split following construction but is the total based on the delta between Ferc reqs vs what National Grid is pushing for a design or did it change to total project cost? If there was a change, can you explain and provide a more detailed explanation and breakdown of the proposal so I can better clarify to our leadership. Due to our current regulatory environment we will need as much detail as possible.

Thank you for your help on this,

Justin Zaccari

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Christopher Redman <Christopher.Redman@enbridge.com>
Sent: Thursday, April 1, 2021 3:52 PM
To: Williams, Glyn
Cc: Eric Borden; Christopher Lombardi
Subject: EXT || RE: East Providence Heater Replacement - Site Visit

Glyn,

Good afternoon. Following the site visit, the Enbridge team has “put pen to paper” and is looking to get some time with your team to review preliminary site layouts. I would like to schedule a follow up meeting with your team for next week. Please advise if one of these two slots is available:
Wednesday 4/7 from 9:00amET to 10amET
Thursday 4/8 from 12:00pmET to 1:00pmET

I will include site plans as attachments on the meeting invite. Please reach out as needed for coordination. If already on holiday then hope you have a great weekend. Thank you!

Christopher Redman

Engineer, Pipeline Engineering
Project Operations Management

ENBRIDGE
TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Christopher Redman
Sent: Friday, March 5, 2021 4:35 PM
To: Christopher Redman; Williams, Glyn; Shawn Robison; William Rogers; Eric Borden
Cc: Joseph Bruno; Mitchell McNally; WD Simmons (WD.Simmons@enbridge.com); Mark Dorso; Christopher Lombardi; Bob Killion; Nancy Kist; Wayne Medeiros
Subject: East Providence Heater Replacement - Site Visit
When: Wednesday, March 10, 2021 9:00 AM-11:00 AM (UTC-06:00) Central Time (US & Canada).
Where: 269 Wampanoag Trail, Riverside, RI 02915

Glyn & Team, Please forward as required to include the correct participants in this site meeting.

This site visit is for the East Providence Heater Replacement Project and will include AGT, National Grid and Odin. The intent of this meeting is to talk through the preliminary design, demarcations and construction of the proposed facilities.

When: 10:00amET to 12:00pmET on Wednesday 03/10/2021

Primary AGT Contact: Please reach out to Shawn with any questions on Site Safety or Parking.

Shawn T Robison

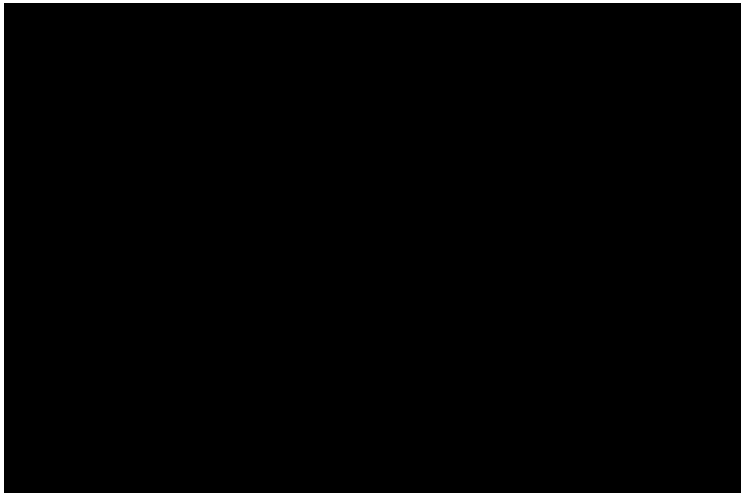
Project Coordinator
ENBRIDGE
CELL: 740-630-6140 | Shawn.Robison@enbridge.com

Site Safety: The following safety gear will be required to go inside the AGT fence line.

- FR
- Hard Hat
- Safety Glasses
- Steel Toe shoes/boots

Directions: The AGT and National Grid facilities are located across the street from Hassel's Garage @ 269, Wampanoag Trail, Riverside, RI 02915

Parking: To minimize congestion within the AGT and National Grid facilities, please park across the street and safely cross to get to the facilities (seen screenshot below).



Agenda:

1. Introductions
2. Site Safety Overview
3. Process overview to walk the physical path of the gas coming into and out of the facility.
4. Discuss what if anything is underground that is not visible
5. Heaters
 - a. Location options for new heaters
 - b. What existing equipment will need to be removed or reconfigured (identify specific piping demarcations if possible for removal)
 - c. Connecting heaters to National Grid control system (discuss if National Grid will own programming or if National Grid is looking for assistance from a third party such as Scadicon w/ Jonathan Brown).
6. Regulation
 - a. Discuss upstream and downstream demarcations if AGT hands over the AGT operated regulation to National Grid
 - b. Discuss any required modifications to complete handoff of upstream regulation to National Grid
7. Construction:
 - a. Positioning of crane and any construction restrictions
 - b. Discuss pressure test plan and any restrictions based on site constraints
8. Cathodic Protection
 - a. Identify any impacts to existing CP system
9. Environmental
 - a. Identify any known environmental concerns.
10. Right of Way
 - a. Discuss limits of temporary workspace

Thank you all for your time and assistance for this site visit.

Christopher Redman

Engineer, Pipeline Engineering
Project Operations Management

—

ENBRIDGE

TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com

5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58

enbridge.com

Safety. Integrity. Respect.

Williams, Glyn

From: Eric Borden <eborden@odinepc.com>
Sent: Thursday, April 22, 2021 1:01 PM
To: Brooklyn Winn; Christopher Redman; Williams, Glyn; Bill Batson; Peter Udovenko
Cc: Sales
Subject: EXT || RE: East Providence [REDACTED] Heater Call Q104550T_R6

Thank you Brooklyn,

This is much appreciated, on our call last week with Enbridge, National Grid, and [REDACTED] it was discussed that [REDACTED] could provide some more detailed drawings for the heaters that ODIN could use for site layout purposes to verify that they would fit and to potentially verify a feasible size range for the site we are working with. We understand that anything provided would be preliminary at this point. Have you an estimate as to when we may receive something?

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com e: eborden@odinepc.com

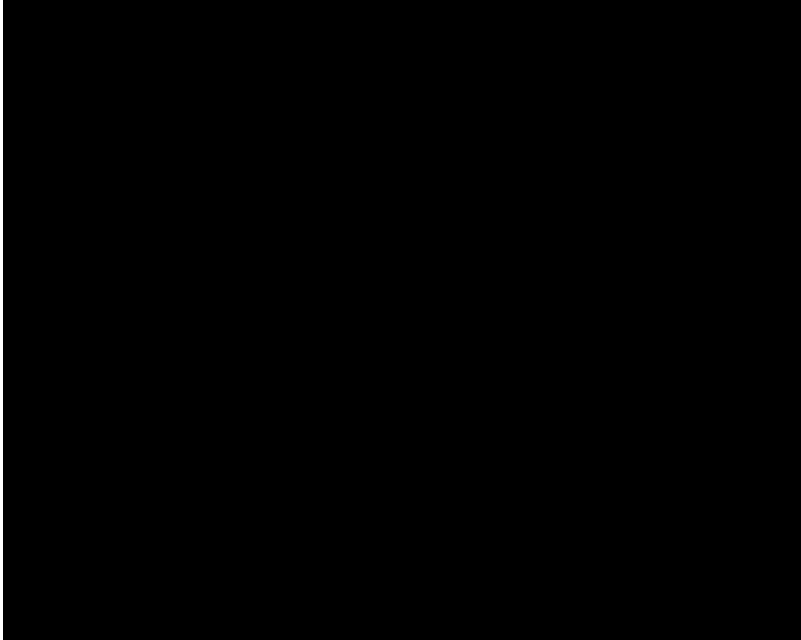


From: [REDACTED]
Sent: Wednesday, April 21, 2021 5:42 PM
To: Eric Borden <eborden@odinepc.com>; Christopher Redman <christopher.redman@enbridge.com>; Glyn.Williams2@nationalgrid.com; Bill Batson <bbatson@odinepc.com>; [REDACTED]
[REDACTED]
Subject: RE: East Providence [REDACTED] Heater Call Q104550T_R6

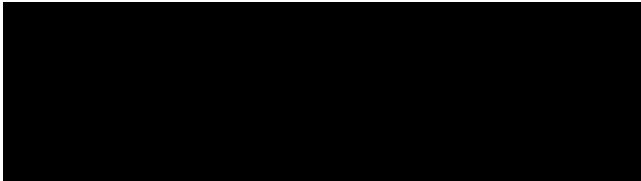
Good Afternoon,

Attached is Quote Q104550T_R6 for Enbridge East Providence Station.

Please let me know if there is anything else we can do.



at these adjustments will better meet our
questions or concerns about the revised Payment



Brooklyn,

Please add Q104550T_R5 back on the dashboard for revision:

- Utilize the design configuration from Holcomb T200608H latest design
- Refresh everything else

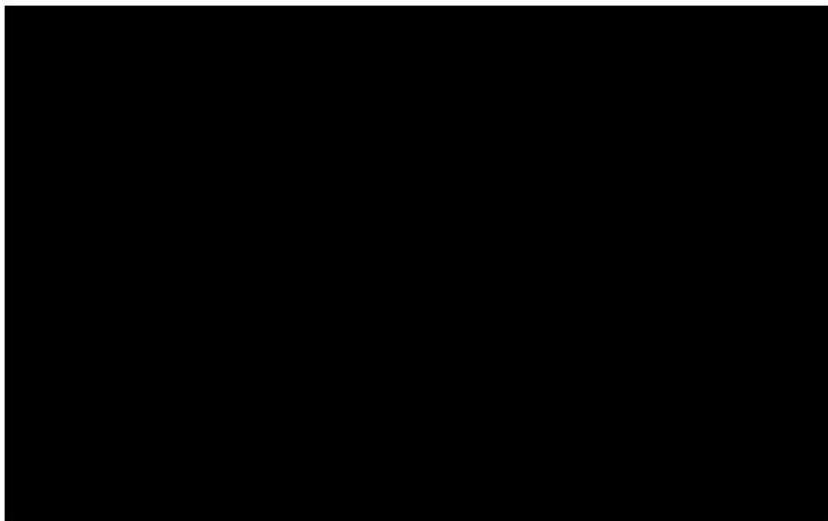
Start a new quote number where we will use the same process conditions and design but our goal is to make the shell narrower and longer. This should hopefully reduce the burner quantity to 2 firetubes instead of 3 firetubes.

Set for 1 week out if possible.

Once these are sized we will need to find a "go-by" GA so that we can show the customer what the foot print will be. This may require finding the closest sized heater and adjusting the dims in pdf. I'll work with Mike on getting that part taken care of.

Best regards,





From: Eric Borden <eborden@odinepc.com>
Sent: Wednesday, April 14, 2021 8:38 AM
To: christopher.redman@enbridge.com; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bill Batson <bbatson@odinepc.com>; [REDACTED]

This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Good Morning All,

I look forward to speaking with everyone today, I figured that I would send a brief agenda to let you know what I think are the important items to cover today, there will be opportunity to add anything but I figure I'd provide the framework.

1. Safety Moment
2. Introductions
3. Current Heater Design Criteria vs. Station Flow Data - Confirmation
4. Heater geometry options, wider vs. narrow vs. number of burners
5. Availability of similar heater design drawings to facilitate site layout (site is very tight, a drawing that would allow us to model the piping and layout the site sooner will help the overall design process and help determine heater width)
6. Open Discussion Portion

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com **e:** eborden@odinepc.com



Williams, Glyn

From: Eric Borden <eborden@odinepc.com>
Sent: Friday, June 4, 2021 1:55 PM
To: Christopher Redman; Williams, Glyn
Cc: Bill Batson
Subject: EXT || RE: East Providence [REDACTED] Heater Call Q104550T_R9
Attachments: BB-G-1003.pdf

Good Afternoon Gentlemen,

In my haste I realized I hit send rather than save to wait for the updated site layout with the ladders flipped and showing where the fuel gas trains would be placed on the heaters. Here it is.

Thank you and enjoy your weekend.

Eric

From: Eric Borden
Sent: Friday, June 4, 2021 8:30 AM
To: Christopher Redman <christopher.redman@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Bill Batson <bbatson@odinepc.com>
Subject: FW: East Providence [REDACTED] Heater Call Q104550T_R9

Good Morning Chris and Glyn,

I hope all is well, it has been a long time coming but I think we have arrived at a heater size, site layout, and proposal that works for the project. The configuration as mentioned in the proposal does not reflect the ladder/fuel gas orientations that were recommended by [REDACTED] and discussed on a recent phone call but those small details can be shown on the actual equipment drawings. ODIN has revised our most current site layout to show the ladder and fuel gas locations so it is clear what is being proposed, it is also attached for your reference.

These attachments should facilitate discussions at Monday afternoon's meeting.

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com **e:** eborden@odinepc.com



From: [REDACTED]

Sent: Friday, May 28, 2021 3:40 PM

To: Eric Borden <eborden@odinepc.com>

[REDACTED]

Subject: RE: East Providence [REDACTED] Heater Call Q104550T_R9

Good Afternoon, Eric.

Attached is Revised Quote Q104550T_R9 for National Grid East Providence Station. Please let me know if there is anything else we can do.

Thank You,

[REDACTED]

Please note: We have changed our Payment Terms. It is our hope that these adjustments will better meet our customers' needs and improve logistical pacing for OGI. If you have questions or concerns about the revised Payment Terms, please do not hesitate to contact OGI.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] East Providence [REDACTED] Heater Call Q104550T_R9

Good Morning, Eric.

I will send the quote mark-up to the Engineer and have them revise this. We will have revised Quote Q104550T_R9 back to you by 5/27.

Thank You,

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Good Morning Brooklyn,

We have some comments on the quote, it seems that one of the older quotes were probably used as a starting point but some of the new parameters were not carried through. If you have any questions please let us know.

Thank you

Eric

[REDACTED]

[REDACTED]

[Redacted]

Eric,

Attached is Quote Q104550T for Enbridge East Providence Station. We are working to get you a generic GA Drawing and I will send that just as soon as it's ready.

Thank You,

[Redacted]

[Redacted]

[Redacted]

Good Morning, Eric.

We are still on track to have Quote Q104550T for Enbridge East Providence Station back to you by E.O.B today. The heater dimensions will be listed on this quote.

Let me know if there is anything else you are needing.

Thank You,

[Redacted]

[Redacted]

[REDACTED]

[REDACTED]

This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Good Morning Brooklyn,

Just checking it to see if [REDACTED] is still on track for an updated proposal and heater footprint today?

Thank you

Eric

[REDACTED]

Good Afternoon, Eric.

We will have this quote revised and back to you by 5/17. Please let us know if you need anything in the meantime.

Thank You,

[REDACTED]

[REDACTED]

[REDACTED]

This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Good Afternoon Peter and Brooklyn,

I just wanted to check in with you to see if you'd be able to supply an ETA as to when you may arrive at the new heater sizing as mentioned earlier in the week.

Thank you

Eric

From: Eric Borden

[REDACTED]

Hi Peter,

That would be perfect, we know that we had the earlier version sized but were concerned that even that may be a little longer with the Grid Specs.

Thank you!

Eric

[REDACTED]

Hi Eric,

Yes, we can shorten the heater but it'll have to have 3 firetubes then. We quoted a version of this under R5, see attached. We can requote that size per National Grid latest specs if that would work for you?

Let me know your thoughts.

Best regards,



From: Eric Borden <eborden@odinepc.com>



email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Good Afternoon Brooklyn and Peter,

I wanted to reach out to you to see if there are any options available to shorten the overall heater's length. Per the drawing provided the overall length of the heater with piping, stacks, and burners is about 34' all in, we are having trouble siting heaters of this length in the area that is available to us, a wider option would be better if it is possible to sacrifice length for width. Is it possible to discuss options if they exist and determine an alternate footprint that may work with our constraints?

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com e: eborden@odinepc.com

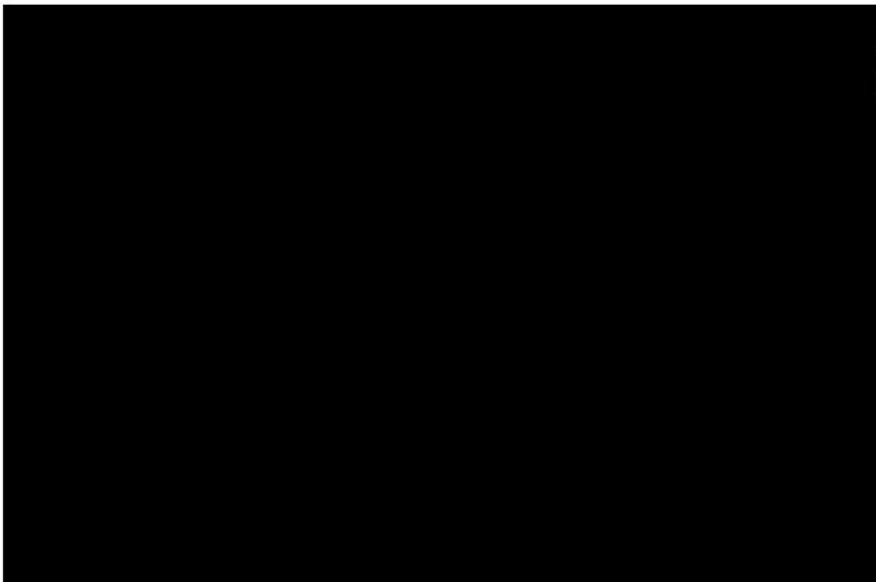




Good Afternoon,

Attached is Revised Quote Q104550T_R7 for Enbridge East Providence Station.
Please let me know if there is anything else we can do.

Thank You,



...e adjustments will better meet our
...ns or concerns about the revised Payment



[REDACTED]

Subject: RE: East Providence TERI Heater Call Q104550T_R6

This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Thank you Brooklyn,

This is much appreciated, on our call last week with Enbridge, National Grid, and OGI it was discussed that [REDACTED] could provide some more detailed drawings for the heaters that ODIN could use for site layout purposes to verify that they would fit and to potentially verify a feasible size range for the site we are working with. We understand that anything provided would be preliminary at this point. Have you an estimate as to when we may receive something?

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com e: eborden@odinepc.com



From: Brooklyn Winn <brooklyn.winn@ogipe.com>

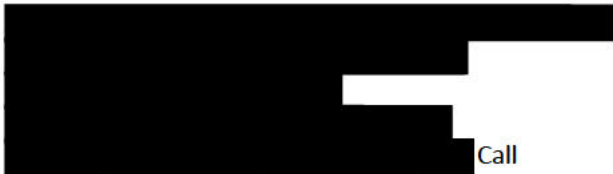
[REDACTED]

Good Afternoon,

Attached is Quote Q104550T_R6 for Enbridge East Providence Station.

Please let me know if there is anything else we can do.

[REDACTED]



Brooklyn,

Please add Q104550T_R5 back on the dashboard for revision:

- Utilize the design configuration from Holcomb T200608H latest design
- Refresh everything else

Start a new quote number where we will use the same process conditions and design but our goal is to make the shell narrower and longer. This should hopefully reduce the burner quantity to 2 firetubes instead of 3 firetubes.

Set for 1 week out if possible.

Once these are sized we will need to find a "go-by" GA so that we can show the customer what the foot print will be. This may require finding the closest sized heater and adjusting the dims in pdf. I'll work with Mike on getting that part taken care of.

Best regards,





From: Eric Borden <eborden@odinepc.com>



This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Good Morning All,

I look forward to speaking with everyone today, I figured that I would send a brief agenda to let you know what I think are the important items to cover today, there will be opportunity to add anything but I figure I'd provide the framework.

1. Safety Moment
2. Introductions
3. Current Heater Design Criteria vs. Station Flow Data - Confirmation
4. Heater geometry options, wider vs. narrow vs. number of burners
5. Availability of similar heater design drawings to facilitate site layout (site is very tight, a drawing that would allow us to model the piping and layout the site sooner will help the overall design process and help determine heater width)
6. Open Discussion Portion

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com **e:** eborden@odinepc.com



Williams, Glyn

From: Eric Borden <eborden@odinepc.com>
Sent: Monday, April 19, 2021 2:00 PM
To: Christopher Redman; Williams, Glyn; Bill Batson; Peter Udoenko; Mike Ingle
Subject: EXT || RE: East Providence [REDACTED] Heater Call
Attachments: 2021-04-14 East Providence [REDACTED] Heater Call Notes.pdf

Good Afternoon Gentlemen,

It took me a little longer than I hoped for but here is just a summary from our call last Wednesday, for your reference.

If you have any questions, comments, or clarifications, please let me know.

Thank you

Eric

-----Original Appointment-----

From: Eric Borden
Sent: Tuesday, April 13, 2021 7:34 AM
To: Eric Borden; Christopher Redman; Williams, Glyn; Bill Batson; Peter Udoenko; Mike Ingle
Cc: Mike Ingle
Subject: East Providence [REDACTED] Heater Call
When: Wednesday, April 14, 2021 1:00 PM-2:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: <https://odinepc.zoom.us/j/3884824587?from=addon>

Good Morning All,

This is a meeting invitation to introduce the ODIN team to OGI, review the current design and process of the heaters for East Providence, and outline the process moving forward.

Call in information below,

Thank you

Eric

Eric Borden is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting
<https://odinepc.zoom.us/j/3884824587?from=addon>

Meeting ID: 388 482 4587
One tap mobile
+13017158592,,3884824587# US (Washington DC)
+13126266799,,3884824587# US (Chicago)

Dial by your location

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

+1 646 558 8656 US (New York)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

+1 669 900 9128 US (San Jose)

888 788 0099 US Toll-free

877 853 5247 US Toll-free

Meeting ID: 388 482 4587

Find your local number: <https://odinepc.zoom.us/j/adwqs0ULwS>

Williams, Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Wednesday, May 12, 2021 3:10 PM
To: Williams, Glyn
Subject: EXT || RE: ENB - Tiverton Scope review

Hey Glyn, Just touching base to see if there was any feedback or additional follow-up questions you or your team had?

Blair Hastey

Business Development

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Blair Hastey
Sent: Tuesday, May 4, 2021 5:08 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Konopka, Michael <Michael.Konopka@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Simoneau, William J. <William.Simoneau@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Backus, Katie E. <Katie.Backus@nationalgrid.com>; Jaffe, Samara A. (Marketing) <Samara.Jaffe@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>
Subject: RE: ENB - Tiverton Scope review

Glyn,

As a follow-up to our meeting on April 23.

Please see attached project estimate in section 4 of the attached file "Tiverton RI Boiler Enbridge - National Grid Option Comparison R1 4 May 21" has been revised to reflect changes to line items (shown in red font) specifically pertaining to the buildings and the switching valves. The building cost was reviewed further, and the revised amount reflects the differential cost between concrete and metal buildings. The switching valves were changed to Enbridge's account. The associated fabrication and construction cost for National Grid has been lowered to align with the associated material changes.

Please also see attached marked up PID's showing the components that are specific to National Grid's specifications and requirements that are additional to the Enbridge option and constitute the material estimate value. The National Grid items are shown within the clouds on the mark up.

Regarding the triple level protection Enbridge does not have any such requirement per PHMSA design requirements. This was an adder as requested by National Grid resulting from PID reviews.

Please let me know if you require any further clarification on the cost breakdown.

Thank,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Blair Haste

Sent: Monday, April 12, 2021 2:35 PM

To: Blair Haste; Williams, Glyn; Barrett, John F.; Bleicken, Joshua; Brennan, Patrick J.; Costa, Jason; DellaCamera, Anthony; Doherty, John E.; Ebert, Gregory; Konopka, Michael; Loiacono, Paul J.; Louis, Chrisnor; Porcaro, Julie; Romano, Michael; Simoneau, William J.; Talbot III, John J.; Zaccari, Justin; Backus, Katie E.; Jaffe, Samara A. (Marketing); Christopher Lombardi; Tim Buzby

Cc: Matthew Baran

Subject: ENB - Tiverton Scope review

When: Friday, April 23, 2021 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

Reschedule due to conflict.

All,

The purpose of this meeting is to discuss the Tiverton M&R project.

Addenda to follow.

Thanks,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

Or call in (audio only)

[+1 346-262-0361,,271802803#](#) United States, Houston

Phone Conference ID: 271 802 803#

[Find a local number](#) | [Reset PIN](#)

[Learn More](#) | [Meeting options](#)

Williams, Glyn

From: Shawn Robison <Shawn.Robison@enbridge.com>
Sent: Tuesday, February 9, 2021 12:37 PM
To: Williams, Glyn; Jaffe, Samara A. (Marketing); Blair Hastey; Zaccari, Justin; Bleicken, Joshua; Loiacono, Paul J.; Porcaro, Julie; DellaCamera, Anthony; Barrett, John F.; Talbot III, John J.
Cc: Christopher Lombardi
Subject: EXT || RE: Enbridge - East Providence / Wampanoag Heater Project - Latest Status?

All,

Chris Lombardi is the PM taking over the project his email is attached above. We had an internal kickoff meeting on our side the other day. If you need any more info feel free to reach out.

Thanks

Shawn T Robison

Project Coordinator
 Core Projects
 Employee of: MBF Inspection
 Assigned to: Enbridge
 --

ENBRIDGE
 OFFICE: 203-651-2954 CELL: 740-630-6140 | Shawn.Robison@enbridge.com
 70 East Johnson Avenue, Cheshire CT 06410

enbridge.com
 Integrity. Safety. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Tuesday, February 9, 2021 10:48 AM
To: Shawn Robison <Shawn.Robison@enbridge.com>; Jaffe, Samara A. (Marketing) <Samara.Jaffe@nationalgrid.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>
Subject: [External] Enbridge - East Providence / Wampanoag Heater Project - Latest Status?

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

All,

In talking to gas control this morning, it appears that the AGT East Providence / Wampanoag Trail heaters continue to perform poorly and there are concerns if they will make it through Winter 2021/22.

It's also been a couple of months since we heard any update on either the technical and/or commercial, contractual approach to the new AGT East Providence / Wampanoag Trail heater project.

Samara – Could you give an update as to where you are commercially / contractually with Blair?

Shawn – Can you provide / forward this to the new Enbridge PM who is looking at the East Providence / Wampanoag Trail heater project?

- We would need to have further technical discussion on future heater performance & any temporary heating that may need to be in place to support the site
- It'd be good to have a virtual meeting to kick the project off with all, and set a schedule for this year in terms of project milestones and reviews.

Many Thanks,

Glyn

Glyn Williams

Manager
 Gas Engineering Design NE I&R
nationalgrid
 1-781-402-4086
glyn.williams2@nationalgrid.com
 Reswoods, 40 Sylvan Road, Waltham MA 02451
nationalgridus.com | [Twitter](#) | [LinkedIn](#) | [Facebook](#)

Please consider the environment before printing this email.

Advance notice of vacation: No vacation days booked

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Tuesday, August 31, 2021 4:29 PM
To: Williams, Glyn
Cc: Kilgus, Robert; Christopher Redman
Subject: EXT || RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence
Attachments: FW: [External] Bid S5263901 PO# ENBRIDGE; S5263901-0002_31000.pdf

Importance: High

Good Afternoon Glyn,

Hope all is well,

I wanted to check-in with your team regarding some Air Permitting Design Basis details, in order to internally prepare some Air Permitting docs for pending Tiverton MR033 design re-start. If you could review the inquiries below to provide any details that could help progress this process – the **main details inquiries highlighted** – please provide this week so I can distribute to the Env. Team, if possible –

1. **Process Boilers** – Based on the current design drawings and equipment list we are assuming two (2) new water/glycol boilers each with a rated heat fuel duty of 200,000 BTU/HR. **The model number specified for the project by the engineering consultant is no longer manufactured. See the attached email for details of the replacement model to use as the basis for design. Confirm with NG, model number and specifications with heat duty confirmed**
2. **Emergency Generator** – National Grid has an existing generator at the site which we understand we will replace as part of the project. We are assuming the replacement will be a [REDACTED] Emergency generator. We understand National Grid is considering a [REDACTED] replacement but don't have the specific model reference currently. **Confirm with NG existing generator engine model and specifications, and that existing generator will be sufficient.**
3. **Odorant Tank** – We need to confirm if there is currently an odorant tank at the site and if so the capacity ,yearly throughput volumes, dimensions, fixed roof or cone roof, horizontal or vertical and paint color in order to calculate air emissions. The existing odorant tank is owned and operated by National Grid. My understanding is there is no plan to change the odorant tank. **Confirm with National Grid and get existing tank specifications;**
4. **Proposed Glycol Make-Up Tank** - There is a proposed glycol tank in the 90% design drawings. We will need the tank specifications and estimated glycol throughputs for this tank as well. **Confirm with NG and get Make-up tank design specifications**

Much Appreciated,

Matthew Baran
 Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
 Safety. Integrity. Respect.

From: Matthew Baran
Sent: Thursday, April 29, 2021 12:41 PM

To: Williams, Glyn Glyn.Williams2@nationalgrid.com
Cc: Kilgus, Robert Robert.Kilgus@nationalgrid.com; Christopher Redman Christopher.Redman@enbridge.com
Subject: RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence

Good Afternoon Glyn,

Apologies for the delay, please see the latest Enbridge equipment specs, relevant to these MR projects
 - Please advise if any further specs are needed

Much Appreciated,

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
 Safety. Integrity. Respect.

From: Christopher Redman <Christopher.Redman@enbridge.com>
Sent: Thursday, April 22, 2021 7:42 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Matthew Baran <matthew.baran@enbridge.com>
Cc: Kilgus, Robert <Robert.Kilgus@nationalgrid.com>
Subject: RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence

Glyn,

Received and thank you for taking the time to discuss. We will communicate with respective engineering firms working on Tiverton and East Providence. I will coordinate with Matthew on the specification transmittal.

Christopher Redman

Engineer, Pipeline Engineering
 Project Operations Management

ENBRIDGE
 TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58
enbridge.com
 Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Thursday, April 22, 2021 7:19 AM
To: Christopher Redman <Christopher.Redman@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>
Cc: Kilgus, Robert <Robert.Kilgus@nationalgrid.com>
Subject: [External] Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Chris and Matt,

Thanks for the discussion Yesterday:

Items attached are below.

Can you provide me a link to the latest Enbridge standards? My thought was to review the latest ES-PF pipe, fittings, flanges, valves policy and try to pickup if there were any key differences also.

1) **Pipe Specification** – a summary of our piping requirements

2) **Coatings:**

a.

[REDACTED]

3) **Below Grade Supports:**

a.

[REDACTED]

4) **Pressure Test:**

- a. Please See CNST04004 for our transmission pressure test policy
- b. This is supplemented by CNST04002 if hydrotest is elected.
- c. We have the similar 30% SMYS upper limits on pneumatic tests
- d. We often complete pneumatic tests at stations, where there is chance to get water in regulators, and piping low points, valve bodies etc, that cannot be easily drained and dried
- e. We do not need to complete the pressure test in Situ. This can be completed off-site. So essentially pneumatic setbacks etc can be easily controlled.
- f. Tie in or 'golden' welds are to be limited as far as practical. We normally do not have any tie in welds when we elect to do the TDW 3 way tee tie in. We can test the TDW tee first and below grade pipe without tapping it.

5) **Valves:**

- a. MATL-3150 Valve Specification – this is for trunnion type pipeline ball valves.
 - b. Essentially a API 6D ball valve with the optional Low Pressure (85 psig) air seat test.
- 6) For an Approved Manufacturers List, we do not have a formal one:
- a. Valves – [REDACTED]
 - b. Piping – Us Domestic – no specific manufacturers
 - c. Flanges . fittings – US domestic preferred, no specific manufacturers

Glyn

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Tuesday, March 23, 2021 8:49 AM
To: Jaffe, Samara A. (Marketing); Williams, Glyn; Bleicken, Joshua
Cc: Steve Elliott
Subject: EXT || RI - East Providence/tiverton - Path Forward

Good Morning Samara, Glyn, and Josh,

The recent announcement of National Grid intent to sell Narragansett assets to PPL comes at a critical time in the Tiverton and East providence projects.

As you are aware the two Mater Stations were identified as candidates for heater replacements in 2020. Since then Enbridge and National Grid have working together to design the replacement to meet National Grid Specifications. This approach will allow for transfer of the heating and regulation to National Grid upon project completion bringing the station ownership and operation in alignment with best practices.

The increased cost associated design of the facilities to National Grid Specifications is proposed to be recovered by a rate surcharge as agreed to in a letter agreement, currently in draft form for review with National Grid. This letter agreement will need to be executed prior to the East Providence and Tiverton projects enter into detailed design phase of the project.

The current plan for the East Providence project is to enter the detailed design phase by mid April. To facilitate this we would require and executed letter agreement by this time.

Recognizing that the announcement of the Narragansett transaction is fairly recent we do require direction on how National Grid would like to proceed on these two projects.

I am available for a call to discuss at your convenience.

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

Williams, Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Friday, April 9, 2021 12:47 PM
To: Williams, Glyn
Subject: EXT || Tiverton - Project Review

Hey Glyn,

Our engineering Development group has finalized the project proposal for the Tiverton M&R station work. I would like to review with you and your team to confirm approach and path forward.

We have the following availability:

Wednesday April 14 2:30-4PM
Thursday April 15 10AM – 11Am or 1PM – 2 PM
Friday April 16 9AM – 2PM

Let me know what works best for your team and I will send out an invite.

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

Williams, Glyn

From: Williams, Glyn
Sent: Friday, April 16, 2021 7:22 AM
To: Christopher Redman; Matthew Baran
Subject: National Grid Projects - Specifications

Hi Chris & Matt,

I am looking through the National Grid / Enbridge Tiverton Design.

I'm trying to get a first set of comments pack to you today.

Is it worth a meeting to go over our specifications, or at least share and discuss?

Our specifications for pipe, fittings, flanges etc are going through a current revision to update with the latest PHMSA rulings coming through. Enbridge's may be also?

I have seen and used previous Spectra / Algonquin (PF / PS titled) specifications.

Wanted to start some discussion so we can look to this on Tiverton and also East Providence.

Just let me know,

Glyn

Glyn Williams

Manager
 Gas Engineering Design NE I&R
[nationalgrid](#)
 1-781-402-4086
glyn.williams2@nationalgrid.com
 Reswoods, 40 Sylvan Road, Waltham MA 02451
[nationalgridus.com](#) | [Twitter](#) | [LinkedIn](#) | [Facebook](#)

Please consider the environment before printing this email.

Advance notice of vacation: No vacation days booked

Williams, Glyn

From: Christopher Redman <Christopher.Redman@enbridge.com>
Sent: Thursday, July 15, 2021 10:23 AM
To: Williams, Glyn; Blair Hastey
Cc: Eric Borden; Tiffany Martinez; Christopher Lombardi
Subject: RE: EXT || 30% Review Package - Requesting Review Meeting W/ Glyn & NGRID Team

Hi Glyn,

Thank you for the email in advance of this afternoon. My agenda is as follows:

1. Safety Moment
2. AGT Commercial Update – Blair Hastey
3. Technical Review
 - a. Drawings
 - b. Heater
 - c. DBM
4. Next steps

The Enbridge and Odin team will join the teams meeting you setup. We appreciate the opportunity to meet and discuss the project with your team. If you have any questions prior to this afternoon please reach out and we can discuss. Note that ODIN will step AGT and NGRID through the technical content.

Christopher Redman

Engineer, Pipeline Engineering
Project Operations Management

ENBRIDGE
TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58

enbridge.com
Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Thursday, July 15, 2021 7:45 AM
To: Christopher Redman <Christopher.Redman@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>
Cc: Eric Borden <eborden@odinepc.com>; Tiffany Martinez <Tiffany.Martinez@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>
Subject: [External] RE: EXT || 30% Review Package - Requesting Review Meeting W/ Glyn & NGRID Team

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Chris & All,

Do you have an Agenda for this afternoon?

It looks like we will have a quorum of people at least on the technical side.

We can review below and anything else you may have.

Thanks,

Glyn

From: Christopher Redman <Christopher.Redman@enbridge.com>
Sent: Wednesday, July 7, 2021 8:53 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Eric Borden <eborden@odinepc.com>; Tiffany Martinez <Tiffany.Martinez@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>
Subject: EXT || 30% Review Package - Requesting Review Meeting W/ Glyn & NGRID Team

Glyn,

Good morning. The Enbridge & ODIN team have advanced the 30% design package to the point where we would like to schedule a review meeting with your team. Deliverables that we would like to discuss and specific contents are:

- **30% Design Package**

File (Clean): [East Providence Heater Replacement Project-30% Review Package.pdf](#)

File (Enbridge Comments): [East Providence Heater Replacement Project-30% Review Package ENBRIDGE REDLINES 2021-07-07.pdf](#)

I have included both the clean file and the file with Enbridge comments for your reference. I will attach the clean file to the meeting invite when it goes out for the team to access. Key questions for your team:

- o NGRID asked the question around access to the heaters. Odin has modified and raised the facility piping to provide personnel walking access around the heaters. **Q:** Does NGRID accept this modified piping design?
- o **Q:** Does NGRID want to use [REDACTED] valves for this location? Please advise.
- o **Q:** Enbridge will look to install SSDs were possible at [REDACTED], evaluating if any [REDACTED] away to enable an SSD to be used. Does NGRID have any considerations or preferences on equipment selection [REDACTED]? Noted regulation offset requirements will be followed.
- o **Q:** ODIN has shown the demarcation points between NGRD and AGT. Is NGRID acceptable to these demarcation points?

- **Heater Quote**

File: [Q104550T_R10_Enbridge_AGT_GSYS_M&R_00010 - East Providence, RI.pdf](#)

Coming out of the 30% review meeting, Enbridge is looking for National Grid technical acceptance or additional comments. Please review and advise if your team has any additional comments or if you can provide technical acceptance.

- **Design Baseline**

File: [ENB-0030 E Prov Heater Replacement Design Baseline.pdf](#)

Note ODIN has specified NGRID piping specifications. Enbridge will discuss with ODIN and breakout AGT piping from NGRID piping in a table as Enbridge operated [REDACTED] piping at 750 psig [REDACTED]

To coordinate a meeting, does your team have availability next week on any of the days below to meet and talk through the 30% design package? Please advise if you would like to push to the following week to give your team additional time to review.

- Tuesday 7/13
- Wednesday 7/14
- Thursday 7/15 (afternoon)

If possible, please advise what day(s) work best and if morning or afternoon is preferred so we can work towards a time. Please reach out with a call if it is easier to talk through over the phone. Thank you for your team's time and assistance.

Christopher Redman

Engineer, Pipeline Engineering
Project Operations Management

—

ENBRIDGE

TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58

enbridge.com

Safety. Integrity. Respect.

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Williams, Glyn
Sent: Tuesday, July 6, 2021 6:41 AM
To: Matthew Baran
Cc: Soroka, Stephen; Zaccari, Justin; Bleicken, Joshua
Subject: RE: EXT || 90% Design Package - Tiverton MR033 Replacement

Hi Matt,

I wanted to check in on the project and also the process safety / PHA part.

Do you have any future date for the Enbridge PHA?

Many Thanks,

Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Thursday, April 1, 2021 3:27 PM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; John Tirrell <john.tirrell@nv5.com>; John E. Scanlon <john.scanlon@nv5.com>; Derek Smith <derek.smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>
Cc: Kenneth Sokoloski <Kenneth.Sokoloski@enbridge.com>; Helen Wang <helen.wang@enbridge.com>; Gianni Paradiso <gianni.paradiso@nv5.com>; Garry Matocha <Garry.Matocha@enbridge.com>; Ray Humphreys <Ray.Humphreys@enbridge.com>; John Fanning <John.Fanning@enbridge.com>; William Rogers <William.Rogers@enbridge.com>; Wayne Medeiros <Wayne.Medeiros@enbridge.com>; David Gattone <David.Gattone@enbridge.com>
Subject: EXT || 90% Design Package - Tiverton MR033 Replacement

Good Afternoon Team,

Please see the Tiverton MR033 Replacement – 90% Design Package, generate by CHI –

- The file is greater than 30 MB so I have uploaded it to the project sharepoint and my Enbridge-OneDrive for those who do not have access to the Sharepoint :
 - o <https://esites.enbridge.com/eng/lpeng/p/AA622/Docs/06%20Engineering/07%20Drawings>

- o https://enbridge-my.sharepoint.com/:b:/g/personal/baranm_spectraenergy_com/Eful46E2H-pPnJAgZcpW72MBJSnje7NUJIwUcX6h92zJYg?e=SIFNY8
- Please relay if you are unable to access either of those links to access the drawings –
 - o For the NG team please relay an FTP site I can upload the package

Please take some time to review the package and provided any comments, I will provide an update on the review and design schedule once I receive directive from the project sponsor.

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

From: Matthew Baran
Sent: Thursday, March 4, 2021 10:38 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirliia <Tom.Tirliia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>
Cc: Kenneth Sokoloski <Kenneth.Sokoloski@enbridge.com>; Helen Wang <helen.wang@enbridge.com>; Gianni Paradiso <Gianni.Paradiso@nv5.com>; Garry Matocha <Garry.Matocha@enbridge.com>; Ray Humphreys <Ray.Humphreys@enbridge.com>; John Fanning <John.Fanning@enbridge.com>; William Rogers <William.Rogers@enbridge.com>; Wayne Medeiros <Wayne.Medeiros@enbridge.com>; David Gattone <David.Gattone@enbridge.com>
Subject: RE: 60% Official Design Review - Tiverton MR033 Replacement

Good Morning Team,

Thanks again for the time and feedback yesterday as we covered the 60% Design Package for Tiverton. Please see the meeting minutes and marked up package – (blue comments – from NG , red comments from meeting)

- We will work to have these changes implemented as well as continue to follow up on the addressed items.

Please do not hesitate to send over any additional comments that we did not get to address in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Wednesday, February 10, 2021 11:00 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Hastey; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila; Joseph Bruno; John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; DellaCamera, Anthony; Ebert, Gregory

Cc: Kenneth Sokoloski; Helen Wang; Gianni Paradiso; Garry Matocha; Ray Humphreys; John Fanning; William Rogers; Wayne Medeiros; David Gattone

Subject: 60% Official Design Review - Tiverton MR033 Replacement

When: Wednesday, March 3, 2021 2:30 PM-4:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good Afternoon Team,

This is a placeholder date for the 60% Official Design Review - Tiverton MR033 Replacement Meeting

- 60% Design Package is set to be distributed to the team on 2/15 allowing for 2 weeks for the team to review and prepare comments
- We will also be using this package to perform the PHA/LOPA processes deemed necessary by the Enbridge and National Grid Teams
 - o Goal is to have those meetings the week following this review in order to gather all the comments necessary to move towards generating a 90% design package on 3/26

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE

CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

Williams, Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Wednesday, February 24, 2021 11:04 AM
To: Jaffe, Samara A. (Marketing); Williams, Glyn
Cc: Christopher Lombardi; Christopher Redman; Joseph Bruno
Subject: RE: EXT || East Providence Heater Replacement - Kicking Off Project

Hi Samara – yes, expecting to have a draft to you early next week.

Thanks,

Blair Hastey

Business Development

ENBRIDGE
 TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451
enbridge.com
 Safety. Integrity. Respect.

From: Jaffe, Samara A. (Marketing) <Samara.Jaffe@nationalgrid.com>
Sent: Wednesday, February 24, 2021 8:55 AM
To: Blair Hastey <Blair.Hastey@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>
Subject: [External] RE: EXT || East Providence Heater Replacement - Kicking Off Project

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thanks Blair,

Recognizing there may need to be a placeholder for the rate, is there any update on the availability of a draft agreement so we can begin reviewing?

Samara Jaffe
 Lead Program Manager- Gas Contracting, Compliance & Hedging
 100 East Old Country Road | Hicksville, NY 11801
 Office: (516) 545-5408
 Cell: (516) 418-9906
 Email: samara.jaffe@nationalgrid.com


From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Wednesday, February 24, 2021 8:24 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Jaffe, Samara A. (Marketing) <Samara.Jaffe@nationalgrid.com>; Christopher Lombardi

<Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>

Subject: EXT || East Providence Heater Replacement - Kicking Off Project

Good Morning Glyn,

Enbridge would like to set up a kickoff meeting for the East Providence Heater Project Execution. Looking ahead, I am requesting that Enbridge and National Grid can:

1. Kickoff project w/ a meeting by Wednesday 03/03/2021
2. Meet onsite for a visit by 3/10/2021

Engineering is looking to focus on locking down the scope and ordering the heaters within the next month if possible.

Agenda items for our kickoff meeting:

1. Introductions of the team
2. Scope Overview
3. Schedule overview
4. Request applicable National Grid Specifications
5. Next steps:
 - a. Site visit by 03/10/2021
 - b. Finalize heater quotes by 3/17/2021

Thank you for the assistance setting this up. If the 3/3 and 3/10 dates don't work then we will take the earliest dates available. Please reach out with any follow up questions.

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
 890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: [REDACTED]
Sent: Monday, October 25, 2021 10:39 AM
To: [REDACTED]
Subject: [REDACTED]

Hi Glyn,

Thanks for confirming the hold and witness points, see attached ITP that we will be using for the Milton heaters. If we need to make any adjustments to East Providence we can.

Attached are Profire test procedures:

- FAT is conducted @ [REDACTED]. We also have our own FAT that is conducted which includes leak checks and burner tuning.
- SAT is performed on heater site prior to startup/commissioning. Additionally we go through leak checks and burning tuning which are not covered by this SAT.
- SIS is an annual check that I believe National Grid would be conducting.

Best regards,

[REDACTED]

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Friday, October 22, 2021 8:20 AM
To: [REDACTED]

This email originated from (Glyn.Williams2@nationalgrid.com) an external sender. Use caution when following links or opening attachments as they could be malicious

All,

Apologies for my poor reception on the road yesterday.

Attached are the latest specifications and NGrid latest comments to the Milton Project for [REDACTED]. Peter – I will provide you a separate email to [REDACTED] with these Milton comments in full.

As we are discussing the East Providence final fuel gas train, quote and NGrid requirements: We should align the [REDACTED] quote as much as we can with Milton (attached) and from the call, include:

- [REDACTED]
- Any costs associated with my current comments.

On the ITP, National Grid:

- Hold and Witness on the process coil (and high pressure fuel gas piping) pressure test
- Hold and witness on the FAT
- We also have new FAT – National Grid Specific documents that we require [REDACTED] to comply with and complete as part of their FAT.
- Peter – can you provide these FAT documents?

I can provide more info as needed,

Glyn

Glyn Williams

Manager
Gas Engineering Design NE I&R
nationalgrid
1-781-402-4086
glyn.williams2@nationalgrid.com
Reswoods, 40 Sylvan Road, Waltham MA 02451
nationalgridus.com | [Twitter](#) | [LinkedIn](#) | [Facebook](#)

Please consider the environment before printing this email.

Advance notice of vacation: No vacation days booked

-----Original Appointment-----

From: Peter Udovenko <Peter.Udovenko@ogipe.com>

[REDACTED]

Rescheduling due to some conflicts. Let me know if this doesn't work for you. Can schedule later that day too.

Adding [REDACTED] to the meeting. A couple of items we would like to add to overall discussion:

- Process Conditions

- Heater footprint
 - Min bath temp
-

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

Or call in (audio only)

[+1 405-534-5016,,163582728#](#) United States, Oklahoma City

Phone Conference ID: 163 582 728#

[Find a local number](#) | [Reset PIN](#)

[Learn More](#) | [Meeting options](#) | [Legal](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Williams, Glyn
Sent: Friday, July 30, 2021 3:08 PM
To: Bill Batson; Christopher Redman
Cc: Eric Borden; Barrett, John F.; Bleicken, Joshua; Brennan, Patrick J.; Costa, Jason; DellaCamera, Anthony; Doherty, John E.; Ebert, Gregory; Konopka, Michael; Loiacono, Paul J.; Louis, Chrisnor; Porcaro, Julie; Romano, Michael; Simoneau, William J.; Talbot III, John J.; Zaccari, Justin; Backus, Katie E.
Subject: RE: EXT || East Providence Tripps Ln - Current Markup Set
Attachments: EAST PROV - ADDED GRID VALVE - NGrid Markups 073021.pdf; 2020-07-22 E PROV PID MARKUP - NGrid Markups 073021.pdf

All,

Please see attached NGrid comments.

All for clarity – ‘green’ is deletions.

Glyn

From: Bill Batson <bbatson@odinepc.com>
Sent: Thursday, July 22, 2021 1:11 PM
To: Christopher Redman <christopher.redman@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Eric Borden <eborden@odinepc.com>
Subject: EXT || East Providence Tripps Ln - Current Markup Set

Chris and Glynn,

Latest set of markups for E. Providence is attached, incorporating comments from our recent call. Any comments please let us know.

Thanks,

Bill Batson, PE

Senior Mechanical Engineer

ODIN

m: 781-325-5768

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com e: bbatson@odinepc.com



Williams, Glyn

From: Williams, Glyn
Sent: Wednesday, November 3, 2021 3:07 PM
To: 'John Tirrell'; Matthew Baran
Cc: John E. Scanlon; Gianni Paradiso
Subject: RE: EXT || FW: Tiverton 90% Issue - Comments - Need Electrical and Controls meeting with National Grid

Hi,

Yes I'm free. If you want to come to a representative NGrid site, we can do that too?

We just put 2 QTY cast iron boilers, and hydronic system controls upgrade at Polaroid Take Station, Waltham MA?

We could visit this if it helps to see the wiring.

I am free Wednesday 10th and Thursday 11th Nov, most of the day.

Glyn

From: John Tirrell <John.Tirrell@nv5.com>
Sent: Wednesday, November 3, 2021 2:34 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Matthew Baran <matthew.baran@enbridge.com>
Cc: John E. Scanlon <john.scanlon@nv5.com>; Gianni Paradiso <gianni.paradiso@nv5.com>
Subject: RE: EXT || FW: Tiverton 90% Issue - Comments - Need Electrical and Controls meeting with National Grid

Glyn, Matt,
 One comment on sheet 47 was that we should have an electrical and controls meeting with National Grid to discuss Boiler Controls.
 Can we schedule that before 11/22?
 Thank you,

Williams, Glyn

From: Williams, Glyn
Sent: Wednesday, March 3, 2021 7:43 AM
To: Matthew Baran
Cc: Barrett, John F.; Bleicken, Joshua; Brennan, Patrick J.; Costa, Jason; DellaCamera, Anthony; Doherty, John E.; Ebert, Gregory; Konopka, Michael; Loiacono, Paul J.; Louis, Chrisnor; Porcaro, Julie; Romano, Michael; Simoneau, William J.; Talbot III, John J.; Zaccari, Justin
Subject: RE: EXT || RE: 60% Official Design Review - Tiverton MR033 Replacement
Attachments: Tiverton MS 60 Percent for Review 2-12-21 - NGrid Comments 030321.pdf

Hi Matt,

Please see attached comments from National Grid.

Just let us know any design review meeting dates.

Many Thanks,

Glyn
 781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, February 15, 2021 11:32 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tom Tirlia <Tom.Tirlia@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Oluyemi Oladipo <Oluyemi.Oladipo@enbridge.com>; William Brett <William.Brett@enbridge.com>; William Diaz <William.Diaz@enbridge.com>; George Migrants <George.Migrants@enbridge.com>; Mitchell McNally <Mitchell.McNally@enbridge.com>; Nicholas Marter <Nicholas.Marter@enbridge.com>; Blair Hastey <Blair.Hastey@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Brendan Boyce <Brendan.Boyce@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; John Bins <John.Bins@enbridge.com>; Joseph Dellaquila <Joseph.Dellaquila@enbridge.com>; Joseph Bruno <Joseph.Bruno@enbridge.com>; John Tirrell <john.tirrell@nv5.com>; john.scanlon <john.scanlon@nv5.com>; Derek Smith <derek.smith@nv5.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>
Cc: Kenneth Sokoloski <Kenneth.Sokoloski@enbridge.com>
Subject: EXT || RE: 60% Official Design Review - Tiverton MR033 Replacement

Good Morning Team,

See the attached 60% Design Package for the AGT Tiverton MR00033 Replacement Project generated by CHI.

Please review this package and prepare any markups/comments for the Design Review set for 3/3 –
 - I will use this package to start the necessary Enbridge PHA Processes

Please do not hesitate to contact me regarding any initial comments before the review meeting,

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

-----Original Appointment-----

From: Matthew Baran

Sent: Wednesday, February 10, 2021 11:00 AM

To: Matthew Baran; Tim Buzby; Tom Tirlia; Christopher Lombardi; Shawn Robison; Joseph Feist; Oluyemi Oladipo; William Brett; William Diaz; George Migrants; Mitchell McNally; Nicholas Marter; Blair Haste; Blaine Fritsche; Brendan Boyce; Nancy Kist; Barry Goodrich; John Bins; Joseph Dellaquila; Joseph Bruno; John Tirrell; John E. Scanlon; Derek Smith; Williams, Glyn; Bleicken, Joshua; Zaccari, Justin; Loiacono, Paul J.; Porcaro, Julie; Brennan, Patrick J.; Talbot III, John J.; Romano, Michael; Costa, Jason; DellaCamera, Anthony; Ebert, Gregory

Cc: Kenneth Sokoloski

Subject: 60% Official Design Review - Tiverton MR033 Replacement

When: Wednesday, March 3, 2021 2:30 PM-4:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Good Afternoon Team,

This is a placeholder date for the 60% Official Design Review - Tiverton MR033 Replacement Meeting

- 60% Design Package is set to be distributed to the team on 2/15 allowing for 2 weeks for the team to review and prepare comments
- We will also be using this package to perform the PHA/LOPA processes deemed necessary by the Enbridge and National Grid Teams
 - o Goal is to have those meetings the week following this review in order to gather all the comments necessary to move towards generating a 90% design package on 3/26

If you cannot attend please take some time to review the package and provide any comments that can be addressed in the meeting –

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

Williams, Glyn

From: [REDACTED]
Sent: Friday, April 23, 2021 12:09 PM
To: Eric Borden; Williams, Glyn; Christopher Redman
Cc: Sales; Bill Batson; Brooklyn Winn
Subject: RE: EXT || RE: East Providence TERI Heater Call Q104550T_R6
Attachments: For Reference Drawing.pdf

Hi Eric/Glyn,

We will issue a revision early next week addressing both of the items below. See attached "for reference drawing" of a similarly sized heater. Note, the one we quoted is 90" diameter shell but the one I'm sharing is 96" so it's slightly wider and taller but should give you a good idea of the footprint. Quoted heater might be less by 8"-12" on height and width..length wise both are 24' long so that part should be close.

Let me know if you have any questions.

Best regards,

[REDACTED]

[REDACTED]

This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Thank you for the clarification Glyn.

Eric

[Redacted]

Hi All,

On 2. The latter is better, we just back-calculate the ASME MAOP / MAWP (to 865 psig) based on the 1125 psig required minimum test pressure.

Many Thanks,

Glyn

Get [Outlook for iOS](#)

From: Christopher Redman <Christopher.Redman@enbridge.com>
Sent: Thursday, April 22, 2021 10:48:21 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Sales <Sales@OGIPE.com>; Eric Borden <eborden@odinepc.com>; Bill Batson <bbatson@odinepc.com>; Brooklyn Winn <brooklyn.winn@ogipe.com>; Peter Udovenko <Peter.Udovenko@ogipe.com>
Subject: EXT || RE: East Providence TERE Heater Call Q104550T_R6

Glyn,

Do you have a preference on Bill's #2 response for how this is specified and documented? Please advise and thank you for the direction.

Christopher Redman
Engineer, Pipeline Engineering
Project Operations Management

ENBRIDGE
TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58
enbridge.com
Safety. Integrity. Respect.

[Redacted]

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Two questions/comments on my end:

1. Note 3 on page one states 9.2 psid pressure drop at 200 psig inlet, what is the pressure drop at the updated minimum inlet pressure of 350 psig?
2. There seems to be some confusion about the pressure test level required. The pipeline MAOP is 750 psig, requiring a minimum of $1.5 \times 750 = 1,125$ psig for the strength test to satisfy 49 CFR 192. The design pressure listed of 865 psig is apparently designed to yield a ASME hydrostatic pressure test (1.3x design pressure per my understanding) that matches the 1.5xMAOP test pressure. There are two options here as I see it: either list the design pressure as 750 psig and specify a special hydrostatic pressure test of 1125 psig minimum for 8 hours (over and above the ASME requirements), or state a design pressure of 865 psig and use the default 1.3x ASME pressure test ($865 \times 1.3 = 1,124.5$ psig, we are relying on rounding up to 1,125) with an additional requirement for 8 hour duration. Either method will generate the required 1,125 psig minimum 8 hr strength test as required by National Grid. Whichever option is easier to accommodate (I suspect the latter) would be fine in my opinion.

Thanks,

Bill Batson, PE

Senior Mechanical Engineer

ODIN

m: 781-325-5768

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: http://secure-web.cisco.com/1PiG8L8-S79dwCn3t_-8a9j--cSAm507-9sVN7Vk44aE0hSGnY5-2g0Unm7ROcd59AK6DLO_3DOpEvahUWKEfts9ygmXEZhntahhcDfYMvXPfftZdrUtAbD7r5Lu8ky4MUorh7Y79Crs8IV64Mmui0QZnse5EDiTE7fatKhbA0Tq3lfawXGrSptp14d2pJwCmHyJEC8OdN/http%3A%2F%2Fwww.odinepc.com



Good Afternoon,

Attached is Quote Q104550T_R6 for Enbridge East Providence Station.

Please let me know if there is anything else we can do.



[REDACTED]

these adjustments will better meet our
questions or concerns about the revised Payment

[REDACTED]

[REDACTED]

Brooklyn,

Please add Q104550T_R5 back on the dashboard for revision:

- Utilize the design configuration from Holcomb T200608H latest design
- Refresh everything else

Start a new quote number where we will use the same process conditions and design but our goal is to make the shell narrower and longer. This should hopefully reduce the burner quantity to 2 firetubes instead of 3 firetubes.

Set for 1 week out if possible.

Once these are sized we will need to find a "go-by" GA so that we can show the customer what the foot print will be. This may require finding the closest sized heater and adjusting the dims in pdf. I'll work with Mike on getting that part taken care of.

Best regards,

[REDACTED]



could be malicious

Good Morning All,

I look forward to speaking with everyone today, I figured that I would send a brief agenda to let you know what I think are the important items to cover today, there will be opportunity to add anything but I figure I'd provide the framework.

1. Safety Moment
2. Introductions
3. Current Heater Design Criteria vs. Station Flow Data - Confirmation
4. Heater geometry options, wider vs. narrow vs. number of burners
5. Availability of similar heater design drawings to facilitate site layout (site is very tight, a drawing that would allow us to model the piping and layout the site sooner will help the overall design process and help determine heater width)
6. Open Discussion Portion

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: [http://secure-web.cisco.com/1PiG8L8-S79dwCn3t_-8a9j--cSAm507-9sVN7Vk44aE0hSGnY5-2g0Unm7ROcd59AK6DLO_3DOpEvahUWKEFts9ygmXEZhntahhcDfYMvXPffTZdrUtAbD7r5Lu8ky4MUorh7Y79\(rs8lV64Mmui0QZnse5EDiTE7ftKhbA0Tq3lfqwXGrSptp14d2pJwCmHyJEC8OdN/http%3A%2F%2Fwww.odinepc.](http://secure-web.cisco.com/1PiG8L8-S79dwCn3t_-8a9j--cSAm507-9sVN7Vk44aE0hSGnY5-2g0Unm7ROcd59AK6DLO_3DOpEvahUWKEFts9ygmXEZhntahhcDfYMvXPffTZdrUtAbD7r5Lu8ky4MUorh7Y79(rs8lV64Mmui0QZnse5EDiTE7ftKhbA0Tq3lfqwXGrSptp14d2pJwCmHyJEC8OdN/http%3A%2F%2Fwww.odinepc.)



This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Eric Borden <eborden@odinepc.com>
Sent: Monday, June 28, 2021 3:10 PM
To: Williams, Glyn; Christopher Redman
Cc: Bill Batson
Subject: RE: EXT || RE: East Providence [REDACTED] Heater Call Q104550T_R9
Attachments: Q104550T_R10_Enbridge_AGT_GSYS M&R 00010 - East Providence, RI.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon Glyn and Chris,

Attached is the most current proposal I received from [REDACTED], this past Wednesday when I was out of the office. It was revised per the most recent comments, P&IDs reflecting Grid's most recent preferred heater design would be supplied as part of the approval drawing set.

One thing [REDACTED] mentioned is that steel prices are very volatile right now and the quotes are only valid for 5 days. We'll need one more revision when ready to place the order.

Thank you

Eric

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, June 16, 2021 8:03 AM
To: Eric Borden <eborden@odinepc.com>
Cc: Bill Batson <bbatson@odinepc.com>; Christopher Redman <christopher.redman@enbridge.com>
Subject: RE: EXT || RE: East Providence [REDACTED] Heater Call Q104550T_R9

Hi Eric,

Specific comments on the quote:

- They still show a 4 hour hydrotest – we would want an 8 hour hydrotest. Hydrotest pressure would be 1125 psig minimum
- Additionally taking to [REDACTED], they would also test the transmission part of the fuel gas train to this 8 our 1125 psig requirement.
- See P&ID for all other comments

Thanks for asking on the P&ID. On the overall design and quoting, we've been going back to [REDACTED] with a number of Milton P&ID revisions, then asking them to update their quote based on changes.

Attached is the latest P&ID for Milton heaters, and we have been discussing it with Peter Udoenko and Mile Ingle on that project.

This would essentially be the P&ID for East Providence heaters, albeit with three fuel gas trains, not two.

If [REDACTED] can confirm or update their East Providence quote based on this latest Milton P&ID revision, that would be ideal.

Thanks,

Glyn

From: Eric Borden <eborden@odinepc.com>
Sent: Tuesday, June 15, 2021 6:28 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Bill Batson <bbatson@odinepc.com>; Christopher Redman <christopher.redman@enbridge.com>
Subject: EXT || RE: East Providence [REDACTED] Heater Call Q104550T_R9

Good Evening Glyn,

I hope all is well, I wanted to follow up to see if you or your team had any comments on the current proposal from [REDACTED] which I shared on this email? We are planning to submit our 30% design package on June 30th to Enbridge and hopefully schedule a review session for all the week after so if you had any comments that may reflect our P&IDs or require revisions to the quote it would be very helpful.

Also I was wondering if you have any P&IDs for past heater jobs which show the communications arrangement that National Grid is using for these heaters, if you could share that it would be helpful as we could provide more detail on our P&IDs for the 30% package.

Thank you

Eric

From: Eric Borden
Sent: Friday, June 4, 2021 8:30 AM
To: Christopher Redman <christopher.redman@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Bill Batson <bbatson@odinepc.com>
Subject: FW: East Providence [REDACTED] Heater Call Q104550T_R9

Good Morning Chris and Glyn,

I hope all is well, it has been a long time coming but I think we have arrived at a heater size, site layout, and proposal that works for the project. The configuration as mentioned in the proposal does not reflect the ladder/fuel gas orientations that were recommended by [REDACTED] and discussed on a recent phone call but those small details can be shown on the actual equipment drawings. ODIN has revised our most current site layout to show the ladder and fuel gas locations so it is clear what is being proposed, it is also attached for your reference.

These attachments should facilitate discussions at Monday afternoon's meeting.

Thank you

Eric

Eric Borden
Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

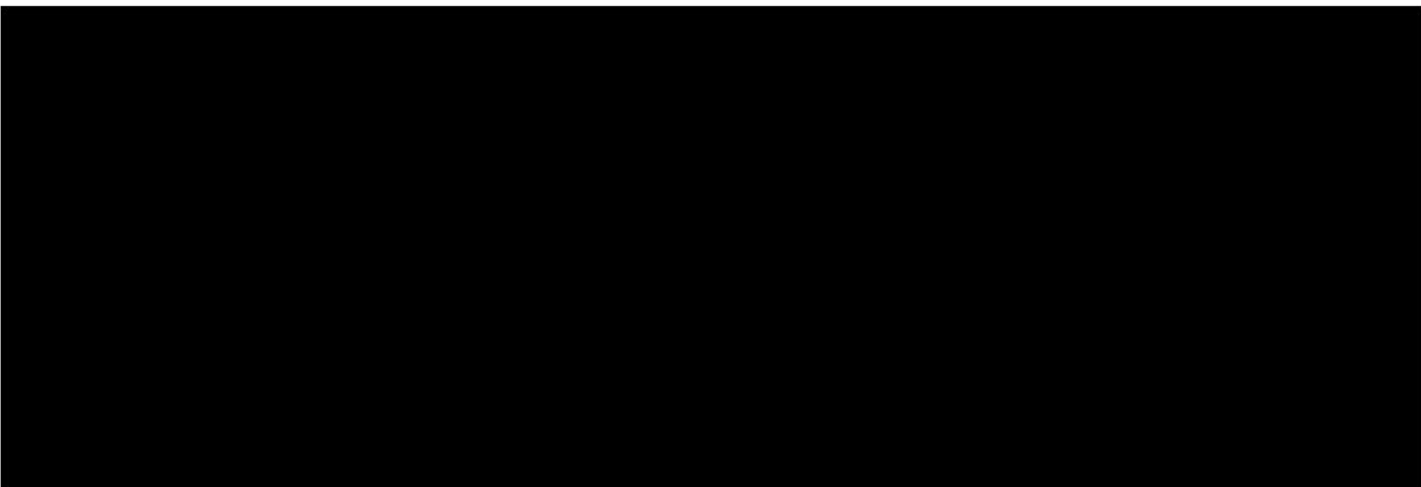
w: www.odinepc.com e: eborden@odinepc.com



Good Afternoon, Eric.

Attached is Revised Quote Q104550T_R9 for National Grid East Providence Station. Please let me know if there is anything else we can do.

Thank You,



[REDACTED]

[REDACTED]

Good Morning, Eric.

I will send the quote mark-up to the Engineer and have them revise this. We will have revised Quote Q104550T_R9 back to you by 5/27.

Thank You,

[REDACTED]

From: Eric Borden <eborden@odinepc.com>

[REDACTED]

Christopher Redman

<christopher.redman@enbridge.com>

Subject: RE: East Providence TE Heater Call Q104550T_R8

[REDACTED]

Good Morning Brooklyn,

We have some comments on the quote, it seems that one of the older quotes were probably used as a starting point but some of the new parameters were not carried through. If you have any questions please let us know.

Thank you

Eric

[Redacted]

Eric,

Attached is Quote Q104550T for Enbridge East Providence Station. We are working to get you a generic GA Drawing and I will send that just as soon as it's ready.

Thank You,

[Redacted]

[Redacted]

Good Morning, Eric.

We are still on track to have Quote Q104550T for Enbridge East Providence Station back to you by E.O.B today. The heater dimensions will be listed on this quote.

Let me know if there is anything else you are needing.

Thank You,

[Redacted]



From: Eric Borden <eborden@odinepc.com>

Sent: Monday, May 17, 2021 9:06 AM



This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Good Morning Brooklyn,

Just checking it to see if [REDACTED] is still on track for an updated proposal and heater footprint today?

Thank you

Eric

From: Brooklyn Winn <brooklyn.winn@ogipe.com>

[REDACTED]
<bbatson@odinepc.com>; Christopher Redman
<christopher.redman@enbridge.com>

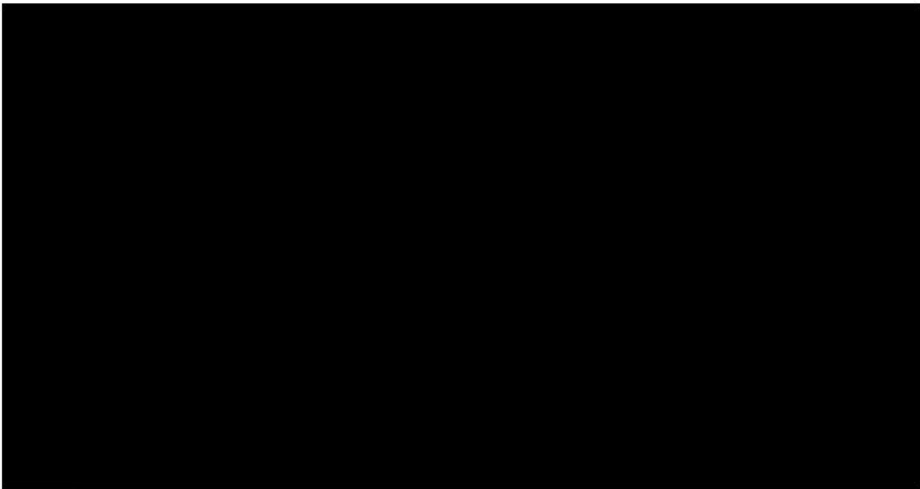
Subject: RE: East Providence TERI Heater Call Q104550T_R7

Good Afternoon, Eric.

We will have this quote revised and back to you by 5/17. Please let us know if you need anything in the meantime.

Thank You,





From: Eric Borden <eborden@odinepc.com>

Sent: Thursday, May 13, 2021 12:15 PM



Good Afternoon Peter and Brooklyn,

I just wanted to check in with you to see if you'd be able to supply an ETA as to when you may arrive at the new heater sizing as mentioned earlier in the week.

Thank you

Eric

From: Eric Borden

Sent: Monday, May 10, 2021 5:59 PM



Hi Peter,

That would be perfect, we know that we had the earlier version sized but were concerned that even that may be a little longer with the Grid Specs.

Thank you!

Eric



[REDACTED]
Subject: RE: East Providence TERI Heater Call Q104550T_R7

Hi Eric,

Yes, we can shorten the heater but it'll have to have 3 firetubes then. We quoted a version of this under R5, see attached. We can requote that size per National Grid latest specs if that would work for you?

Let me know your thoughts.

Best regards,

[REDACTED]

From: Eric Borden <eborden@odinepc.com>

[REDACTED]

This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Good Afternoon Brooklyn and Peter,

I wanted to reach out to you to see if there are any options available to shorten the overall heater's length. Per the drawing provided the overall length of the heater with piping, stacks, and burners is about 34' all in, we are having trouble siting heaters of this length in the area that is available to us, a wider option would be better if it is possible to sacrifice length for width. Is it possible to discuss options if they exist and determine an alternate footprint that may work with our constraints?

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com e: eborden@odinepc.com

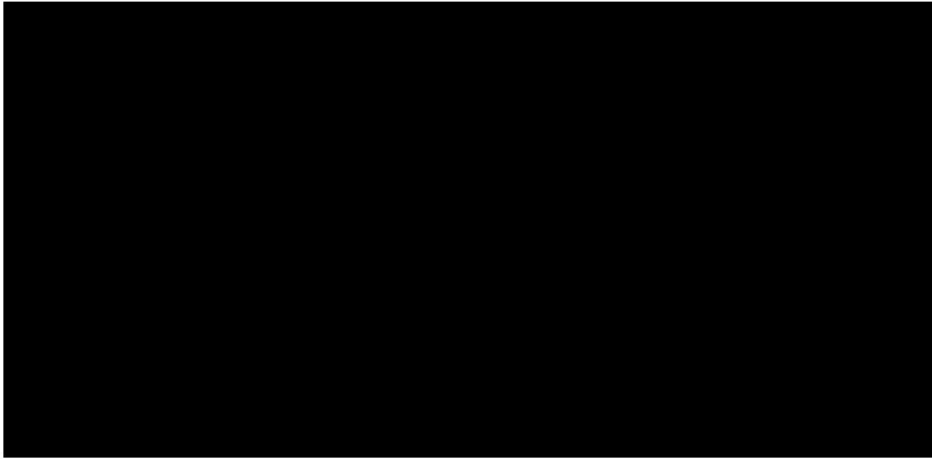


Good Afternoon,

Attached is Revised Quote Q104550T_R7 for Enbridge East Providence Station.
Please let me know if there is anything else we can do.

Thank You,





From: Eric Borden <eborden@odinepc.com>

Sent: Thursday, April 22, 2021 12:01 PM



This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Thank you Brooklyn,

This is much appreciated, on our call last week with Enbridge, National Grid, and [REDACTED] it was discussed that [REDACTED] could provide some more detailed drawings for the heaters that ODIN could use for site layout purposes to verify that they would fit and to potentially verify a feasible size range for the site we are working with. We understand that anything provided would be preliminary at this point. Have you an estimate as to when we may receive something?

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com **e:** eborden@odinepc.com



[REDACTED]

Good Afternoon,

Attached is Quote Q104550T_R6 for Enbridge East Providence Station.

Please let me know if there is anything else we can do.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Brooklyn,

Please add Q104550T_R5 back on the dashboard for revision:

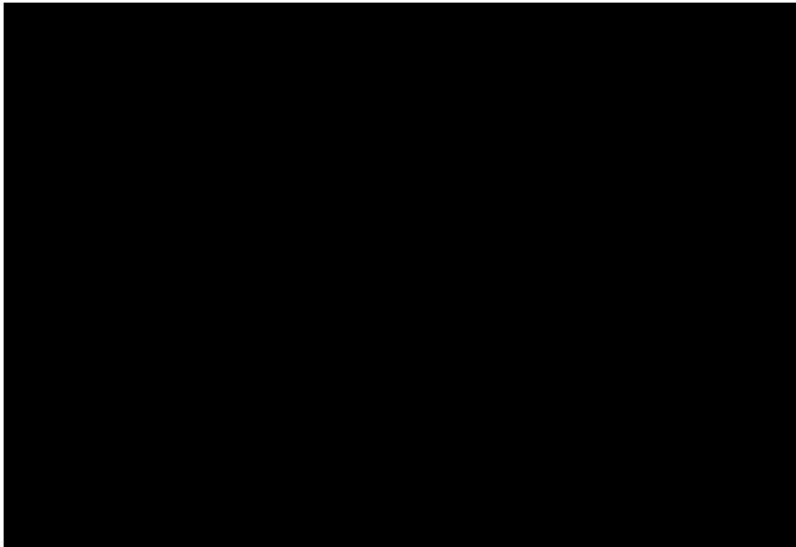
- Utilize the design configuration from Holcomb T200608H latest design
- Refresh everything else

Start a new quote number where we will use the same process conditions and design but our goal is to make the shell narrower and longer. This should hopefully reduce the burner quantity to 2 firetubes instead of 3 firetubes.

Set for 1 week out if possible.

Once these are sized we will need to find a "go-by" GA so that we can show the customer what the foot print will be. This may require finding the closest sized heater and adjusting the dims in pdf. I'll work with Mike on getting that part taken care of.

Best regards,



This email originated from (eborden@odinepc.com) an external sender. Use caution when following links or opening attachments as they could be malicious

Good Morning All,

I look forward to speaking with everyone today, I figured that I would send a brief agenda to let you know what I think are the important items to cover today, there will be opportunity to add anything but I figure I'd provide the framework.

1. Safety Moment
2. Introductions
3. Current Heater Design Criteria vs. Station Flow Data - Confirmation
4. Heater geometry options, wider vs. narrow vs. number of burners
5. Availability of similar heater design drawings to facilitate site layout (site is very tight, a drawing that would allow us to model the piping and layout the site sooner will help the overall design process and help determine heater width)
6. Open Discussion Portion

Thank you

Eric

Eric Borden

Director

ODIN

m: 978-852-0073

a: 2 Highwood Drive – Suite 204, Tewksbury, MA 01876

w: www.odinepc.com e: eborden@odinepc.com



This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Friday, May 14, 2021 8:29 AM
To: Williams, Glyn; Kilgus, Robert; Bleicken, Joshua
Cc: Matthew Baran; Tim Buzby
Subject: RE: EXT || RE: ENB - Tiverton Scope review
Attachments: RI Tiverton CHI Pricing BOM Revised 3 May 21.xlsx

Follow Up Flag: Follow up
Flag Status: Completed

Glyn,

See attached breakdown.

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Thursday, May 13, 2021 1:30 PM
To: Blair Hastey <Blair.Hastey@enbridge.com>; Kilgus, Robert <Robert.Kilgus@nationalgrid.com>; Matthew Baran <matthew.baran@enbridge.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>
Subject: [External] Re: EXT || RE: ENB - Tiverton Scope review

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Blair,

I'm on paternity leave at the moment and returning slowly!

Do you have a breakdown of the national grid adders for both the materials and construction ?

When I do the math in my head, I don't seem to get the same increases.

For example:

- additional HX - \$30k
- Additional supermonitor valves- \$25k each
- Instrumentation adders - maybe \$25k

- Additional boiler - \$10k
- Etc

I did see the P&ID markup and the overall doc, but not the math behind them.

Many thanks,

Glyn

Get [Outlook for iOS](#)

From: Blair Hasteley <Blair.Hasteley@enbridge.com>
Sent: Wednesday, May 12, 2021 3:10:14 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: EXT || RE: ENB - Tiverton Scope review

Hey Glyn, Just touching base to see if there was any feedback or additional follow-up questions you or your team had?

Blair Hasteley
Business Development

ENBRIDGE
TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451
enbridge.com
Safety. Integrity. Respect.

From: Blair Hasteley
Sent: Tuesday, May 4, 2021 5:08 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Konopka, Michael <Michael.Konopka@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; Louis, Chrisnor <Chrisnor.Louis@nationalgrid.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Simoneau, William J. <William.Simoneau@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Backus, Katie E. <Katie.Backus@nationalgrid.com>; Jaffe, Samara A. (Marketing) <Samara.Jaffe@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>
Subject: RE: ENB - Tiverton Scope review

Glyn,

As a follow-up to our meeting on April 23.

Please see attached project estimate in section 4 of the attached file "Tiverton RI Boiler Enbridge - National Grid Option Comparison R1 4 May 21" has been revised to reflect changes to line items (shown in red font) specifically pertaining to the buildings and the switching valves. The building cost was reviewed further, and the revised amount reflects the differential cost between concrete and metal buildings. The switching valves were changed to Enbridge's account. The

associated fabrication and construction cost for National Grid has been lowered to align with the associated material changes.

Please also see attached marked up PID's showing the components that are specific to National Grid's specifications and requirements that are additional to the Enbridge option and constitute the material estimate value. The National Grid items are shown within the clouds on the mark up.

Regarding the triple level protection Enbridge does not have any such requirement per PHMSA design requirements. This was an adder as requested by National Grid resulting from PID reviews.

Please let me know if you require any further clarification on the cost breakdown.

Thank,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517

890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

-----Original Appointment-----

From: Blair Haste

Sent: Monday, April 12, 2021 2:35 PM

To: Blair Haste; Williams, Glyn; Barrett, John F.; Bleicken, Joshua; Brennan, Patrick J.; Costa, Jason; DellaCamera, Anthony; Doherty, John E.; Ebert, Gregory; Konopka, Michael; Loiacono, Paul J.; Louis, Chrisnor; Porcaro, Julie; Romano, Michael; Simoneau, William J.; Talbot III, John J.; Zaccari, Justin; Backus, Katie E.; Jaffe, Samara A. (Marketing); Christopher Lombardi; Tim Buzby

Cc: Matthew Baran

Subject: ENB - Tiverton Scope review

When: Friday, April 23, 2021 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

Reschedule due to conflict.

All,

The purpose of this meeting is to discuss the Tiverton M&R project.

Addenda to follow.

Thanks,

Blair Haste

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

Or call in (audio only)

[+1 346-262-0361,,271802803#](tel:+13462620361,,271802803#) United States, Houston

Phone Conference ID: 271 802 803#

[Find a local number](#) | [Reset PIN](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Williams, Glyn
Sent: Monday, September 13, 2021 3:07 PM
To: Matthew Baran
Cc: Kilgus, Robert; Christopher Redman; Romano, Michael
Subject: RE: EXT || RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence
Attachments: 8H-8HE_manual.pdf; S5263901-0002_31000.pdf

Hi Matt,

Boilers are above the 100,000 BTU/HR threshold.

Each [REDACTED] boiler has a rated input of 305,000 BTU/HR. This is fuel duty of the combusted natural gas.

I'm unsure what the 100 MBTU/HR threshold is?

A RI environmental permit only looks to be needed when the heat capacity is 10,000,000 BTU/HR (10 MMBTU/HR) of more for natural gas.

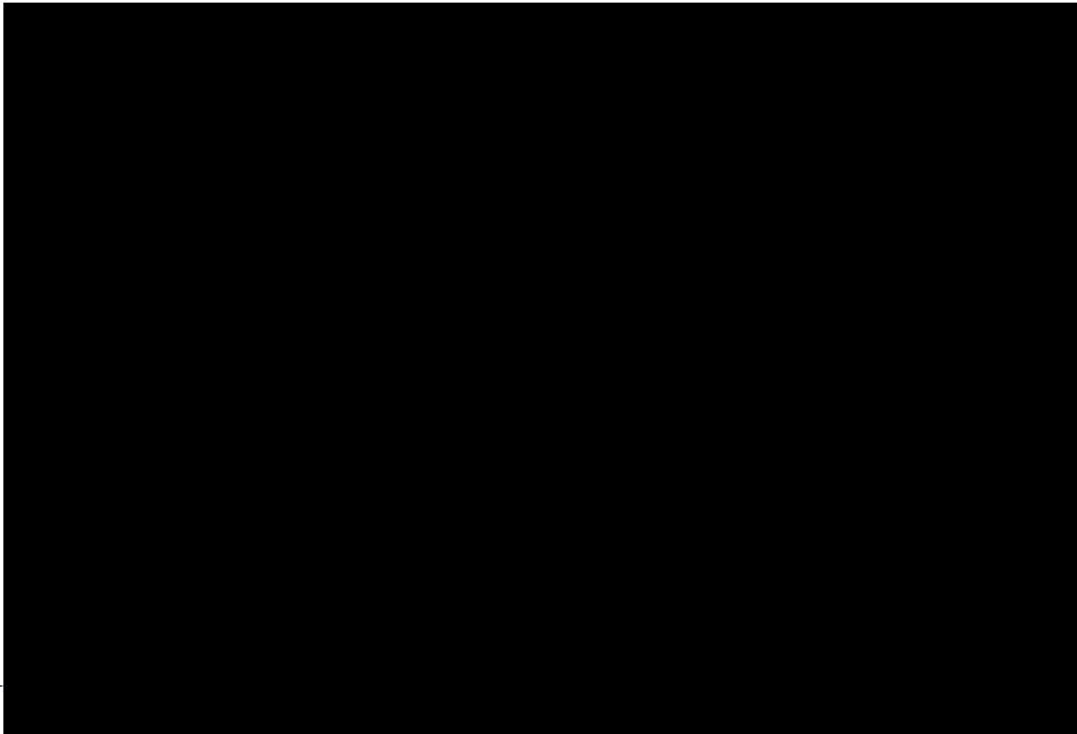
Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, September 13, 2021 2:49 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Kilgus, Robert <Robert.Kilgus@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Romano, Michael <Michael.Romano@nationalgrid.com>
Subject: RE: EXT || RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence

Thanks again Glyn,

Hate to inquire on a Monday, but can you answer the follow-up on item#1 (Boilers) to close the loop on the Air Permitting Design Basis –

- I believe we just want confirmation to ensure the rating is below the 100 MBtu/Hr threshold –
- *On item 1, is it possible to get a **specification sheet for the proposed water/glycol boilers?***
 - o *The attached quote does not provide the rating and when I tried to search online using the model number, the units seem to have ratings greater than 200,000 BTU/HR*
 - *(see one example snip below and the attached general spec document I downloaded from the [manufacturer's website](#)).*
 - o *I understand the spec sheet may not be available at this stage but could you please confirm the rating? Thank you.*



Much Appreciated!

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Thursday, September 2, 2021 12:46 PM
To: Matthew Baran <matthew.baran@enbridge.com>
Cc: Kilgus, Robert <Robert.Kilgus@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Romano, Michael <Michael.Romano@nationalgrid.com>
Subject: [External] RE: EXT || RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt,

Also as a follow up:

Tiverton has a 60 gallon odorant tank.

I corrected it below also,

Thanks,

Glyn

From: Williams, Glyn

Sent: Thursday, September 2, 2021 1:16 PM

To: Matthew Baran <matthew.baran@enbridge.com>

Cc: Kilgus, Robert <Robert.Kilgus@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Romano, Michael <Michael.Romano@nationalgrid.com>

Subject: RE: EXT || RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence

Hi Matt,

Details are:

1. Process Boilers – if the [REDACTED] is not offered the [REDACTED] is ok and good to use.
2. Emergency Generator – The existing generator will be sufficient. It is a 22 KW [REDACTED].
3. There is an odorant tank at site (photo attached). Outdoor tank, with stainless steel bund and lid.
 - 60 gallon horizontal tank, gets filled maybe 1 a year.
 - The tank is located inside the stainless steel bund and lid.
 - Note the tank is a pressurized vessel, and aside from some pump and other vents around the odorant system, does not naturally release into the atmosphere.
4. Glycol makeup tank – [REDACTED]
 - It can hold 18 gallons of glycol
 - No release to atmosphere
 - Maybe some natural evaporation over time but that's it
 - Purpose is to be able to slightly adjust glycol system pressure, without too much hassle

Just to state also:

- The boilers and emergency generator emission are well below what we need as national Grid to file any state air / environmental permitting.
- We actually pick the 22 kW generator size to get below the required state air emissions permitting for generators 37 Kw and above. http://www.dem.ri.gov/pubs/regs/regs/air/air43_12.pdf

The odorant / glycol storage volumes also well below any formal permitting we see.

Just let me know if anything else is needed,

Glyn

From: Matthew Baran <matthew.baran@enbridge.com>

Sent: Tuesday, August 31, 2021 4:29 PM

To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Kilgus, Robert <Robert.Kilgus@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>
Subject: EXT || RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence
Importance: High

Good Afternoon Glyn,

Hope all is well,

I wanted to check-in with your team regarding some Air Permitting Design Basis details, in order to internally prepare some Air Permitting docs for pending Tiverton MR033 design re-start. If you could review the inquiries below to provide any details that could help progress this process – the main details inquiries highlighted – please provide this week so I can distribute to the Env. Team, if possible –

1. **Process Boilers** – Based on the current design drawings and equipment list we are assuming two (2) new water/glycol boilers each with a rated heat fuel duty of 200,000 BTU/HR. The model number specified for the project by the engineering consultant is no longer manufactured. See the attached email for details of the replacement model to use as the basis for design. Confirm with NG, model number and specifications with heat duty confirmed
2. **Emergency Generator** – National Grid has an existing generator at the site which we understand we will replace as part of the project. We are assuming the replacement will be a [REDACTED] Emergency generator. We understand National Grid is considering a [REDACTED] replacement but don't have the specific model reference currently. Confirm with NG existing generator engine model and specifications, and that existing generator will be sufficient.
3. **Odorant Tank** – We need to confirm if there is currently an odorant tank at the site and if so the capacity ,yearly throughput volumes, dimensions, fixed roof or cone roof, horizontal or vertical and paint color in order to calculate air emissions. The existing odorant tank is owned and operated by National Grid. My understanding is there is no plan to change the odorant tank. Confirm with National Grid and get existing tank specifications.
4. **Proposed Glycol Make-Up Tank** - There is a proposed glycol tank in the 90% design drawings. We will need the tank specifications and estimated glycol throughputs for this tank as well. Confirm with NG and get Make-up tank design specifications

Much Appreciated,

Matthew Baran
 Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
 Safety. Integrity. Respect.

From: Matthew Baran
Sent: Thursday, April 29, 2021 12:41 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Kilgus, Robert <Robert.Kilgus@nationalgrid.com>; Christopher Redman <Christopher.Redman@enbridge.com>
Subject: RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence

Good Afternoon Glyn,

Apologies for the delay, please see the latest Enbridge equipment specs, relevant to these MR projects
 - Please advise if any further specs are needed

Much Appreciated,

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
 Safety. Integrity. Respect.

From: Christopher Redman <Christopher.Redman@enbridge.com>
Sent: Thursday, April 22, 2021 7:42 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>; Matthew Baran <matthew.baran@enbridge.com>
Cc: Kilgus, Robert <Robert.Kilgus@nationalgrid.com>
Subject: RE: Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence

Glyn,

Received and thank you for taking the time to discuss. We will communicate with respective engineering firms working on Tiverton and East Providence. I will coordinate with Matthew on the specification transmittal.

Christopher Redman

Engineer, Pipeline Engineering
 Project Operations Management

ENBRIDGE
 TEL: 713-627-4816 | CELL: 832-567-2317 | Christopher.Redman@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Mail Code: 5G-58
enbridge.com
 Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Thursday, April 22, 2021 7:19 AM
To: Christopher Redman <Christopher.Redman@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>
Cc: Kilgus, Robert <Robert.Kilgus@nationalgrid.com>
Subject: [External] Enbridge / NGrid Material Specification Discussion - Tiverton and East Providence

EXTERNAL: PLEASE PROCEED WITH CAUTION.
 This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Chris and Matt,

Thanks for the discussion Yesterday:

Items attached are below.

Can you provide me a link to the latest Enbridge standards? My thought was to review the latest ES-PF pipe, fittings, flanges, valves policy and try to pickup if there were any key differences also.

- 1) **Pipe Specification** – a summary of our piping requirements

2) Coatings:

- a. [REDACTED]

3) Below Grade Supports:

- a. [REDACTED]

4) Pressure Test:

- a. Please See CNST04004 for our transmission pressure test policy
- b. This is supplemented by CNST04002 if hydrotest is elected.
- c. We have the similar 30% SMYS upper limits on pneumatic tests
- d. We often complete pneumatic tests at stations, where there is chance to get water in regulators, and piping low points, valve bodies etc, that cannot be easily drained and dried
- e. We do not need to complete the pressure test in Situ. This can be completed off-site. So essentially pneumatic setbacks etc can be easily controlled.
- f. Tie in or 'golden' welds are to be limited as far as practical. We normally do not have any tie in welds when we elect to do the TDW 3 way tee tie in. We can test the TDW tee first and below grade pipe without tapping it.

5) Valves:

- a. [REDACTED]

6) For an Approved Manufacturers List, we do not have a formal one:

- a. Valves – [REDACTED]
- b. Piping – US Domestic – no specific manufacturers
- c. Flanges . fittings – US domestic preferred, no specific manufacturers

Glyn

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, February 10, 2021 10:52 AM
To: Williams, Glyn
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Thanks Glyn!

Much Appreciated,

Matthew Baran

Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, February 10, 2021 9:22 AM
To: Matthew Baran <matthew.baran@enbridge.com>
Subject: [External] RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Matt,

For check metering we are looking at the following:

This would be on each rotary meter run:

uncorrected pulse

- [REDACTED]

metering pressure

- [REDACTED]

metering temp

- [REDACTED]

Just let me know if you need any more information at this stage. We can provide the exact model #'s of pressure and temperature transmitters through the design comments.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Wednesday, February 10, 2021 8:58 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
Importance: High

Good Morning Glyn,

Just wanted to touch base regarding Tiverton –

I believe you are aware we are looking to move construction to 2022 , while finishing design by May of 2021.

- 60% Design Package from CHI is set to be transmitted on 2/12 for review and comment – I will set up a design review meeting the week of 2/22
- We will need to start performing our PHA processes using this package as well to ensure there are no issues that would affect further detail design

We have discussed internally the option of concrete buildings being the preferred type for this site and I believe are good to move forward with input from all the key stakeholders. We can further discuss the logistics after the 60% package is developed.

There is discussion that CHI still needs clarification on the **“Check Metering Configuration”** – has your team come to a conclusion on this? Our operations area manager relayed we have done both ways in the past

Much Appreciated,

Matthew Baran
Pipeline Engineer
Project Operations Management

ENBRIDGE
CELL: 832-627-3511 | Matthew.Baran@enbridge.com
5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
Safety. Integrity. Respect.

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Friday, January 22, 2021 8:43 AM
To: John Tirrell <John.Tirrell@nv5.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Romano, Michael <Michael.Romano@nationalgrid.com>; Costa, Jason <Jason.Costa@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Blair Hasteley <Blair.Hasteley@enbridge.com>; Porcaro, Julie <Julie.Porcaro@nationalgrid.com>; Loiacono, Paul J. <Paul.Loiacono@nationalgrid.com>; DellaCamera, Anthony <Anthony.DellaCamera2@nationalgrid.com>; Louis, Chrisnor

<Chrisnor.Louis@nationalgrid.com>

Subject: [External] RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

EXTERNAL: PLEASE PROCEED WITH CAUTION.
This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Thanks for below questions John,

I've copied in our National Grid team and Blair Hastey:

[Redacted]

I&R, Gas Control and SCADA – [Redacted]

[Redacted]

Heater Selection

- [Redacted]

Glyn
781-402-4086

From: John Tirrell <John.Tirrell@nv5.com>
Sent: Friday, January 22, 2021 9:05 AM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Cc: Matthew Baran <matthew.baran@enbridge.com>; Derek Smith <Derek.Smith@nv5.com>; Bruce T. Madore <Bruce.Madore@nv5.com>
Subject: FW: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Glyn,
We have the following questions on your comments:

[Redacted]

Thank you,

From: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Sent: Wednesday, January 20, 2021 9:29 AM
To: Matthew Baran <matthew.baran@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis Blais <Denis.Blais@swca.com>; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>; Talbot III, John J. <John.TalbotIII@nationalgrid.com>; Zaccari, Justin <Justin.Zaccari@nationalgrid.com>; Ebert, Gregory <Gregory.Ebert@nationalgrid.com>; Doherty, John E. <John.Doherty@nationalgrid.com>
Subject: RE: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Matt and All,

Attached are some comments to the P&IDs and below documents that we discussed at the field visit last Wednesday.

I have also attached a copy of the National Grid piping specification, this is to help on the BOM after the Enbridge / National Grid demarc point.

Great to meet everyone at site last week.

If there are any questions on the National Grid comments, just let me know.

Glyn
781-402-4086

From: Matthew Baran <matthew.baran@enbridge.com>
Sent: Monday, January 11, 2021 11:59 AM
To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Bleicken, Joshua <Joshua.Bleicken@nationalgrid.com>; Barrett, John F. <John.Barrett@nationalgrid.com>; Helen Wang <helen.wang@enbridge.com>; Denis Blais <Denis.Blais@swca.com>; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Brennan, Patrick J. <Patrick.Brennan@nationalgrid.com>
Subject: EXT || RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Morning Team,

Please see the attached engineering deliverables reflecting last meeting's discussion –

1. Revised conceptual site plan on existing conditions plan
2. Revised P&IDs
3. Revised Design Basis Memo with civil design data added
4. Preliminary Bill of Materials

Please review the preliminary design for comment as we look to generate our 60% Design Package, currently set for transmittal on 1/22 –

Good luck to everyone traveling to the site this week!

Much Appreciated,

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43
enbridge.com
 Safety. Integrity. Respect.

From: Matthew Baran
Sent: Thursday, January 7, 2021 4:19 PM
To: Tim Buzby <tim.buzby@enbridge.com>; Tim Buzby <tim.buzby@enbridge.com>; Matthew Baran <matthew.baran@enbridge.com>; Shawn Robison <Shawn.Robison@enbridge.com>; Denis Blais <Denis.Blais@enbridge.com>; Joseph Feist <Joe.Feist@enbridge.com>; Christopher Lombardi <Christopher.Lombardi@enbridge.com>; Christopher Redman <Christopher.Redman@enbridge.com>; Nancy Kist <Nancy.Kist@enbridge.com>; Barry Goodrich <Barry.Goodrich@enbridge.com>; Blaine Fritsche <Blaine.Fritsche@enbridge.com>; Max Bergeron <Max.Bergeron@enbridge.com>; Williams, Glyn <Glyn.Williams2@nationalgrid.com>; John Tirrell <John.Tirrell@nv5.com>; Derek Smith <Derek.Smith@nv5.com>; John E. Scanlon <John.Scanlon@nv5.com>
Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; Helen Wang <helen.wang@enbridge.com>; Denis.Blais@swca.com; John Bins <John.Bins@enbridge.com>; Kristopher Jackson <kristopher.jackson@enbridge.com>; Patrick.Brennan@nationalgrid.com
Subject: RE: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit

Good Afternoon Team,

Please see the attached Meeting Minutes from today's discussion –

The primary action items are as followed

- Site Visit planned for 1/13, 10am – Shawn Robison to coordinate with CHI/NG personnel
- ROW to begin contacting site LO's to get permission to Env./Culturally survey the area outside our existing easement – Enbridge
- Now that the site configuration has a starting consensus, project building layouts onto the existing survey conditions for site visit use (rotate buildings to attempt to fit into existing easement) – CHI

Thanks again all that were able to attend,

Much Appreciated,
 Happy New Year!

Matthew Baran

Pipeline Engineer
 Project Operations Management

ENBRIDGE
 CELL: 832-627-3511 | Matthew.Baran@enbridge.com
 5400 Westheimer Court, Houston, TX 77056 | Office Number 5G-43

enbridge.com
 Safety. Integrity. Respect.

-----Original Appointment-----

From: Tim Buzby <tim.buzby@enbridge.com>
Sent: Wednesday, January 6, 2021 10:14 AM
To: Tim Buzby; matthew.baran@enbridge.com; Shawn.Robison@enbridge.com; Denis.Blais@enbridge.com; Joe.Feist@enbridge.com; Christopher.Lombardi@enbridge.com; Christopher.Redman@enbridge.com; Nancy.Kist@enbridge.com; Barry.Goodrich@enbridge.com; Blaine.Fritsche@enbridge.com; Max.Bergeron@enbridge.com; Williams, Glyn; John Tirrell; Derek Smith; John E. Scanlon
Cc: Joshua.Bleicken@nationalgrid.com; John.Barrett@nationalgrid.com; helen.wang@enbridge.com; Denis.Blais@swca.com; John.Bins@enbridge.com; kristopher.jackson@enbridge.com; Patrick.Brennan@nationalgrid.com
Subject: RI Tiverton MR 00033 Plot Layout Discussion and Site Visit
When: Thursday, January 7, 2021 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Not the most convenient time, but the only one open for the majority of invitees. The purpose of the meeting is to discuss the attached email. The meeting will be led by Matt Baran and CHI.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

This e-mail, and any attachments are strictly confidential and intended for the addressee(s) only. The content may also contain legal, professional or other privileged information. If you are not the intended recipient, please notify the sender immediately and then delete the e-mail and any attachments. You should not disclose, copy or take any action in reliance on this transmission.

You may report the matter by contacting us via our [UK Contacts Page](#) or our [US Contacts Page](#) (accessed by clicking on the appropriate link)

Please ensure you have adequate virus protection before you open or detach any documents from this transmission. National Grid plc and its affiliates do not accept any liability for viruses. An e-mail reply to this address may be subject to monitoring for operational reasons or lawful business practices.

For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Williams, Glyn

From: Williams, Glyn
Sent: Wednesday, July 28, 2021 7:49 AM
To: Blair Hastey
Cc: Zaccari, Justin; Bleicken, Joshua
Subject: RE: EXT || RI Heaters Path forward

Hi Blair,

I've copied Justin and Josh on this, if they have an update.

Glyn

From: Blair Hastey <Blair.Hastey@enbridge.com>
Sent: Tuesday, July 27, 2021 3:14 PM
To: Williams, Glyn <Glyn.Williams2@nationalgrid.com>
Subject: EXT || RI Heaters Path forward

Hey Glyn,

Any feedback on path forward for Tiverton and East Providence heater replacements?

Thanks,

Blair Hastey

Business Development

—

ENBRIDGE

TEL: 617-560-1436 | CELL: 339-215-6517
890 Winter Street, Suite 300, Waltham, MA 02451

enbridge.com

Safety. Integrity. Respect.

Division 1-39

Request:

Provide all documentation relating to the transfer of ownership of the Wampanoag Trail and Tiverton gate station heaters to National Grid.

Response:

Please see Attachments DIV 1-39-1 through 1-39-3 for relevant documents concerning the transfer of ownership of the Wampanoag Trail and Tiverton gate station heaters to National Grid. National Grid will cooperatively work to identify and produce additional documentation which may be available, if, after review of Attachment DIV 1-39, the Division has additional questions or desires additional documentation.

Please note that the Construction, Ownership and Operation Agreement concerning the Wampanoag Trail gate station heaters included in Attachment DIV 1-39 is a draft that remains subject to change. The Company will supplement its response to this data request with additional draft and final agreements responsive to this request as they become available.

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Attachments DIV 1-39

REDACTED

RI Meter Station Projects Status



September 17th 2021



Agenda

- Safety Moment
- Background
- Project Overviews
 - East Providence Heaters
 - Tiverton Boiler
- Schedule Critical Path
- Cost Breakdowns
- Next Steps

REDACTED VERSION

Cyber safety moment

Secure Your Home Network

- Unprotected home networks are lucrative targets for cyber criminals, or trespassers to:
 - Borrow Wi-Fi and download large files or stream content
 - Utilize for criminal activity like downloading copyrighted files, illegal materials or gaining access to devices to steal data
- Protect your home network
 - Change the default username and password for your router. Keep passwords long, strong and unique. Choose the highest form of secure network available (currently WPA-3)
 - Set up a separate network (Wi-Fi access point) for guests to connect to. This ensures you segregate all untrusted devices that may potentially introduce malware
 - Enable auto-updating of your router's firmware
 - Change default passwords of any "smart" device that you connect to your network
 - When using your company laptop on your home network, connect to your organizations VPN for maximum protection



Securing your home network will protect you, your household members and your guests— it's a win-win!

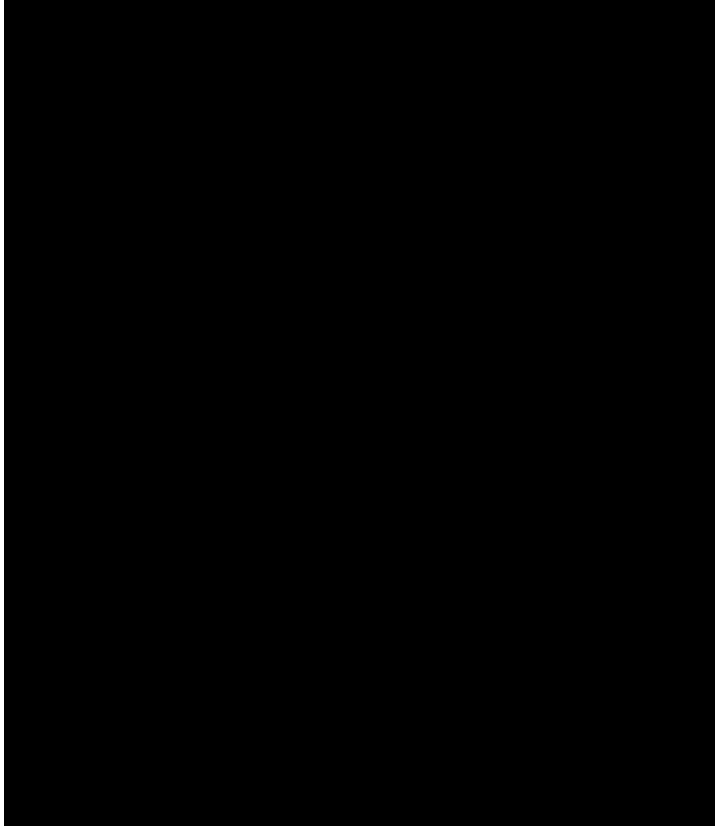
East Providence Heater Replacements Background

East Providence Meter Station (M&R-00010) there are two 1.5 MMBTU
Water Bath Heaters, owned, operated and maintained by
Enbridge. These heaters were installed in 1967 and are near their end of
life

This project is an opportunity to turn over ownership and maintenance of
heating and regulation over to national grid.

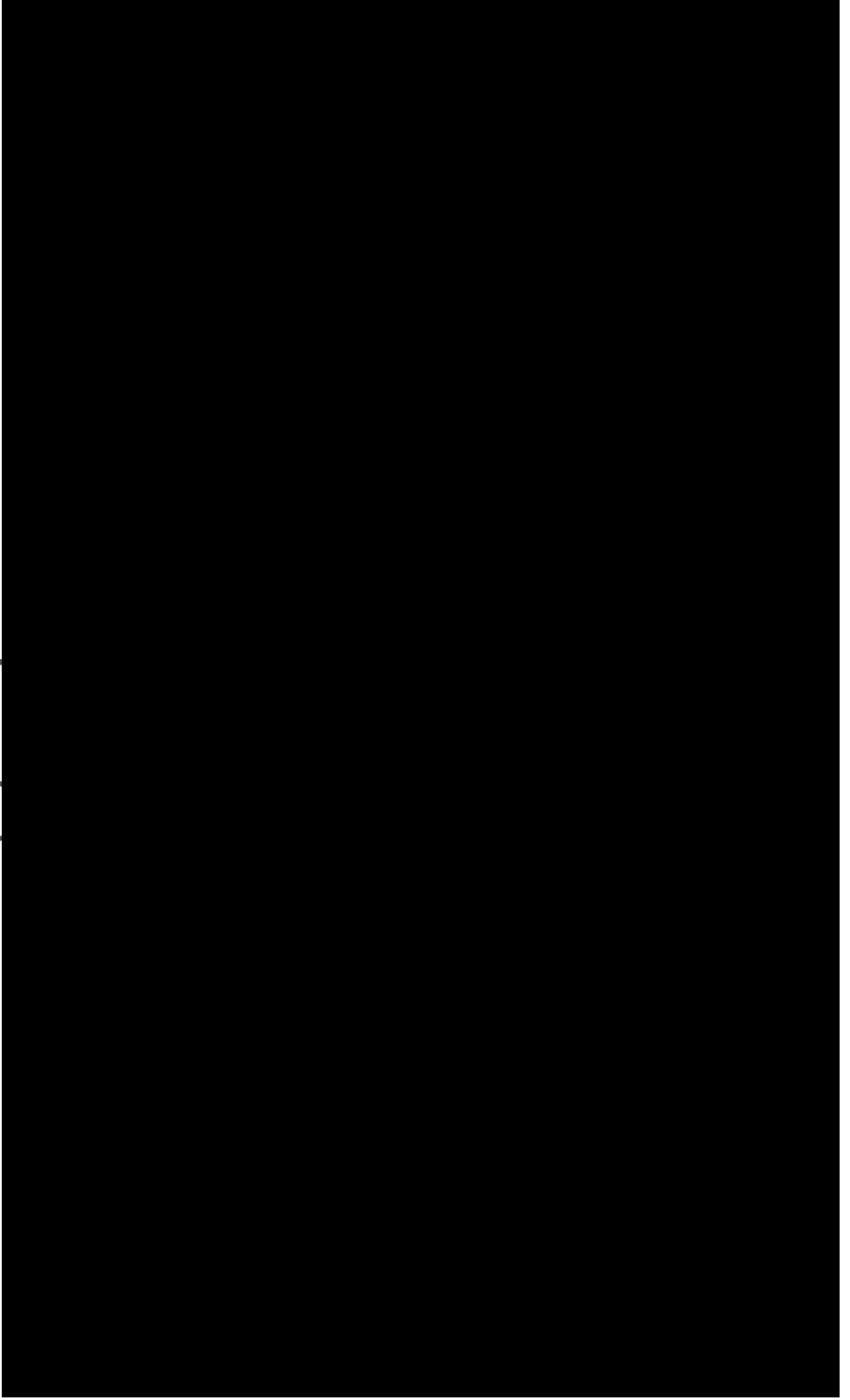
The project cost allocation is to be based total install cost associated
with replaced assets in alignment with ownership

REDACTED VERSION



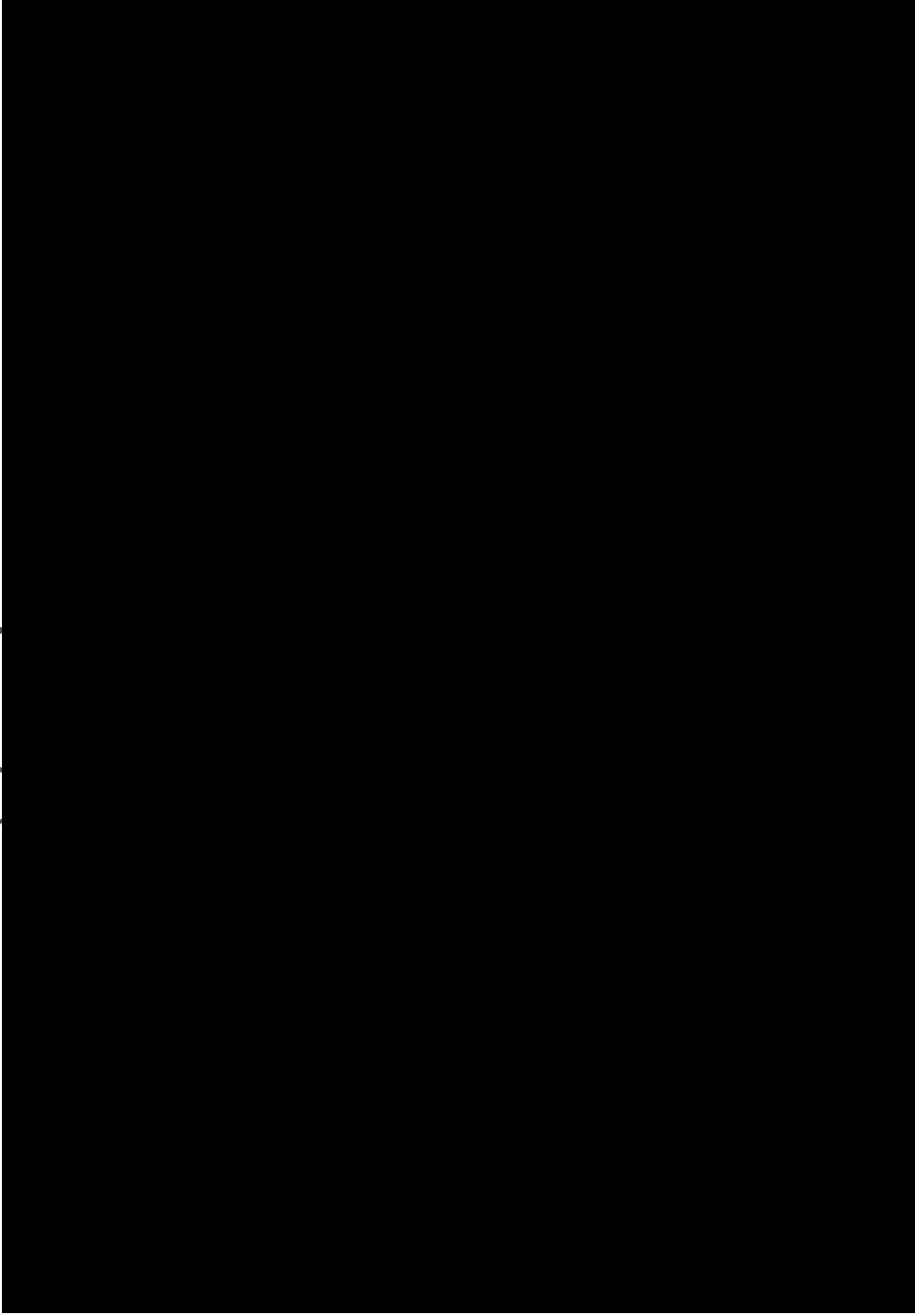
Project Overview – P&ID Ownership Breakout

East Providence Heater(s) Replacement



Project Overview – Plot Plan Ownership

East Providence Heater(s) Replacement



REDACTED VERSION

East Providence

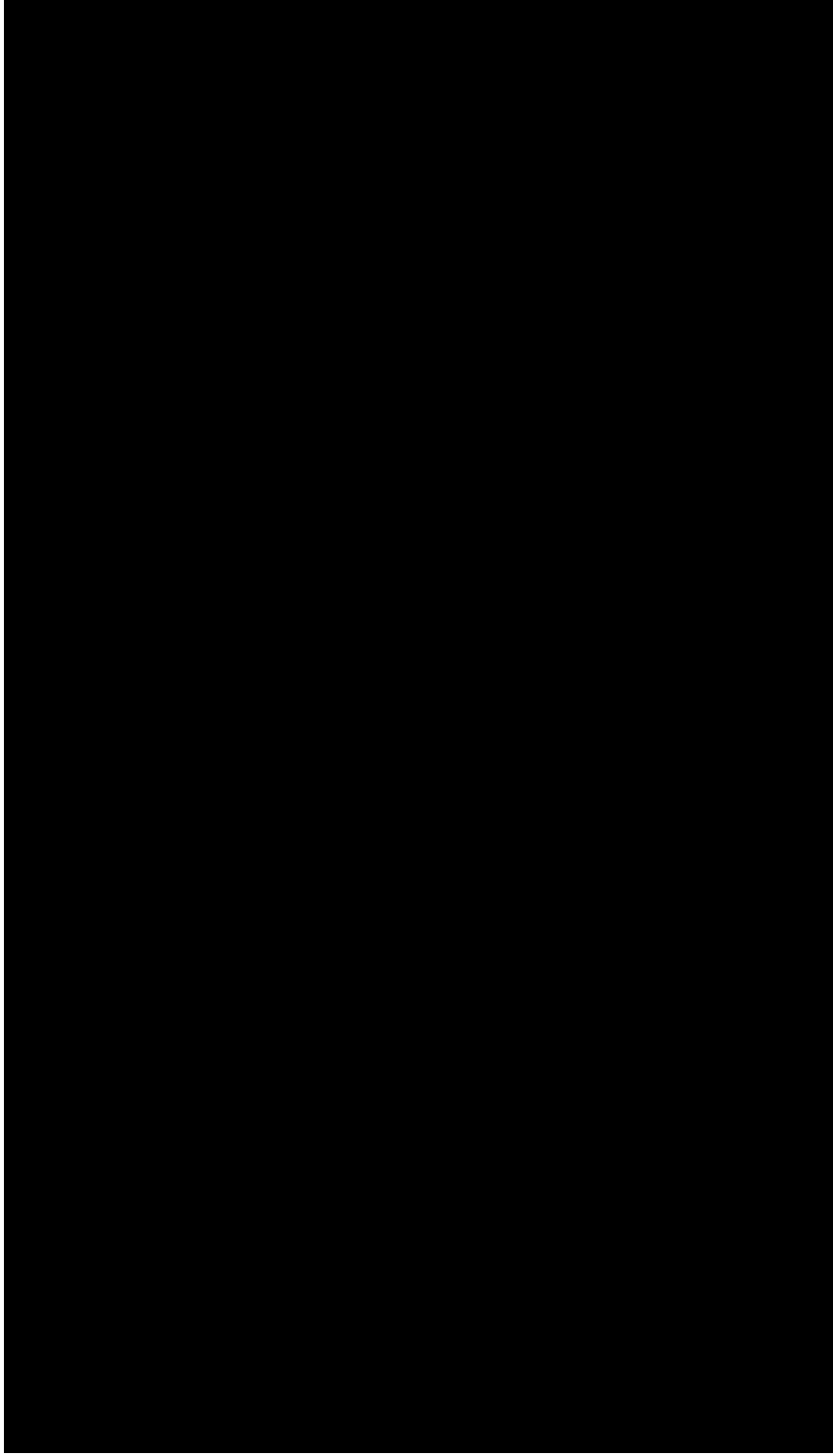
Schedule Critical Path

- Order Long Lead Items
 - Heater lead times currently 26 – 30 weeks Order by 10/15/21
- IFC Drawings (+/- 4 months)
 - 10/15/2021 thru 2/15/2022
- Begin Construction (+/- 4.5 months)
 - 5/15/2022 thru 10/1/2022
- Outages (TBD)
- ISD NLT 10/15/2022



REDACTED VERSION

Cost Breakdown East Providence



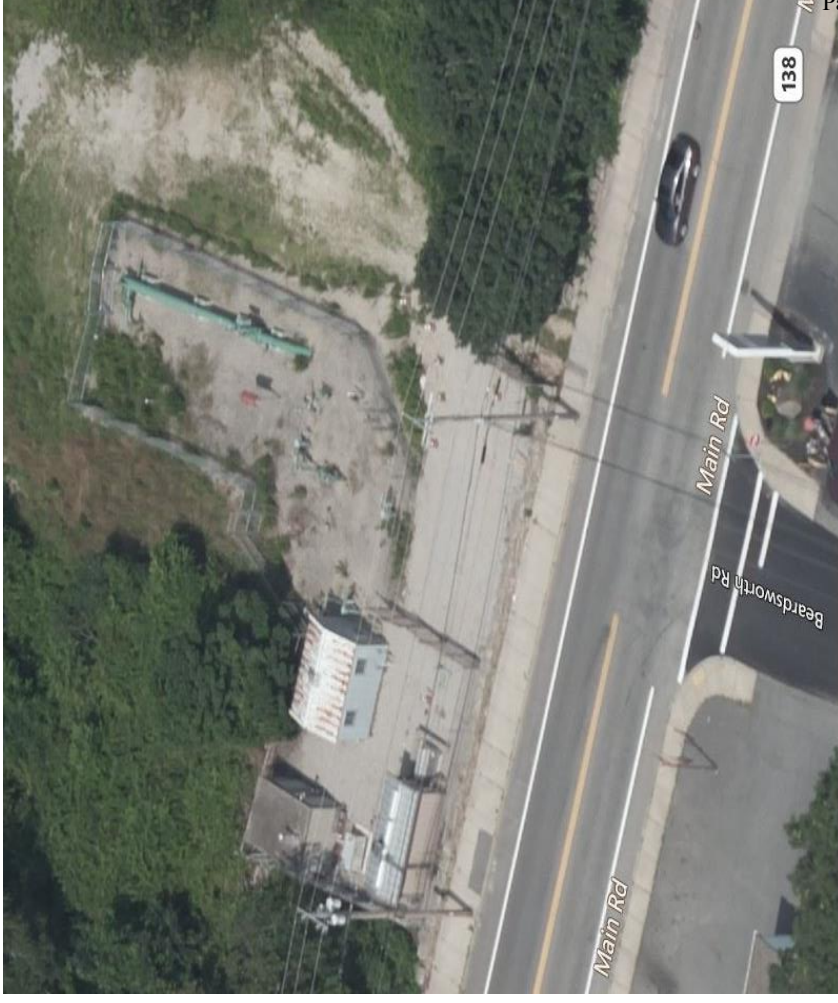
Tiverton Background



Tiverton, Rhode Island (M&R 00033) feeds gas from the Enbridge Algonquin Gas Transmission (AGT) system to the National Grid distribution system and redesign/rebuild the station in the standard flow arrangement with upstream meters, preheating, and regulation/OPP.

This project is an opportunity to turn over ownership and maintenance of heating and regulation over to national grid.

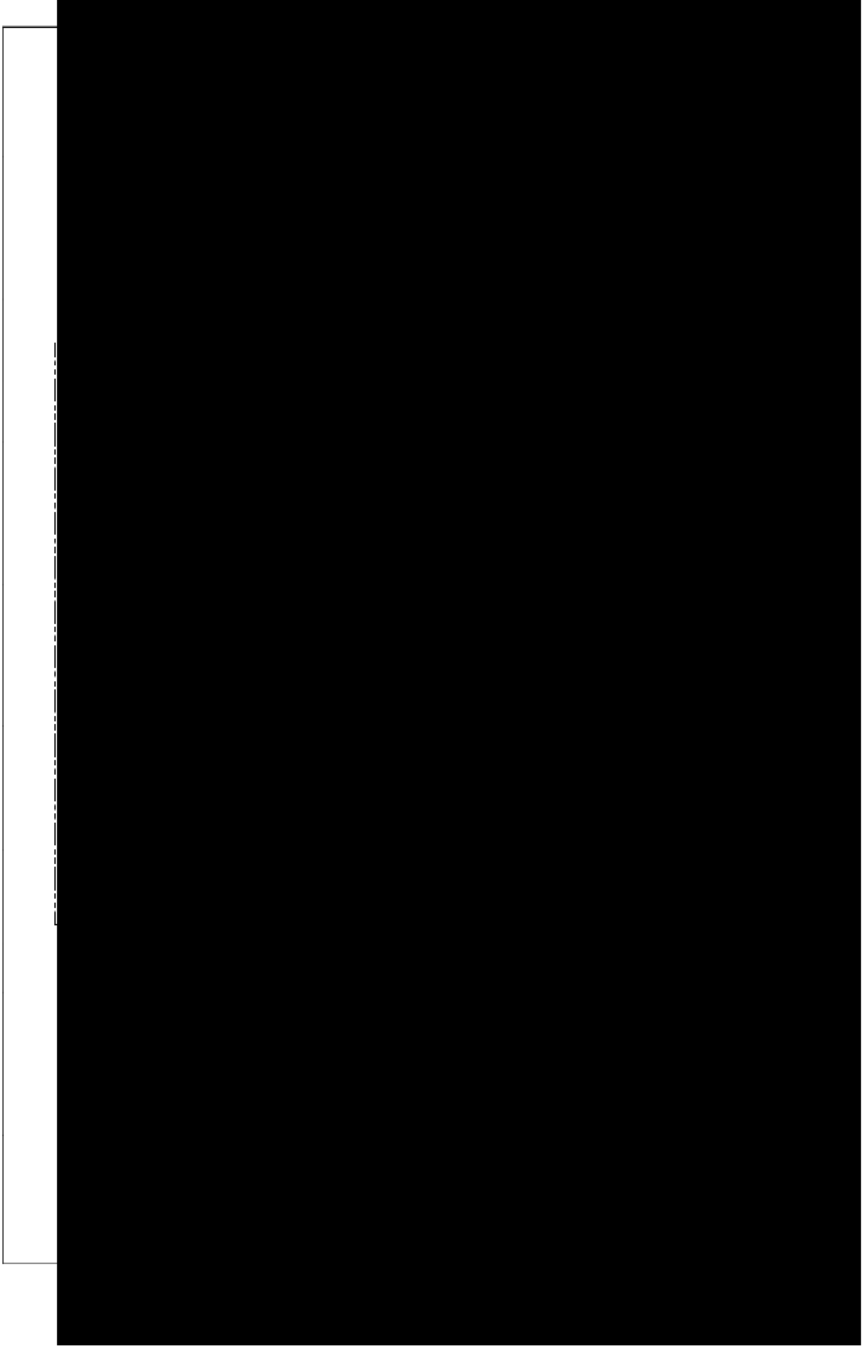
The project cost allocation is to be based total install cost associated with replaced assets in alignment with ownership



REDACTED VERSION

Project Overview

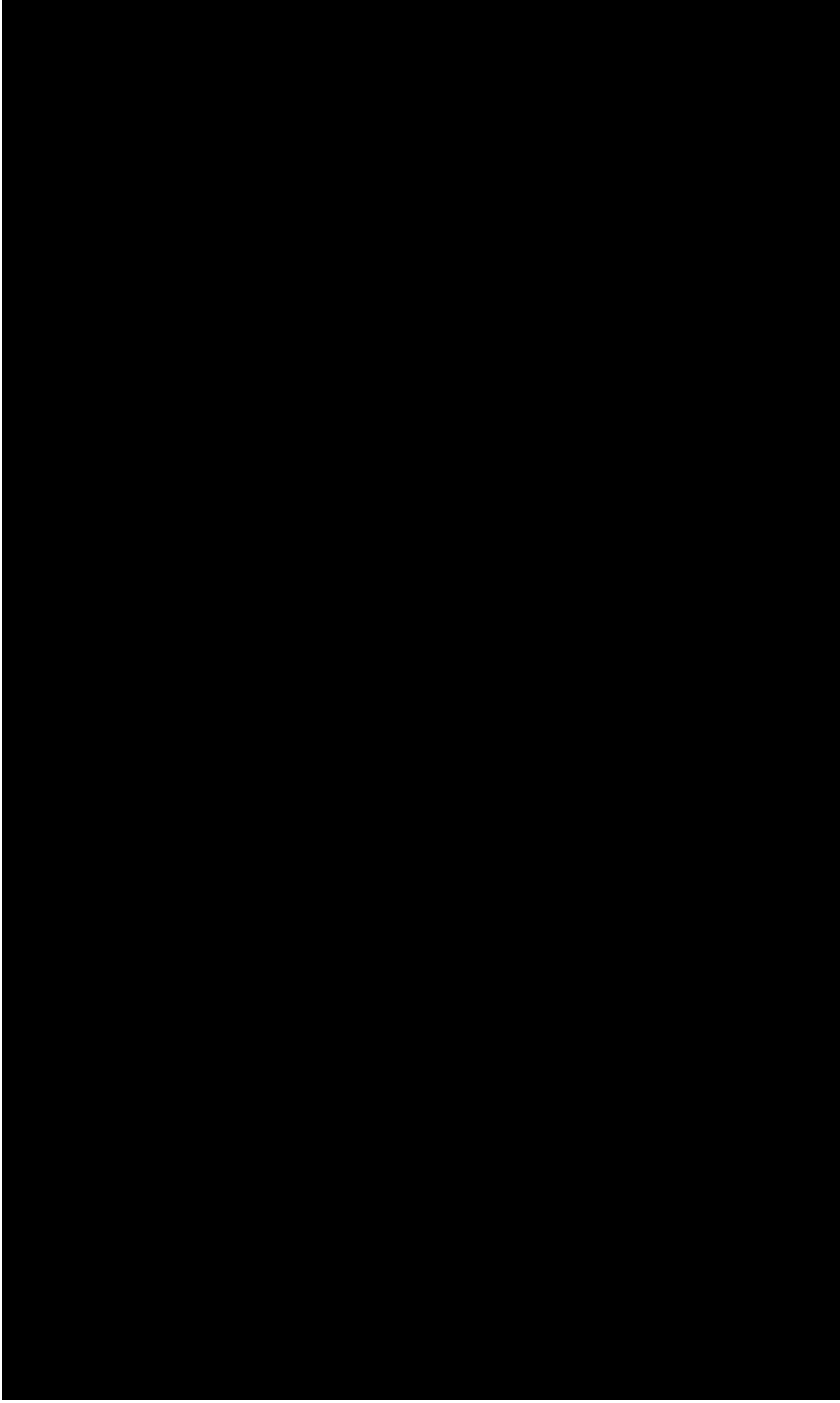
Tiverton PID Custody Transfer Point



REDACTED VERSION



Tiverton Plot Plan Ownership Demarcation



REDACTED VERSION

Tiverton



Tiverton Critical Path Schedule Activities Based on 1 October 2021 Project Restart

- Complete Engineering – Complete 90% design, issue IFC 1 Dec. 21
- Critical Path Item - Air Permit– Application preparation 3 months, *RIDEM review/approval 6-9 months, permit approval/issue July-October 2022
- Material Requisition and Place Purchase Orders for Long Lead Items
- Land & ROW acquire TWS, easements, and road permits
- Bid and Select a Construction Contractor
- Construction and Facility Cutover/ISD (Cutover does not require an outage.) – 3 months duration, ISD range based on air permit issue is October 2022- January 2023.

REDACTED VERSION

* - RIDEM is the Rhode Island Department of Environmental Management

Cost Breakdown

Tiverton Total Project Cost Split



REDACTED VERSION



Next Steps

- Execute letter agreements – Oct 1st
- East Providence - Order Long lead items - Oct 15th
- Tiverton – resume design begin Air permitting process - Oct 1st
- Execute O&M Agreements – Dec 1st

REDACTED VERSION



Algonquin Gas Transmission, LLC
890 Winter Street
Suite 300
Waltham, MA 02451

October 7th, 2021

Joshua Bleicken
National Grid Manager Pressure Regulation
40 Sylvan Woods
Waltham, MA 02451

RE: Prepayment for Proposed Tiverton Meter Station Upgrade

Dear Joshua:

The Narragansett Electric Company d/b/a National Grid (“Connecting Party”) is seeking to upgrade and take ownership of heaters and regulators at Meter Station MR-00033 at 0 Main Road, Tiverton, Rhode Island (such meter station upgrade is referred to as the “Project”). Algonquin Gas Transmission, LLC (“Company”), at Connecting Party’s request, will perform an initial engineering design review for this Project and procure long lead materials (including the heaters) (“Preliminary Work”) for the proposed Project prior to the execution of a mutually agreeable agreement regarding the reimbursement, construction, ownership, and operation of the interconnecting facilities at Meter Station MR-00033 (“Interconnect Agreement”).


In order to expedite the Preliminary Work, Connecting Party agrees to provide funds in the amount of [REDACTED] (the “Prepayment”) to Company as prepayment of the costs estimated to be incurred by or on behalf of Company in connection with the Preliminary Work. Connecting Party has remitted the Prepayment to Company concurrently with Connecting Party’s execution of this Letter Agreement. The Preliminary Work and Prepayment amount may only be changed by written agreement between the parties.

The parties shall use their reasonable efforts to execute the Interconnect Agreement within sixty (60) days of Company’s receipt of the Prepayment. If the parties do not reach mutual agreement and the Interconnect Agreement is not executed by both parties by the end of the day on December 15, 2021, unless the parties otherwise agree in writing, Company will reimburse Connecting Party the portion of the Prepayment that has not been paid in respect of amounts owed, or otherwise allocated to amounts accrued or otherwise payable and Connecting Party will have option to receive any long lead items in exchange for making the balance of payments of said long lead items, in connection with the Preliminary Work. The reimbursement will be paid within thirty (30) days of the date such reimbursement is identified and agreed by the parties. If the parties reach mutual agreement and execute the Interconnect Agreement, the amount of Connecting Party’s Prepayment will be included in the calculation of costs for which Connecting Party is responsible under the Interconnect Agreement.

If Connecting Party is in agreement with the above, please have a duly authorized representative execute this Letter Agreement in the space provided below. A validly executed counterpart of this letter agreement that is delivered by one party to the other via electronic transmission ("Counterpart Image") will be valid and binding to the same extent as one delivered physically, provided that the valid signature is clearly visible in the Counterpart Image. Please email and return two (2) signed originals for countersignature by Company. One fully executed original will be returned to Connecting Party.

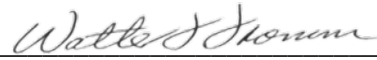
Sincerely,

Algonquin Gas Transmission, LLC
By: Spectra Algonquin Management, LLC
Its Operator

By:  _____
Title: Richard M. Paglia, President
Date: 10/8/2021

ACCEPTED AND AGREED TO
THIS 8th DAY OF October 2021

The Narragansett Electric Company d/b/a National Grid

By:  _____
Title: Walter Fromm, V.P., NE Gas Asset & Engineering
Date: 10/8/2021



Algonquin Gas Transmission, LLC
890 Winter Street
Suite 300
Waltham, MA 02451

October 7th, 2021

Joshua Bleicken
National Grid Manager Pressure Regulation
40 Sylvan Woods
Waltham, MA 02451

RE: Prepayment for Proposed East Providence (Wampanog Trail) Meter Station Upgrade

Dear Joshua:

The Narragansett Electric Company d/b/a National Grid (“Connecting Party”) is seeking to acquire two heaters that will be installed to replace the existing heaters at Meter Station MR-00010 at 0-ZZ Tripps Lane, Riverside, Rhode Island (such heater replacement is referred to as the “Project”). Algonquin Gas Transmission, LLC (“Company”), at Connecting Party’s request, will perform an initial engineering design review for this Project and procure long lead materials (including the heaters) (“Preliminary Work”) for the proposed Project prior to the execution of a mutually agreeable agreement regarding the reimbursement, construction, ownership, and operation of the interconnecting facilities at Meter Station MR-00010 (“Interconnect Agreement”).


In order to expedite the Preliminary Work, Connecting Party agrees to provide funds in the amount of [REDACTED] (the “Prepayment”) to Company as prepayment of the costs estimated to be incurred by or on behalf of Company in connection with the Preliminary Work. Connecting Party has remitted the Prepayment to Company concurrently with Connecting Party’s execution of this Letter Agreement. The Preliminary Work and Prepayment amount may only be changed by written agreement between the parties.

The parties shall use their reasonable efforts to execute the Interconnect Agreement within sixty (60) days of Company’s receipt of the Prepayment. If the parties do not reach mutual agreement and the Interconnect Agreement is not executed by both parties by the end of the day on December 15, 2021, unless the parties otherwise agree in writing, Company will reimburse Connecting Party the portion of the Prepayment that has not been paid in respect of amounts owed, or otherwise allocated to amounts accrued or otherwise payable and Connecting Party will have option to receive any long lead items in exchange for making the balance of payments of said long lead items, in connection with the Preliminary Work. The reimbursement will be paid within thirty (30) days of the date such reimbursement is identified and agreed by the parties. If the parties reach mutual agreement and execute the Interconnect Agreement, the amount of Connecting Party’s Prepayment will be included in the calculation of costs for which Connecting Party is responsible under the Interconnect Agreement.

If Connecting Party is in agreement with the above, please have a duly authorized representative execute this Letter Agreement in the space provided below. A validly executed counterpart of this letter agreement that is delivered by one party to the other via electronic transmission ("Counterpart Image") will be valid and binding to the same extent as one delivered physically, provided that the valid signature is clearly visible in the Counterpart Image. Please email and return two (2) signed originals for countersignature by Company. One fully executed original will be returned to Connecting Party.


Sincerely,

Algonquin Gas Transmission, LLC
By: Spectra Algonquin Management, LLC
Its Operator

By: 
Title: Richard M. Paglia, President
Date: 10/8/2021

ACCEPTED AND AGREED TO
THIS 8th DAY OF October 2021

The Narragansett Electric Company d/b/a National Grid

By: 
Title: Walter Fromm, V.P., NE Gas Asset & Engineering
Date: 10/8/2021

Division 1-40

Request:

Is National Grid engaging in similar agreements to replace transmission company infrastructure in National Grid's other service territories? If so, please identify the location and the specifics of each such agreement.

Response:

Yes, National Grid has discussed similar agreements with both Enbridge and Kinder Morgan. Since the Company's goal is to standardize the design of each station, and given that each station has unique characteristics, the specifics and type of agreements may differ. However, the Company enters these agreements with the same future end state in mind which includes:

- Clear separation/demarcation between parties
- Standardized O&M agreements
- Common equipment to simplify maintenance and spares
- National Grid control of the pressure that will enter our distribution system (including regulators and heat)
- National Grid design standards and records for all assets that it will operate, maintain and/or own.

The two most recent new assets installed (one station in MA, and the Crary St station in Providence, RI) were handled with similar Enbridge agreements.

National Grid has recently started scoping discussions for a similar project to replace a station in Lynn, MA with Kinder Morgan (TGP).

Division 1-41

Request:

Identify all other areas in Rhode Island where National Grid believes there is a vulnerability in the maintenance / standards of transmission company infrastructure that may require National Grid to assume ownership of that infrastructure.

Response:

Wampanoag Trail, East Providence: Enbridge owns and operates two layers of pressure regulation. National Grid owns and operates a third layer of over pressure protection.

Canal St, Westerly: Complete station replacement and ownership transfer. Similar in scope to the Tiverton project.

Brown St, Warren/Barrington. Heating replacement and ownership transfer. Similar in scope to the Wampanoag Heater replacement.

Diamond Hill, Cumberland: National Grid owns heat and Regulation. A piping reconfiguration would result in a more uniform arrangement and provide a single ownership transfer.

This is similar to a small project in 2015 between National Grid and Enbridge completed in MA.

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-42

Request:

Provide a list of all heaters on the Rhode Island gas system and their current status including ownership, age, risk rank and replacement schedule.

Response:

Please see the list below for the requested information.

Reg Stations ID	Address	Boiler Type	Age (years)	# of Heaters	Total Risk Score	Replacement Year (FY)	Ownership
East Providence (Dey St)	27 Dey St	Waterbath	23	1	391	2024	National Grid
Smithfield	374 Putnam Pike	Hydronic	22	2	264	2024	National Grid
East Providence (Wampanoag)	259 Wampanoag Trail	Waterbath	35	2	184	2023	Enbridge
Cumberland (Scott Rd) - Heater 1 (2008)	1595 Mendon Rd (Scott Rd)	Waterbath	13	1	182	May be replaced/retrofit with station	National Grid
Tiverton	401 Main Rd	Waterbath	28	1	168	2023	Enbridge
Cumberland (Diamond Hill)	4317 Diamond Hill Rd	Hydronic	31	2	70	2024	National Grid
Portsmouth Heater 1	135 Old Mill Lane	Waterbath	22	1	330	2025	National Grid

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-42, page 2

Reg Stations ID	Address	Boiler Type	Age (years)	# of Heaters	Total Risk Score	Replacement Year (FY)	Ownership
Warren	28 Brown St	Waterbath	18	1	216	2025	Enbridge
Portsmouth Heater 2	135 Old Mill Lane	Waterbath	9	1	122	TBD, possible controls upgrade	National Grid
Lincoln	602 George Washington Hwy	Waterbath	8	1	88	TBD, possible controls upgrade	National Grid
Burrillville	1084 Wallum Lake Rd	Waterbath	7	1	21	2026	National Grid
Providence (Manchester St TS)	30 Allens Ave	Hydronic	15	2	17	2027	National Grid
Westerly	73 Canal St	Waterbath	28	1	210	TBD	Enbridge
Cumberland (Scott Rd) - Heater 2 (2015)	1595 Mendon Rd	Waterbath	6	1	78	May be replaced/retrofit with station	National Grid
Providence (Crary St TS)	30 Allens Ave	Waterbath	3	2	36	TBD	National Grid
Cranston	67 Laten Knight Rd	Hydronic	1	3	11	TBD	National Grid

Division 1-43

Request:

Explain the increase in the Take Station Refurbishment budget between FY 2022 and FY 2023 and describe work to be done at each location

Response:

The increase in the Take Station Refurbishment budget between FY 2022 and FY 2023 is due primarily to the need to increase the size of several odorant tanks and improve odorization equipment to upgraded dual pump designs. There are other necessary specific upgrades, including a backup generator upgrade, outlet valve replacement and the design for a third layer of overpressure protection. Additional upgrades may be necessary depending on winter observations.

The list below includes some of the required upgrades:

- Smithfield Gate Station
 - Odorant system replacement
- Lincoln Gate Station
 - Odorant system replacement
- Portsmouth (Old Mill Ln)
 - Odorant tank size increase to 500 gal
- Warren GS
 - Odorant tank size increase to 500 gal
- Wampanoag Tr
 - Additional odorant tank for necessary capacity
- Scott Rd
 - Outlet valve and control line replacement
- Manchester St
 - Generator replacement
- Smithfield GS
 - Pressure regulation replacement with three layers of overpressure, dual runs

Division 1-44

Request:

Identify the two regulatory stations that are carryover work from FY 2022 and the four new regulator stations that National Grid plans work on in FY 2023 and provide a summary of the work that will be done at each station in FY 2023.

Response:

The work performed at each station will be a complete replacement based on National Grid's latest regulator station design requirements. A prefabricated station vault with three layers of overpressure protection will be installed. Tie-ins will be performed to appropriate inlet piping and outlet piping with new isolating street valves. System automation equipment will also be involved for each station including motorized pilots for remote control and telemetry with alarming to Gas Control.

Carryover Work:

- RIS-018, Park Av @ Maple Av, Cranston
- RIS-069, 816 Middle Rd, East Greenwich

New proposed Stations: (Growthpoint project)

Town	Station Number	Station Name
PROVIDENCE	RIS-083	Pettis St @ N Main St
WEST WARWICK	RIS-133	Cowesett Av @ Quaker Ln
JOHNSTON	RIS-090	1827 Plainfield Pk @ Simmonsville
CRANSTON	RIS-017	Station St @ Pond St
WARWICK	RIS-036	Post Rd @ Byron Blvd

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-45

Request:

Identify the five regulator stations at which National Grid plans to install a second bypass valve.

Response:

National Grid plans to install a second bypass valve at the five regulator stations included in the chart below.

Station Number	Town	Station Name
RIS-047	East Providence	747 Bullocks Point Av
RIS-N219	Newport	Carroll Av @ Ocean Dr
RIS-057	Johnston	915 Atwood Av @ Plainfield St (St Rocco's)
RIS-N215	Newport	E Main Rd @ Turner Rd
RIS-N217	Newport	Boulevard St @ Miantonomi

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-46, page 1

Request:

Provide an overall Risk Ranked list of all Pressure Regulating Facilities on the Rhode Island gas system including any abandonments and or replacements over the past 5 years.

Response:

Please see the information below for the requested information.

Town	Station Number	Station Name	Risk Ranking
WESTERLY	RIS-OOB-R	Westerly GS (Relief Only)	1
WARWICK	RIS-107	Warwick Av @ W Shore	2
TIVERTON	RIS-TIV1	401 Main Rd TS (Relief Only)	4
WOONSOCKET	RIN-C012	Bourdon Blvd @ Asylum St	5
PROVIDENCE	RIS-083	Pettis St @ N Main St	7
NORTH PROVIDENCE	RIS-110	Smith St @ Sunset Av	8
SMITHFIELD	RIS-402	347 Putnam Pike TS (Rt 44) 99 PSIG	9
NORTH PROVIDENCE	RIS-082	Waterman @ Whitman St	10
PROVIDENCE	RIS-121	Broad St @ Early St	11
EAST GREENWICH	RIS-068	337 Cowesett Rd	12
PROVIDENCE	RIS-109	477 Dexter St	13
PAWTUCKET	RIN-C022	Weeden St @ Smithfield Av	14
WEST WARWICK	RIS-133	Cowesett Av @ Quaker Ln	15
EAST GREENWICH	RIS-069	816 Middle Rd	16
PORTSMOUTH	RIS-N204	135 Old Mill Ln	17
CRANSTON	RIS-334	67 Laten Knight Road TS	19
EAST PROVIDENCE	RIS-315	Wampanoag Trail @ Tripps Ln	20
CRANSTON	RIS-113	Depot Av @ Cranston St	21
PROVIDENCE	RIS-065	Corina St @ Glasglow LP	22
NEWPORT	RIS-N213-HP	Wellington St @ Thames St 40 PSIG	23
PAWTUCKET	RIN-C021	337 Lonsdale Av	24
PROVIDENCE	RIS-078	Ives St @ Trenton St	26
WARWICK	RIS-036	Post Rd @ Byron Blvd	27
CRANSTON	RIS-073	Mayfield Rd @ Oakland Av	28

Prepared by or under the supervision of: Matthew Coombs

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-46, page 2

Town	Station Number	Station Name	Risk Ranking
PROVIDENCE	RIS-023	Westminster St @ Rt 10	31
WARWICK	RIS-061	Maple St @ Albany	32
CRANSTON	RIS-077	Fountain Av @ Dyer Av	33
LINCOLN	RIN-C048	New River Rd @ Cottage St	34
PROVIDENCE	RIS-122	30 Virginia Av	37
LINCOLN	RIN-C018	Boulevard Av @ Front St	38
CUMBERLAND	RIN-C017	West Highland Av @ High St	40
WARWICK	RIS-035	186 N Country Club Dr	41
WEST WARWICK	RIS-134	565 Quaker Ln	42
JOHNSTON	RIS-090	1827 Plainfield Pk @ Simmonsville	43
JOHNSTON	RIS-034	Atwood Av @ 1401 Plainfield St	44
NORTH KINGSTOWN	RIS-118	3362 Kingstown Rd (Waites Corner)	45
MIDDLETOWN	RIS-N205	305 Corey Ln	46
JOHNSTON	RIS-124	Scenery Ln	47
CRANSTON	RIS-096	Broad St @ Columbia Av	48
PROVIDENCE	RIS-115	Doyle Av @ Tabor Av	49
JOHNSTON	RIS-100	Allendale Av @ Geo. Waterman	50
WOONSOCKET	RIN-C007	Kendrick Av @ Gaulin Av	51
PROVIDENCE	RIS-127	Point St @ Beacon Av	52
CRANSTON	RIS-017	Station St @ Pond St	53
WARWICK	RIS-038	East Av @ 650 Bald Hill Rd	54
LINCOLN	RIN-C014	Railroad Av @ Winter St LP	56
PROVIDENCE	RIS-024.1	Hartford Av @ Petteys Av (Holder 19) LP	57
WESTERLY	RIS-OOA	10 White Rock Rd	58
NORTH KINGSTOWN	RIS-081	Ten Rod Rd (Pole 110)	59
PAWTUCKET	RIN-C024	Senate St @ Daggett Av	61
CRANSTON	RIS-108	11 Lawnacre Dr @ Wayside Dr	62
CRANSTON	RIS-114	110 Atwood Av @ D St	63
PAWTUCKET	RIN-C028	Oregon Av @ Manistee St	64
PROVIDENCE	RIS-103	Promenade St @ Kingsley Av (121 Providence Place)	65

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-46, page 3

Town	Station Number	Station Name	Risk Ranking
PROVIDENCE	RIS-024.3	Hartford Av @ Petteys Av (Holder 19) 18" Line	66
PROVIDENCE	RIS-024.5	Hartford Av @ Petteys Av (Holder 19) Dey St Line	67
WEST WARWICK	RIS-120	Providence St @ Toll Gate Rd	68
PAWTUCKET	RIN-C032	Bacon St @ Columbus Av	70
SMITHFIELD	RIS-125	347 Putnam Pike TS (Rt 44) 35 PSIG	71
COVENTRY	RIS-126	433 Hopkins Hill Rd	72
PAWTUCKET	RIN-C027	Bloomfield St @ Armistice Blvd	73
PAWTUCKET	RIN-C030	North Bend St @ Cottage St	74
CENTRAL FALLS	RIN-C020	550 High St	75
WARREN	RIS-BW014	Market St @ Kickemuit Rd	77
CUMBERLAND	RIN-C046	68 Scott Rd TS	78
EAST PROVIDENCE	RIS-089	Willet Av @ Forbes St 25 PSIG	79
PAWTUCKET	RIN-C026	Downes Av @ Robinson Av	80
CRANSTON	RIS-119	Wellington Av @ Well Av	81
PAWTUCKET	RIN-C033	Kepler St @ Divison St	82
PROVIDENCE	RIS-116	Silver Spring St @ Metcalf St	83
WOONSOCKET	RIN-C005	Bailey St @ Ballou St	84
CRANSTON	RIS-020	Cannon St	85
WEST WARWICK	RIS-104	E Greenwich St @ Quaker Ln	86
PROVIDENCE	RIS-111	Canal St @ Washington St	87
PAWTUCKET	RIN-C036	Dora St @ Vincent Av	88
NEWPORT	RIS-N213-LP	Wellington St @ Thames St LP	89
CENTRAL FALLS	RIN-C019	Liberty St @ Hunt St	90
PROVIDENCE	RIS-128	Allens Av @ Blackstone St	91
PROVIDENCE	RIS-048	Hyacinth St @ Shiloh St	92
NORTH PROVIDENCE	RIN-132	Waterman Av @ Greystone	93
NORTH KINGSTOWN	RIS-084	Stony Ln @ Rt 2	94
CUMBERLAND	RIN-C049	Mendon Rd @ Nate Whipple Hwy	95
TIVERTON	RIS-TIV2	Evans Av @ Pierce Av	96
MIDDLETOWN	RIS-N209	Walcott Av @ St Georges	97

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-46, page 4

Town	Station Number	Station Name	Risk Ranking
NORTH			
PROVIDENCE	RIS-026	Eliot Av @ Barrett Av	101
JOHNSTON	RIS-063	Hartford Av @ Dale Av	103
WOONSOCKET	RIN-C006	Kenwood St @ Cass Av	104
CRANSTON	RIS-018	Park Av @ Maple Av	105
EAST PROVIDENCE	RIS-071	Willet Av @ Forbes St 5 PSIG	106
PROVIDENCE	RIS-098	Chalkstone St @ Rosebank Av	107
PROVIDENCE	RIS-022	Niantic Av @ Pawnee St	108
CENTRAL FALLS	RIN-C050	Broad St @ Hunt St	109
PAWTUCKET	RIN-C023	Moshassuck St @ Main St	110
NORTH			
PROVIDENCE	RIS-129	David St @ Mineral Spring Av	111
NEWPORT	RIS-N220	Memorial Blvd @ Anna Dr	112
CRANSTON	RIS-049	1584 Plainfield St @ Plainfield Pk	113
EAST PROVIDENCE	RIS-015	Pawtucket Av @ Waterman Av	115
PROVIDENCE	RIS-008	Brook St @ George St LP	117
JOHNSTON	RIS-029	20 Serrel Sweet Rd	118
EAST PROVIDENCE	RIS-046	Centre St @ Castro St	119
PROVIDENCE	RIS-094	Dyer St @ Pine St	120
EAST PROVIDENCE	RIS-006	Pawtucket Av @ Sprague St	121
PAWTUCKET	RIN-C029	Maryland Av @ School St	122
PAWTUCKET	RIN-C051	Bernon St @ Front St	123
WOONSOCKET	RIN-C004	Harris Av @ Blackstone St	124
PAWTUCKET	RIN-C031	Tidewater St @ Taft St City Reg	125
PAWTUCKET	RIN-C025	290 Daggett Av	126
NORTH			
PROVIDENCE	RIS-027	Smithfield Rd @ Cushing St	127
WOONSOCKET	RIN-C003	High St @ Fountain St	128
EAST PROVIDENCE	RIS-117	County Rd @ Old County Rd	129
CUMBERLAND	RIN-C044	1595 Mendon Rd	130
EAST PROVIDENCE	RIS-099	860 Waterman Av	131
EAST PROVIDENCE	RIS-130	Village Green N @ Pawtucket Av	133

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-46, page 5

Town	Station Number	Station Name	Risk Ranking
JOHNSTON	RIS-057	915 Atwood Av @ Plainfield St (St Rocco's)	135
PAWTUCKET	RIN-C042	Smithfield Av @ Weeden St	136
LINCOLN	RIN-C037	Woodland St @ Smithfield Av	138
CUMBERLAND	RIN-C016	Ann & Hope Way	140
LINCOLN	RIN-C043	Cobble Hill Rd @ Louisquisset Pk	141
NORTH PROVIDENCE	RIN-C038	Charles St @ Mineral Spring Av	142
PAWTUCKET	RIN-C035	Tidewater St @ Taft St B Run	144
BRISTOL	RIS-BW005	213 Mt Hope Av	145
EAST PROVIDENCE	RIS-014	N Broadway @ Greenwood St	146
WOONSOCKET	RIN-C009	Asylum St @ Mason St	147
MIDDLETOWN	RIS-N221	Maple Av @ Yarnell Av	150
PROVIDENCE	RIS-087	Silver Spring St @ Charles St	151
PAWTUCKET	RIN-C039	Tidewater St @ Taft St Primaries	152
BRISTOL	RIS-BW015	8 Gooding Av	154
WESTERLY	RIS-OOF	14A Perkins Av	157
WOONSOCKET	RIN-C002	Rockland Av @ Morse Av	158
MIDDLETOWN	RIS-N202	W Main Rd @ Oliphant Ln	161
NEWPORT	RIS-N219	Carroll Av @ Ocean Dr	162
EAST PROVIDENCE	RIS-123	Fort St @ S Broadway	163
PROVIDENCE	RIS-079	Ship St @ Chestnut St	164
WOONSOCKET	RIN-C010	E School St @ Pond St	165
EAST PROVIDENCE	RIS-131	Amaral St @ Wampanoag Trail	166
MIDDLETOWN	RIS-N212	W Main Rd @ Dudley Av	167
MIDDLETOWN	RIS-N201	Newman Rd @ Aquidneck Av	168
WESTERLY	RIS-OOG	Friendship St – Yankee Line	169
NEWPORT	RIS-N217	Boulevard St @ Miantonomi	170
NEWPORT	RIS-N211	Third St @ Admiral Kalbfus	171
PROVIDENCE	RIS-105	Brook St @ George St 35 PSIG	172
EAST PROVIDENCE	RIS-002	First St @ Mauran Av (Holder 20) 5 PSIG	173
EAST GREENWICH	RIS-093	Division Rd @ Quaker Ln	174
WESTERLY	RIS-OOC	53 Ward Av	175

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-46, page 6

Town	Station Number	Station Name	Risk Ranking
EAST PROVIDENCE	RIS-047	747 Bullocks Point Av	176
WOONSOCKET	RIN-C001	St James Way @ Mendon Rd	177
WARREN	RIS-309	22 Brown St Basement 25 PSIG	178
WESTERLY	RIS-OBH	Friendship St - Spectra Line	179
BRISTOL	RIS-BW002	Wood St @ Shaws Ln LP	180
MIDDLETOWN	RIS-N215	E Main Rd @ Turner Rd	181
BRISTOL	RIS-BW001	Franklin @ Wood 8 PSIG	182
NORTH KINGSTOWN	RIS-097	6 Long Av	183
WESTERLY	RIS-OBL	12 Canal St	184
EAST PROVIDENCE	RIS-064	Wampanoag Trail @ Boyd Av 5 PSIG	185
WARREN	RIS-BW013	22 Brown St Basement 8 PSIG	186
EAST PROVIDENCE	RIS-013	Summit St @ Taunton Av	187
WESTERLY	RIS-OOD	54 East Av	188
WESTERLY	RIS-OOE	Beach St @ 11 Watch Hill Rd	190
EAST PROVIDENCE	RIS-003	First St @ Mauran Av (Holder 20) LP	191
PROVIDENCE	RIS-320	Allens Av/LNG Fuel	193

Division 1-46, page 7

REPLACED/RETROFIT COMPLETE
(some scores still reflect rank prior to work being completed)

WARREN	RIS-BW010	Warren GS	3
PORTSMOUTH	RIS-N203	135 Old Mill Ln TS	30
LINCOLN	RIN-C045	600 George Washington Hwy (Rt 116) TS	36
PROVIDENCE	RIS-300	Allens Av/Becker Cabinet 18" Line	6
PROVIDENCE	RIS-400	30 Allens Av (Manchester St) TS Power Plant	98
BURRILLVILLE	RIS-340	1084 Wallum Lake Rd TS	148
PAWTUCKET	RIN-C040	Sanford St @ Myrtle St	25
WARREN	RIS-310	28 Brown St TS (Barrington Bldg)	153
PROVIDENCE	RIS-086	Dorrance St @ Eddy St	35
EAST PROVIDENCE	RIS-311	27 Dey St TS	155
JOHNSTON	RIS-101	1 Cottage St	76
EAST GREENWICH	RIS-106	Frenchtown Rd @ S County Trail	39
EAST PROVIDENCE	RIS-067	Roger Williams Av @ Whitaker	60
CRANSTON	RIS-032	Park Av @ Old Park Av	69
EAST PROVIDENCE	RIS-004	Wampanoag Trail GS	189
CUMBERLAND	RIN-C047	4425 Diamond Hill Rd TS	194
PROVIDENCE	RIS-343	30 Allens Av (Crary St) TS 99 PSIG	195
PROVIDENCE	RIS-305	Allens Av/Hut	99
JOHNSTON	RIS-092	Traver Av @ Killingly St	102
JOHNSTON	RIS-102	Greenville @ George Waterman	116
PROVIDENCE	RIS-306	Allens Av/19 Holder Filling Line	132
PROVIDENCE	RIS-091	Adelaide Ave @ Hamilton St	137
EAST PROVIDENCE	RIS-001	500 Veterans Mem Pkwy (Bentley St)	139
PROVIDENCE	RIS-308	Allens Av/Providence 7 PSIG	149
EAST PROVIDENCE	RIS-056	Roger Williams Av @ Puritan	156
BRISTOL	RIS-BW007	Woodlawn Av @ Wood St	160

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-46, page 8

ABANDONED

PROVIDENCE	RIS-274	Allens Av/Becker Cabinet Dey St	18
PROVIDENCE	RIS-327	Allens Av/Hoxie	55
WARWICK	RIS-037	122 Pettaconsett Av	114
EAST PROVIDENCE	RIS-005	Martin St @ Dodge St	143
EAST PROVIDENCE	RIS-045	Harris@Hoppin	159
PROVIDENCE	RIS-307	Allens Av/200 PSI Standby Run	192
LINCOLN	RIN-C015	Quinn Ln @ Lower River Rd	
BRISTOL	RIS-BW003	142 Gibson Rd	

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-47

Request:

Provide a breakdown of the 2023 Gas System Reliability budget, identifying the “multi-year projects” in Newport, Cranston, Warwick and East Providence and the work to be performed on each system to “eliminate single-system feeds” including the site plan for each project and their respective costs.

Response:

Please see the table below, which includes the four (4) FY 2023 projects, including their corresponding description, scope and estimate.

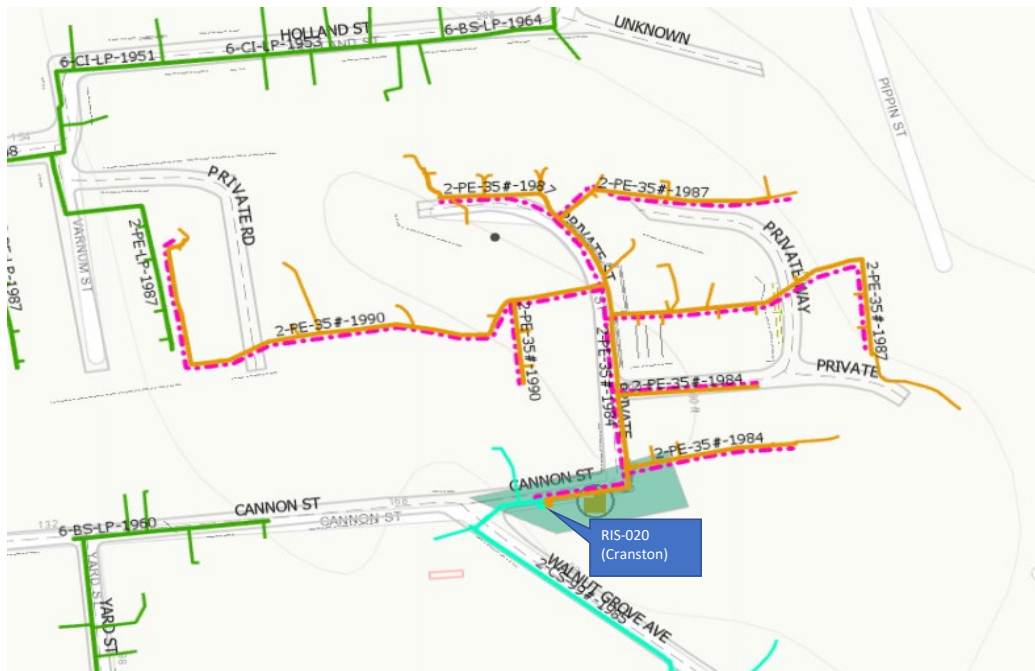
Town	Title	Description	Project Scope	Lenth (ft)	Estimate
East Providence	Roger Williams Av (RIS-067), East Providence	Improve reliability of multiple subsystems by eliminating a single-feed 35-psig subsystem in E Providence via new reg station, and reinforcing the end of the 18-psig Pawtucket system.	Phase 1: Install aprx 4700 ft of 99-psig 8-in plastic from the existing 99-psig main in Roger Williams Av EPV, toward the EPV/PAW town line. Future phases include additional 99-psig new main, a new 99-35 reg station to eliminate the single-feed system, and load-shedding the end of the Pawtucket 18-psig system onto the 35-psig system.	4,700	\$1,354,521
Cranston	Cannon St (RIS-020), Cranston	Eliminate single-feed 35-psig subsystem and regulator station at 200-Cannon St, Cranston. Integrate with 99-psig system via main replacement to improve reliability.	Replace aprx 2610 ft of 35-psig main (PL/CS) with 2-in 99-psig plastic in the 200-Cannon St CRA neighborhood off Walnut Grove Av. Convert services to 99-psig. Retire single-feed station RIS-020.	2,610	\$740,835
Warwick	East Ave (Farm Taps), Warwick	Eliminate three single-feed 30/35-psig regulators off Bald Hill Rd, Warwick. Integrate with larger 99-psig system via main replacement to improve reliability.	Replace aprx 3580 ft of 30/35-psig main with 2-in 99-psig plastic off Bald Hill Rd/East Av, WWK. Convert services to 99-psig. Retire three single-feed regulators. Farm Tap East Ave 30#: aprx 2610 ft of 2/3/4-in 30-psig PE/CS. Farm Tap East Ave N: aprx 340 ft of 2-in 35-psig PB/CS. Farm Tap East Ave S: aprx 630 ft of 2-in 35-psig PE/CS.	3,580	\$575,223
Newport	Newport (10-to-35) Phase 1	Multi-year project to reduce/eliminate the single-feed branch of the 10-psig subsystem downstream of regulator station RIS-N220. Integrate with 35-psig system via main replacement to improve reliability.	Phase 1: Replace 1700 ft of 10-psig main with 2800 ft of 4-in 35-psig plastic in Beacon Hill Rd and Harrison Av NPR. Convert services to 35-psig.	2,800	\$589,201
Totals				13,690	\$3,259,780

Attachment DIV 1-47 includes maps that provide an overview of each of the four projects described above.

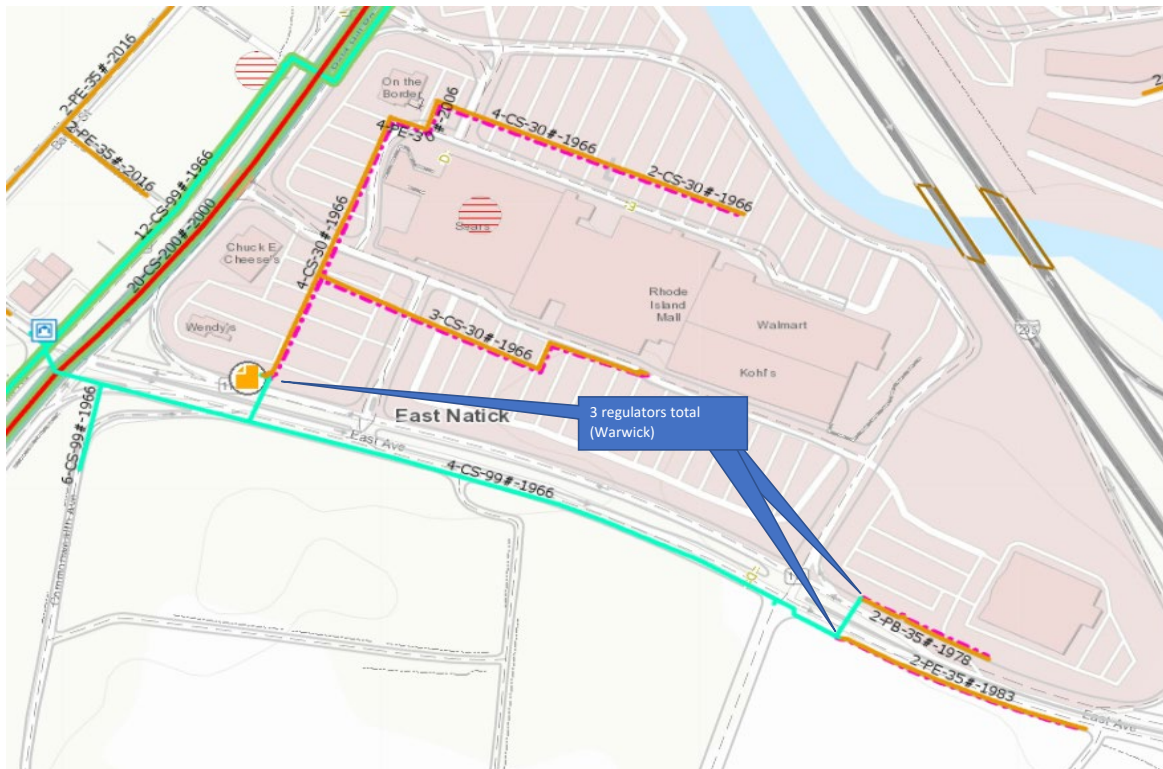
Roger Williams Av, East Providence



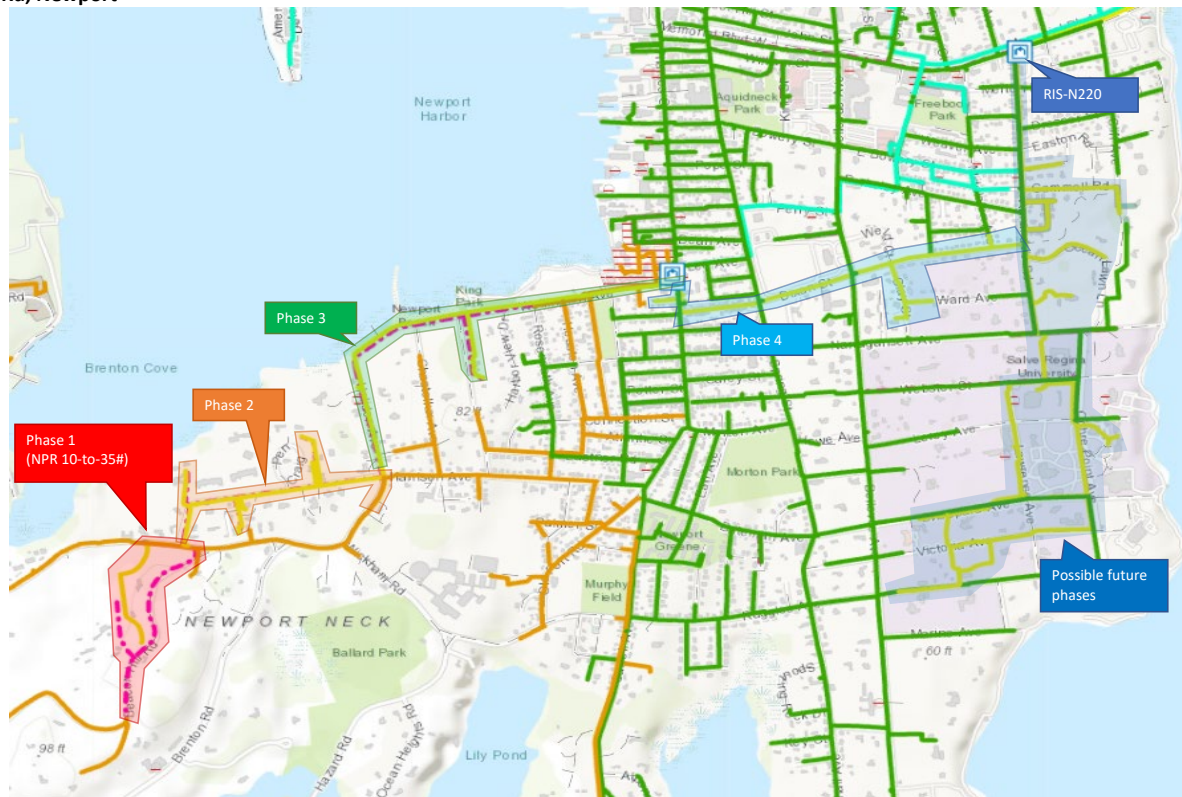
Canon St, Cranston



East Ave, Warwick



Beacon Hill Rd, Newport



Division 1-48

Request:

Provide a list of projects and respective costs for FY 2023 for the I & R Reactive category.

Response:

The I&R Reactive Budget is designed to address capital project requirements over and above what the Pressure Regulation Capital budget provides. The budget is used to address problems that are identified and arise during the fiscal year. Therefore, a list would not be available at this time for FY 2023.

I&R Reactive projects range from instrumentation replacement due to weather or vehicular damage, replacement of obsolete/unreliable equipment, such as regulators, station valves, pilots, boilers, heat exchangers, odorant equipment and replacement of building roofs or doors due to deterioration.

For FY 2023, the budget is \$1.375M.

Division 1-49

Request:

Provide costs associated with FY 2023 individual subcategories of work identified on Page 33 under the category Distribution Station Over Pressure Protection.

Response:

Please see the table below for the requested information.

Category	Cost
Override Pilots	\$684,000
Relief Valves	\$2,020,000
Control Line Headers	\$679,000
Total	\$3,383,000

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

Division 1-50

Request:

Identify the deferrals and new work included in the \$9.19 M of funding in the LNG category. Provide a breakdown and costs of work associated with the former and latter subcategories.

Response:

The deferrals and new work included in the \$9.19 M of funding in the LNG category are detailed in the table below, including associated costs.

Investment Name	Deferrals \$(millions)	New Work \$(millions)
LNG – Exeter AESD System	-	\$0.350
LNG – Exeter Boiloff Compressor 2 Upgrade	-	\$2.000
LNG – Exeter Hi Ex Foam System	\$0.200	\$6.140
LNG – Exeter Critical Spares	-	\$0.300
LNG – Exeter LNG Septic Upgrade	-	\$0.200
Sub-Total	\$0.200	\$8.990
Total	\$9.190	

The Narragansett Electric Company
d/b/a National Grid
In Re: Division's Review of FY 2023 Proposed Gas ISR Plan
Responses to Division's First Set of Data Requests
Issued October 28, 2021

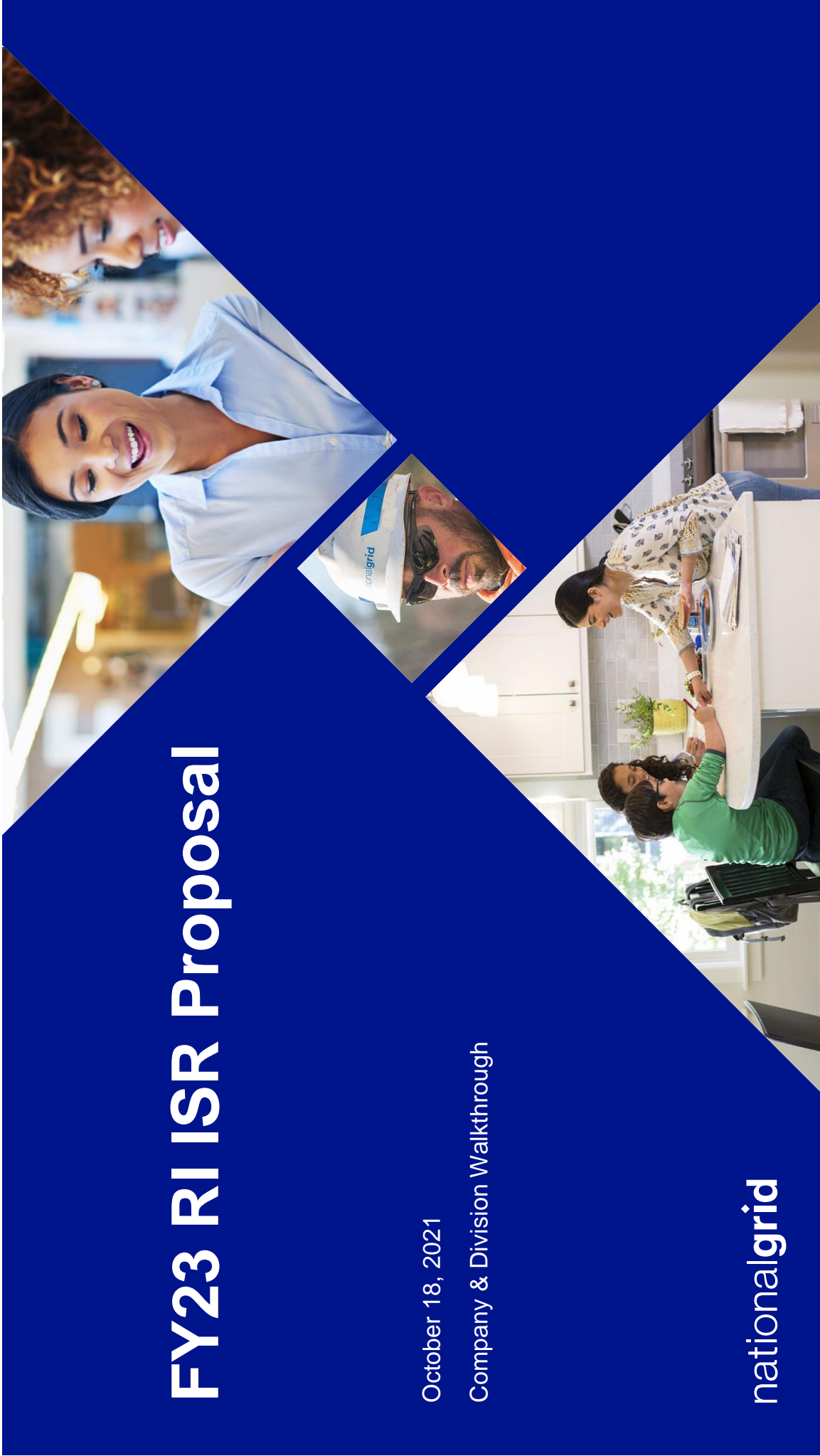
Division 1-51

Request:

Provide the PowerPoint Presentation from the October 18, 2021 Walkthrough in electronic format.

Response:

Please see Attachment DIV 1-51 for an electronic copy of the PowerPoint Presentation from the October 18, 2021 Walkthrough of the FY 2023 ISR Proposal presented by the Company to the Division.



FY23 RI ISR Proposal

October 18, 2021
Company & Division Walkthrough

nationalgrid

FY 2023 Gas ISR Proposed Schedule

Division Filing & Meetings

- **October 5, 2021 - Submitted FY 2023 Proposal to Division**
- **October 18, 2021 – 1-day plan walk-through with Division**
 - Investment owners present overview of FY 2023 planned work in proposal
 - Division will issue informal and formal data requests
 - Additional breakout sessions/follow-up meetings will be scheduled, as needed
- **October to December – Company and Division review and revise plan**
 - FY 2023 category budgets may be revised based on FY 2022 actuals through November

Commission Filing, Hearing, and Ruling

- **By December 23, 2021 – Submit Final FY 2023 Proposal to Commission**
- **Commission has 90 days to review and approval plan**
- **Discovery Period – December to February**
- **Evidentiary Hearings – Late February to March**
- **Commission approval – March (ideally before April 1st)**

National Grid

2

ISR Historical Spending

(\$000)

Categories	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022	
	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget
NON-DISCRETIONARY												
Public Works	\$ 8,597		\$ 14,590		\$ 13,575		\$ 16,523		\$ 12,997		\$ 19,202	
Mandated Programs	\$ 16,370		\$ 22,110		\$ 18,868		\$ 19,043		\$ 17,518		\$ 22,203	
Damage / Failure (Reactive)	\$ -		\$ 1,610		\$ -		\$ -		\$ -		\$ 250	
Special Projects	\$ 5,020		\$ 1,780		\$ 8,486		\$ -		\$ -		\$ -	
NON-DISCRETIONARY TOTAL	\$ 29,987		\$ 40,080		\$ 40,928		\$ 35,566		\$ 30,516		\$ 41,655	
DISCRETIONARY												
Proactive Main Replacement	\$ 48,872		\$ 51,210		\$ 52,548		\$ 58,032		\$ 60,896		\$ 70,019	
Proactive Main Replacement - Large Diameter LPCI	\$ -		\$ 1,180		\$ -		\$ 1,115		\$ 1,419		\$ 3,852	
Atwells Avenue	\$ -		\$ -		\$ 81		\$ 906		\$ 5,612		\$ 4,000	
Service Replacement - Proactive	\$ -		\$ -		\$ -		\$ -		\$ 240		\$ 350	
Reliability	\$ 8,403		\$ 13,950		\$ 10,290		\$ 15,933		\$ 24,836		\$ 33,932	
SUBTOTAL DISCRETIONARY (Without Gas Expansion)	\$ 57,275		\$ 66,330		\$ 62,918		\$ 75,986		\$ 93,003		\$ 112,153	
Southern RI Gas Expansion Project	\$ -		\$ -		\$ 2,390		\$ 42,729		\$ 41,755		\$ 19,438	
DISCRETIONARY TOTAL (With Gas Expansion)	\$ 57,275		\$ 66,330		\$ 65,308		\$ 118,715		\$ 134,758		\$ 131,591	
CAPITAL ISR TOTAL (Base Capital - Without Gas Expansion)	\$ 87,262		\$ 106,410		\$ 103,846		\$ 111,552		\$ 123,519		\$ 153,808	
CAPITAL ISR TOTAL (With Gas Expansion)	\$ 87,262		\$ 106,410		\$ 106,236		\$ 154,281		\$ 165,274		\$ 173,246	
O&M Total	\$ 488		\$ 560		\$ 179		\$ -		\$ -		\$ -	
GAS ISR GRAND TOTAL	\$ 87,750		\$ 106,970		\$ 106,415		\$ 154,281		\$ 165,274		\$ 173,246	

National Grid

ISR 5-Year Forecast

(\$000)

Categories	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
NON-DISCRETIONARY					
Public Works	\$ 20,600	\$ 21,012	\$ 21,432	\$ 21,861	\$ 22,298
Mandated Programs	\$ 32,999	\$ 40,150	\$ 46,825	\$ 41,179	\$ 63,979
Damage / Failure (Reactive)	\$ 255	\$ 260	\$ 287	\$ 293	\$ 299
NON-DISCRETIONARY TOTAL	\$ 53,854	\$ 61,422	\$ 68,544	\$ 63,333	\$ 86,576
DISCRETIONARY					
Proactive Main Replacement	\$ 84,721	\$ 101,835	\$ 111,417	\$ 108,961	\$ 108,590
Proactive Service Replacement	\$ 600	\$ 612	\$ 624	\$ 637	\$ 649
Reliability	\$ 43,495	\$ 38,859	\$ 35,156	\$ 35,223	\$ 47,247
SUBTOTAL DISCRETIONARY (Without Gas Expansion)	\$ 128,817	\$ 141,305	\$ 147,197	\$ 144,820	\$ 156,486
Southern RI Gas Expansion Project	\$ 6,789	\$ 7,900	\$ 14,123	\$ 350	\$ -
DISCRETIONARY TOTAL (With Gas Expansion)	\$ 135,606	\$ 149,205	\$ 161,320	\$ 145,170	\$ 156,486
CAPITAL ISR TOTAL (Base Capital - Without Gas Expansion)	\$ 182,670	\$ 202,727	\$ 215,741	\$ 208,154	\$ 243,062
CAPITAL ISR TOTAL (With Gas Expansion)	\$ 189,459	\$ 210,627	\$ 229,864	\$ 208,504	\$ 243,062

Notable Capital Projects Not Currently Included in the ISR					
Old Mill Lane	\$ 1,000	\$ 1,000	\$ 21,000	\$ 16,000	\$ 100
LNG - Cumberland Tank Replacement	\$ 2,500	\$ 2,500	\$ 500	\$ 1,500	\$ 9,000
Smart Gas Meter - IS Integration	\$ -	\$ 3,000	\$ -	\$ -	\$ -
Total	\$ 3,500	\$ 6,500	\$ 21,500	\$ 17,500	\$ 9,100

National Grid

ISR Changes Over FY22

In \$000'

Investments	Trace	Comments
FY22 ISR	180,146	PUC approved ISR budget of \$173.246M, but internal budget included \$6.9M for Aquidneck and Cumberland Tank.
Proactive LPP	\$10,215	Aligned with actual unit costs for recent LPP abandonments.
Wampanoag and Tiverton Heater Replacement	\$9,241	Heaters to be replaced and built to Company's higher standards, with Company taking ownership of the stations.
LNG - Exeter	\$4,138	Acceleration of construction for Compressor 2 and Hi-Ex Foam projects
Scott Road Take Station (Cumberland)	\$2,750	Beginning to rebuild this station
CSC/Public Works – Non-Reimbursable	\$1,443	Increased Unit Cost
Growthpoint - Main Installation	\$(11,462)	Reduction of \$14.3M due to final phase of main installation being completed in FY22. Partially offset by reg station/other Growthpoint FY23 investment.
Aquidneck Island Portable LNG Relocation	\$(3,900)	Company recommending to stay at existing site, with modifications. No longer installing main to new site or building new regulator station.
Heater Installation Program - Dey St GS	\$(2,733)	Project delayed from FY22. FY23 – Engineering and Development, FY24 – Construction
Other	3,573	
Total Changes	\$12,813	
FY23 Proposed	\$192,959	Actual ISR Submittal was \$189,459 (excludes \$3.5M Old Mill Lane & Cumberland LNG Tank)

ISR – FY22 vs FY23

Categories (\$000)	FY 22 Approved Budget	FY 23 Proposed Budget	Variance	Categories (\$000)	FY 22 Approved Budget	FY 23 Proposed Budget	Variance
NON-DISCRETIONARY				Reliability			
Public Works				System Automation	\$1,321	\$ 1,387	\$ 66
CSC/Public Works - Non-Reimbursable	\$ 19,162	\$ 20,596	\$ 1,444	Heater Installation Program	\$3,567	\$ 1,242	\$ (2,315)
CSC/Public Works - Reimbursable	\$ 1,455	\$ 1,437	\$ (18)				
CSC/Public Works - Reimbursements	\$ (1,409)	\$ (1,433)	\$ (28)	Wampanoag Trail & Tiverton GS - Heaters Replacement and Ownership Transfer	\$0	\$ 9,241	\$ 9,241
Public Works Total	\$ 19,202	\$ 20,600	\$ 1,398	Take Station Refurbishment	\$1,300	\$ 1,850	\$ 550
Mandated Programs				Pressure Regulating Facilities	\$7,462	\$ 7,585	\$ 123
Corrosion	\$1,250	\$ 1,305	\$ 55	Allens Ave Multi Station Rebuild	\$2,500	\$ -	\$ (2,500)
Purchase Meters (Replacement)	\$2,880	\$ 5,248	\$ 2,368	Valve Installation/Replacement - Primary Valve Program & Aquidneck Island Low Pressure Valves	\$1,233	\$ 988	\$ (245)
Reactive Leaks (Cl Joint Encapsulation/Service Replacement)	\$12,629	\$ 12,629	\$ -	Gas System Reliability	\$3,244	\$ 3,260	\$ 16
Service Replacements (Reactive) - Non-Leaks/Other	\$2,016	\$ 2,067	\$ 51	I&R - Reactive	\$1,348	\$ 1,375	\$ 27
Main Replacement (Reactive) - Maintenance (Incl Water Intrusion)	\$1,188	\$ 3,000	\$ 1,812	Distribution Station Over Pressure Protection	\$3,301	\$ 3,383	\$ 82
Low Pressure System Elimination (Proactive)	\$500	\$ 2,000	\$ 1,500	LNG	\$5,738	\$ 10,089	\$ 4,351
Transmission Station Integrity	\$1,740	\$ 6,250	\$ 4,510	Replace Pipe on Bridges	\$2,006	\$ 2,000	\$ (6)
Pipeline Integrity - IVP - Wampanoag Trail Pipeline Replacement	\$0	\$ 500	\$ 500	Access Protection Remediation	\$310	\$ 272	\$ (38)
Mandated Total	\$ 22,203	\$ 32,999	\$ 10,796	Tools & Equipment	\$612	\$ 824	\$ 212
Damage / Failure (Reactive)				Reliability Total	\$33,932	\$43,495	\$9,563
				SUBTOTAL DISCRETIONARY (Without Gas Expansion)	\$112,153	\$128,817	\$16,664
				Southern RI Gas Expansion Project			
				Pipeline	\$14,908	\$ 600	\$ (14,308)
				Other Upgrades/Investments	\$2,930	\$ 396	\$ (2,534)
				Regulator Station Investment	\$1,600	\$ 5,793	\$ 4,193
				Southern RI Gas Expansion Project Total	\$19,438	\$6,789	(\$12,649)
				DISCRETIONARY TOTAL (With Gas Expansion)	\$131,591	\$135,606	\$4,015
				CAPITAL ISR TOTAL (Base Capital - Without Gas Expansion)	\$153,808	\$182,670	\$28,862
				CAPITAL ISR TOTAL (With Gas Expansion)	\$173,246	\$189,459	\$16,213
				Notable Capital Projects Not Currently Included in the ISR			
				Old Mill Lane	\$4,900	\$ 1,000	\$ (3,900)
				LNG - Cumberland Tank Replacement	\$2,000	\$ 2,500	\$ 500
				Total	\$6,900	\$3,500	(\$3,400)

Project Details

Valve Installation/ Replacement – Primary Valve Program & Aquidneck Island Low Pressure Protection

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Valve Installation/Replacement - Primary Valve Program & Aquidneck Island Low Pressure Protection	\$1,233	\$1,233	\$988	(\$245)	\$1,023	Caliri, Stephen A.	Coombs, Matthew	Elkin, Kasey

Program Summary

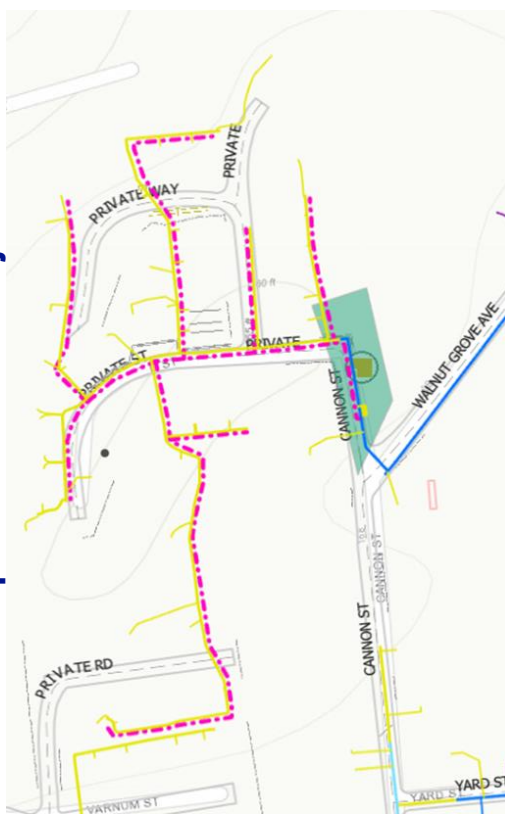
- Purpose: Valves are used to sectionalize portions of gas network to support both planned and unplanned field activities.
 - Replacement of inoperable valves (reactively) is necessary to ensure the ability to isolate portions of the distribution system.
 - New valves are also occasionally needed to provide capability to reduce the size of an isolated area.
- FY 2023 Workplan includes
 - \$138K Reactive Valve work - Blanket
 - \$850K Continue Sectionalizing Valve work in Newport and Middletown

Gas System Reliability/ Gas Planning

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Gas System Reliability/ Gas Planning	\$3,244	\$3,244	\$3,260	\$16	\$3,174	Caliri, Stephen A.	Coombs, Matthew	DeWolff, Christie

Project/ Location	Town	Description	LPP CI - Length	LPP BS - Length	Install ft	Cost Estimate
LTRI Reliability - Newport (10-to-35)	Newport	Part of a multi-phase project to eliminate the single-feed 10-psig subsystem and integrate with the larger 35-psig system via main replacement, starting at Beacon Hill Rd, Newport. Phases 1 & 2.	150	275	2,800	\$589
	Newport		1,800	505	3,930	\$907
LTRI Reliability - Small Single-Feed Station Subsystems 1	Cranston	Eliminate single-feed 35-psig subsystem and regulator station at 200-Cannon St, Cranston. Integrate with 99-psig system via main replacement to improve reliability.	-	-	2,610	\$741
LTRI Reliability - Small Single-Feed Station Subsystems 2	Warwick	Eliminate three single-feed 30/35-psig regulators off Bald Hill Rd, Warwick. Integrate with larger 99-psig system via main replacement to improve reliability.	-	-	3,580	\$575
East Providence Downrate - Narragansett Park Dr (35-to-18)	East Providence	Eliminate single-feed 35-psig subsystem located in East Providence near the Pawtucket town line. Integrate into the larger 18-psig system via pressure downrate to improve reliability.	635	575	260	\$448

Map of Cranston Project



National Grid

Instrumentation and Regulation (I&R) Reactive

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
I&R - Reactive	\$1,848	\$1,348	\$1,375	\$27	\$1,456	Talbot, John; Bleicken, Joshua	Coombs, Matthew	Daly, Maureen; Zaccari, Justin

Program Summary

- **Purpose: Established to address capital project requirements over and above the Pressure Regulation capital budget.**
 - Projects range from instrumentation replacement due to failure; Replacement of obsolete/unreliable equipment, such as regulators, pilots, boilers, heat exchangers, odorant equipment, and station valves; and replacement of building roofs or doors due to deterioration.

Public Works

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
CSC/Public Works - Non-Reimbursable	\$19,152	\$19,152	\$20,596	\$1,444	\$19,729	Owens, Melissa	Coombs, Matthew	Owens, Melissa
CSC/Public Works - Reimbursable	\$1,455	\$1,455	\$1,437	(\$18)	\$1,405	Owens, Melissa	Coombs, Matthew	Tribble, Melanie
CSC/Public Works - Reimbursements	(\$1,904)	(\$1,405)	(\$1,433)	(\$28)	(\$1,512)	Owens, Melissa	Coombs, Matthew	Tribble, Melanie

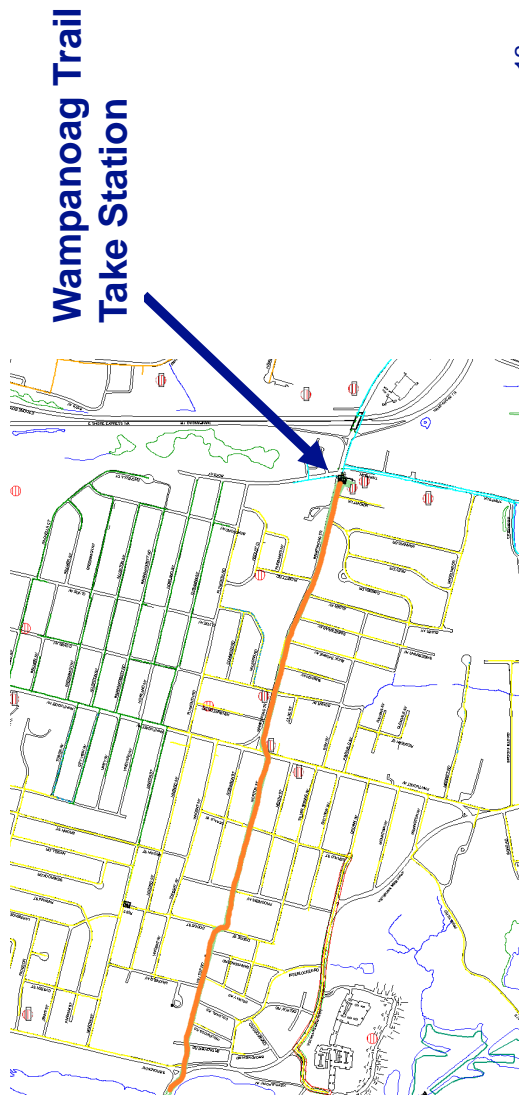
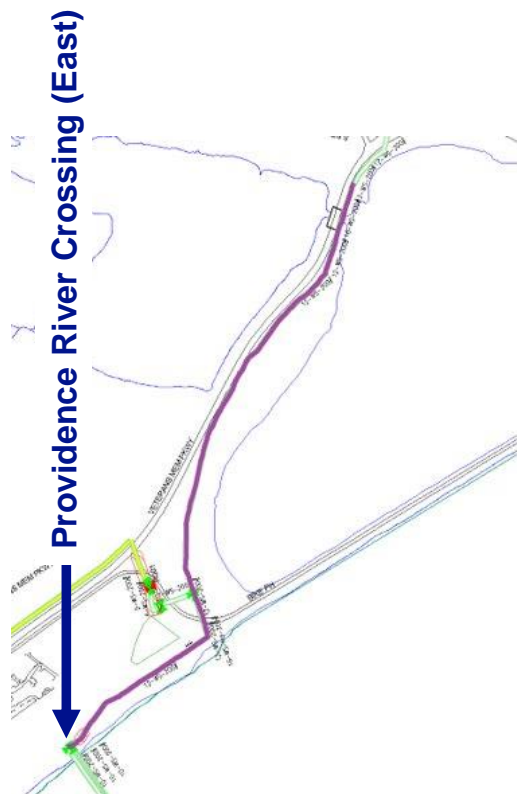
- **Abandonment and Installation Targets** – Remain the same as FY 2022
 - 14 miles Abandonment
 - 14 miles Installation
- **DPW Directors Meeting - October 21, 2021**
 - Leaders from National Grid's Community Team & Gas Construction Team are meeting with DPW Directors from State of RI and Municipalities to review FY 2023 work plan.
 - Help facilitate discussion of planned Public Works projects.

Pipeline Integrity- IVP – Wampanoag Trail Pipeline Replacement

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Pipeline Integrity - IVP - Wampanoag Trail Pipeline Replacement	\$0	\$0	\$500	\$500	\$366	Parro, Brian	Coombs, Matthew	Parro, Brian

• FY 2023 will begin a 5-year project to replace ~2 miles of transmission main in East Providence, which runs from the Providence River Crossing to Wampanoag Trail Take Station.

- This section of 12”-16” coated steel piping is some of the oldest main operating at 200 psig (installed before 1971) on the RI System and is a critical piece of infrastructure for RI gas supply.
- The new main will be designed to be in-line inspected (“piggable”) – take advantage of industry preferred means of inspection an in line with Company standards. Designed and constructed main will have a SMYS under 20%.



Southern RI Gas Expansion Project

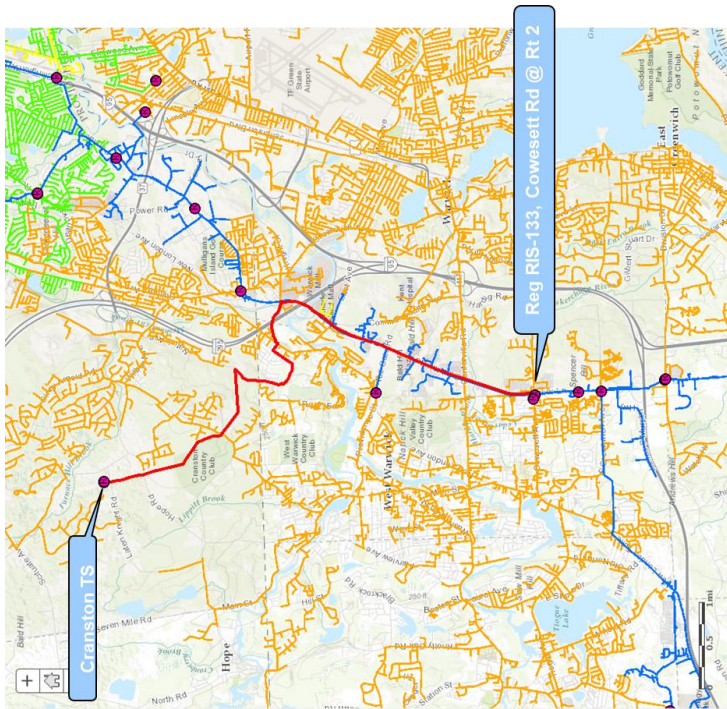
Main Installation – FY23 Budget - \$600K

- Project Closeout & Settle Invoices

MOP Increase – FY23 Budget - \$46K

- This is part of the Other Upgrades/Investments budget

Categories	Budget
Southern RI Gas Expansion Project	
Pipeline	\$ 600
Other Upgrades/Investments	\$ 396
Regulator Station Investment	\$ 5,793



Southern RI Gas Expansion Project

Regulator Station Upgrades – Cowesett - \$3.09M

- Active Construction Work planned for FY 23
- We have an existing facility. It needs integrity upgrades. We will add another pre-fab regulator and eventually abandon the existing regulator. The new regulator will run in parallel to the existing station until the old station is ready to be abandoned.

Regulator Station Upgrades – Cranston - \$2.00M

New Regulator Station near (north of) Cowesett - \$700K

- Planning and Engineering work
- The need is driven by

Regulator Station/Launcher-Receiver / Install ROV - \$350K

- Planning and Engineering work, develop conceptual layout, and secure a location

Purchase Meters

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
<i>Purchase Meter (Replacement)</i>	\$2,880	\$2,880	\$5,248	\$2,368	\$4,540	Sullivan, Peter	Tupper, Michael	Sullivan, Peter

Program Overview

- Capital costs for procurement of meters
- Multi-year plan – 19,945 meters represents ~7.35% of the existing gas meter population in RI
- FY 2023 – Company will purchase 18,045 meters
 - Will require approximately 19,945 Meters (Growth is excluded)
 - 18,640 Mandated
 - 1,305 Miscellaneous
 - Note: Meter Department currently assessing whether buffer inventory of meters should be increased. Meter manufacturers experiencing ongoing labor issues and chip shortages.

Replace Pipe on Bridges Access Protection Remediation

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Replace Pipe on Bridges	\$1,500	\$2,006	\$2,000	(\$6)	\$1,828	Bader, Leomary	Tupper, Michael	Fleury, Adrien
Access Protection Remediation	\$310	\$310	\$272	(\$38)	\$274	Bader, Leomary	Tupper, Michael	Fleury, Adrien

Replace Pipe on Bridges

- **Construction for Lonsdale Avenue Bridge, Pawtucket**
 - Replacement of 12-in main scheduled for beginning of FY23.
- **Development of Glenbridge Avenue Bridge, Providence Main Replacement Project**
 - Complex project involves retiring 36" and 16" mains on trestle bridge and relaying new carrier pipes.
- **Development for Goat Island Bridge (timing TBD with RIDOT)**
- **Development of other projects to replace gas mains on bridges.**

Access Protection Remediation

- **Purpose: Reduce risk of public injury by reducing and/or deterring public access to elevated gas facilities.**
 - Typically fencing to prevent people from walking on pipe attached to bridge crossings.

Main Replacement (Proactive) – Leak Prone Pipe

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Main Replacement (Proactive) - Leak Prone Pipe	\$67,572	\$70,019	\$80,234	\$10,215	\$75,142	Bader, Leomary	Tupper, Michael	Fleury, Adrian; [additional info from John Currie]

Program Summary

- Consists of Cast Iron and Unprotected Steel Main with diameter of less than 16”
- FY 2023 Workplan includes Installation of 43.4 miles and Abandonment of 49.9 miles
 - Abandonment miles include 5.0 miles that were installed in FY 2022.
 - FY 2022 plan included installation of 48.5 miles and Abandonment of 55.0 miles (forecasting to fall short)
 - Program costs have continued to increase over past several years from following factors:
 - New contracts with contractors, local paving requirements, professional engineering requirements, and higher % of cast iron main replacement.
 - Costs for replacing cast iron is typically greater than unprotected steel for a few factors:
 - Cast Iron is predominantly on low and intermediate pressure systems consisting of larger diameter mains.
 - Cast Iron facilities are typically centralized in urban areas where costs are driven by higher customer density, greater underground congestion, increased restoration and traffic control.

Current LPP Inventory by Material – Plan as of 09/13/2021

As of 9/13/2021																							
Material	End of CY20	Program	FY22 ISR Plan	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	Total Mileage Replaced						
Bare Steel/Unprotected Coated Steel	314.5	Other Programs	4	4	3	2	3	3	3	4	4	5	6	7	7	7	63						
		Proactive	16	13	11	8	11	11	11	14	16	18	19	25	30	30	27	252					
		Total Bare Steel	21	18	14	10	14	14	14	17	20	22	24	31	38	37	35	314					
Cast Iron/Wrought Iron/Ductile Iron	636.5	Other Programs	9	10	11	11	11	11	10	10	9	9	7	6	6	6	127						
		Proactive	39	31	45	48	45	45	42	42	40	38	36	30	25	25	22	509					
		Total Cast Iron	48	42	56	59	56	56	52	52	49	47	45	38	31	31	28	636					
Leak Prone Mileage	951.0	Total	69	60	70	70	70	70	70	70	69	69	55%	45%	45%	62	951						
Cast Iron %	67%		70%	71%	80%	85%	80%	80%	75%	71%	68%	65%	55%	45%	45%	45%							

Notes:

*In the coming year, the Company plans to complete a deep dive into replacing the remaining miles of leak prone pipe on the gas system. The Company will consider risk on the system, the remaining miles, the remaining timeline in the plan, availability of internal and contractor resources, customer bill impacts, permitting, and other factors.

**The Company uses a risk based approach to prioritize the leak prone main that is being replaced. Thus the targeted ratio of Cast Iron pipe vs Bare Steel/ Unprotected Coated Steel pipe may vary slightly, based on risk scores, when the annual workplans are being developed.

National Grid

Proactive Service Replacement

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
<i>Proactive Service Replacement</i>	\$559	\$350	\$600	\$250	\$575	Bader, Leomary	Tupper, Michael	Fleury, Adrian

Program Summary

- 3rd year of this program
- These are services that would NOT be replaced as part of the Proactive Main Replacement Program.
 - Proposed as 10-year program, with 100 services being proactively replaced per year.
 - **Next Steps:** Company needs to determine highest priority services to be replaced in FY 2023. Data cleanup and potentially field verification of High Pressure Inside Meter Sets is needed (~800 records).
 - High Pressure Inside Sets may be the next service type the Division focuses on.
 - Will be challenging to replace ~50 Copper Services remaining in Warren – Historic/Guaranteed Street
 - In total, ~1,000 services will be ‘remediated’ through data cleanup or services replaced due to leaks, etc.
 - Positive Trend: Service Leak Rate decreased 19.1% in CY 2020 vs 2019

	A	B	C	D = A-B-C	
	Count at Start of FY21	Completed in FY21	YTD Completed in FY22	Remaining as of 10/1/21	Forecasted Ending Inventory FY22
Cumberland Copper Services	133	53	38	42	0-14

National Grid

Main Replacement (Proactive) – Large Diameter LPCI Program

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Main Replacement (Proactive) - Large Diameter LPCI Program	\$3,902	\$3,852	\$2,850	(\$1,002)	\$3,035	Bader, Leomary	Tupper, Michael	Fleury, Adrian

Program Summary

- The Company operates ~37 miles of Large Diameter leak-prone gas mains (greater than or equal to 16-inches)
- This proactive program consists of rehabilitating large diameter leak-prone pipe through sealing and lining programs
 - **Pros:**
 - Lining and sealing are cost-effective alternatives for remediating large diameter leak-prone pipe
 - Minimize impact to customers and communities, a shortened construction period and use of existing space in areas with significant underground utility congestion
 - **Con:**
 - Still draws resources from same pool of internal resources needed for live gas work

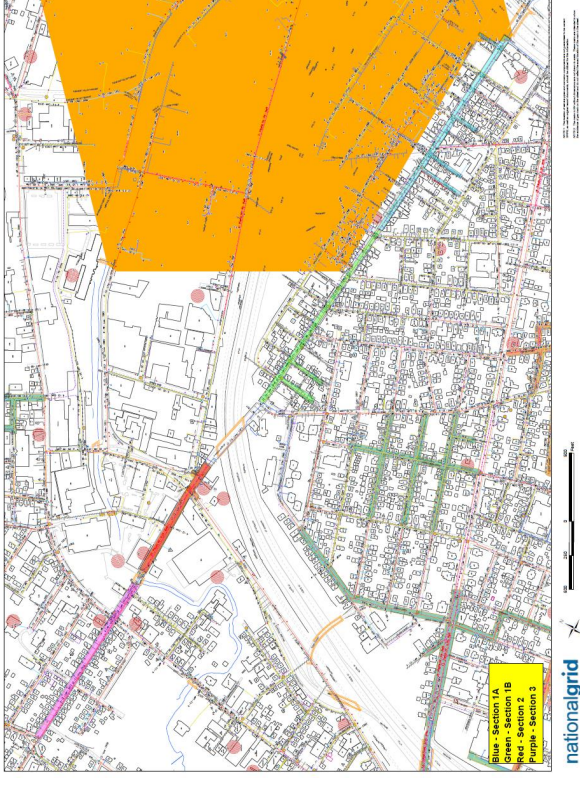
FY 2023

- Cast Iron (“CI”) Lining: \$0.85M for closeout and development of projects
- Cast-Iron Sealing Robot (“CISBOT”): \$2.00M for projects located in Providence and Newport

National Grid

Atwells Avenue – Main Replacement Project

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Atwells Avenue	\$4,000	\$4,000	\$1,637	(\$2,363)	\$1,570	Bader, Leomary	Tupper, Michael	Fleury, Adrian



Program Summary

- **Multi-year project in Providence through busy historical restaurant district. Some pipe was from 1800's. Highly congested underground utilities. Various parts of roadway crossings have pavers.**
 - Progress on this project was a highlight of work completed during the pandemic.
- **Segment 2 – Main Installation and Final Restoration is Complete**
- **Segments 1A & 1B – Main Installation Complete – Final Restoration is Ongoing**
 - Mill and Pave being completed as City of Providence completes their sidewalk restoration.
 - Work with Pavers (mostly Segment 1B) likely deferred into FY 2023.
- **Segment 3 – 0.3 mile of Main and Final Restoration to be completed in FY 2023.**

National Grid

Low Pressure System Elimination (Proactive) Main Replacement (Reactive) – Maintenance (incl Water Intrusion)

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
<i>Low Pressure System Elimination (Proactive)</i>	\$500	\$500	\$2,000	\$1,500	\$1,584	Bader, Leomary	Tupper, Michael	Fleury, Adrian
<i>Main Replacement (Reactive) - Maintenance (incl Water Intrusion)</i>	\$5,988	\$1,188	\$3,000	\$1,812	\$3,653	Bader, Leomary	Tupper, Michael	Fleury, Adrian

Low Pressure System Elimination (Proactive)

- Replace low pressure gas systems with high pressure systems to increase the overall gas system safety.
- Installing new high pressure distribution mains, services, and regulators and safely transferring customers from low pressure to the high pressure system – Being done in response to recommendations by Federal and State Agencies following Columbia Gas incident in MA in 2018
 - Work planned for Middletown – Eventually abandon LP Regulator Station (Walcott Ave near Briarwood Ave)

Main Replacement (Reactive) – Maintenance (incl Water Intrusion)

- Emergency main replacements or modifications because of leaks or other unplanned events that typically dictate immediate replacement and/or gas facilities are subject to water intrusion or exposure and require remedy.
- FY 2023 workplan includes larger main replacement projects for:
 - Reservoir Ave – Cranston
 - Oxbow Farms - Middletown

National Grid

Reactive Leaks (CI Joint Encapsulation/Service Replacement) Service Replacements (Reactive) – Non-Leaks/Other

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Reactive Leaks (CI Joint Encapsulation/Service Replacement)	\$12,629	\$12,629	\$12,629	\$0	\$12,313	Bader, Leomary	Tupper, Michael	Fleury, Adrian
Service Replacement (Reactive) - Non-Leaks/Other	\$2,016	\$2,016	\$2,067	\$51	\$2,003	Bader, Leomary	Tupper, Michael	Fleury, Adrian

Reactive Leaks (CI Joint Encapsulation/ Service Replacement)

- Leak sealing of cast iron bell joints, discovered during proactive leak surveys, public order calls, and other activities.
- Remediating leaking gas services through insertion, replacement, and/or abandonment on services

Service Replacements (Reactive) – Non-Leaks/Other

- Service relocations, meter protection, service abandonment, installation of curb valves

Transmission Station Integrity

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
<i>Transmission Station Integrity</i>	\$1,641	\$1,740	\$6,250	\$4,510	\$1,050	Bleicken, Joshua	Coombs, Matthew	Bleicken, Joshua; Zaccari, Justin

Program Summary

- **Purpose:** to meet USDOT PHMSA code requirements, pursuant to 49 CFR § 192.624, which require operators of steel gas transmission pipeline segments to reconfirm MAOP of segments with documentation, including material property records by 2035.
- **Continuation of rate base funded program**
 - Focus on pipeline in pressure regulating facilities/ transmission stations
 - Began several years ago
 - Has primarily consisted of in-depth compliance records and documentation review
 - Ensure pipelines are safe, reliable, and fit for service
- **Currently in a multi-year program:** 12 of 24 Transmission Stations are in scope for re-testing and/or replacing equipment

Scott Road Take Station Replacement

- Continuing with multi-year replacement of Scott Road Take Station as part of this program – total project cost ~\$15.09M
- FY 2023 – Purchase of long lead materials, finalizing station design, beginning contractor bidding process, and engagement with station’s transmission company, Kinder Morgan.

National Grid

24

Distribution Station Over Pressure Protection

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
<i>Distribution Station Over Pressure Protection</i>	\$3,752	\$3,301	\$3,383	\$82	\$3,388	Bleicken, Joshua	Coombs, Matthew	Zaccari, Justin

Program Summary

- **Purpose: Addresses risks for over pressurization incidents at pressure regulating facilities.**
 - Relocate and provide additional protections for regulator sensing and control lines to protect from third-party damage and installation of additional control equipment to ensure safe and reliable regulator operation in the event of control line damage.
- **FY 2023 Workplan includes**
 - Install 3 Sensing Headers – Middletown, Woonsocket, and East Providence
 - Install 12 Override Pilots – Cranston, Providence, North Providence, Lincoln, North Kingstown, Newport, Middletown, and West Warwick.
 - Install 6 New Relief Valves on the System – Pawtucket, Woonsocket, and Middletown (each FY 2022 carryover)
 - Plus 1 new project in Warren, and 2 projects with locations TBD.

System Automation

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
System Automation	\$1,321	\$1,321	\$1,387	\$66	\$1,336	Bleicken, Joshua	Coombs, Matthew	Zaccari, Justin

Program Summary

- **Purpose: Meet US DOT code requirements under 49 C.F.R. Part 192 Docket ID 2007-27954, issued 12/3/2009.**
 - **Contains the following pipeline safety requirements:**
 - a) Control room management/human factors;
 - b) Modernization of Company's system data and telemetry recording;
 - c) Increasing the level of system automation and control.
- **Company has 190 gas pressure regulators on RI system**
 - **All stations in RI Northern Region now have telemetry**
 - **Some stations still require installation of new telemetry equipment**
- **FY 2023 Workplan: Provide alternating current power, telemetry and/or remote control to ~20 locations.**

Heater Installation

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
<i>Heater Installation Program</i>	\$1,313	\$3,557	\$1,242	(\$2,315)	\$1,228	Bleicken, Joshua	Coombs, Matthew	Zaccari, Justin

Program Summary

- **Purpose: Installation and replacement of gas system heaters, which are operated to ensure proper conditioning and control of gas temperatures at key Company facilities.**
- **FY 2023 Workplan**
 - **\$275K – Blanket Workorder – Misc fuel train upgrades and burner management/ safety system upgrades.**
 - **\$460K – Dey St Providence – Engineering and materials, including 1 water bath heater.**
 - **\$450K – Diamond Hill Cumberland – Engineering and materials for hydronic boiler system.**
 - **\$450K – Smithfield – Engineering and materials for hydronic boiler system**

Take Station Refurbishment

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Take Station Refurbishment	\$2,154	\$1,300	\$1,850	\$550	\$1,878	Bleicken, Joshua	Coombs, Matthew	Zaccari, Justin

Program Summary

- **Purpose: Addresses required modifications to the Company's custody transfer stations.**
- **FY 2023 Workplan includes**
 - **Installation of third layer of over pressure protection with remote operation capability at multiple stations**
 - The remote operated valves will be installed at high pressure connection points and will support ability to shorten response time in the event of a major gas release.
 - **Design costs for future station construction at Smithfield Station**
 - **Control line replacement work**

Wampanoag Trail & Tiverton Gate Station – Heaters Replacement and Ownership Transfer

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Wampanoag Trail Heater Replacement & Ownership Transfer	0	0	\$4,526	\$4,526	\$5,349	Bleicken, Joshua	Coombs, Matthew	Zaccari, Justin
Take Station Enhancement - Tiverton GS Ownership Transfer	0	0	\$4,715	\$4,715	\$4,929	Bleicken, Joshua	Coombs, Matthew	Zaccari, Justin

- **Summary**

- In FY 2023, Enbridge will replace heaters at its Wampanoag Trail and Tiverton gate stations.
- The new heaters are designed to meet National Grid’s reliability standards, which exceed Enbridge’s standards for heater design.
- Once the work is complete, Enbridge will transfer ownership of the heaters to the National Grid.
- National Grid plans to spend \$9.24 million for this program in FY 2023, which would contribute to plant additions in FY 2023 of \$10.28 million.
- The benefits resulting from the work and the transfer of ownership of the assets from Enbridge to National Grid are listed below

- **For both Stations**

- Enhances heating system reliability at both locations by installing fully redundant heating systems.
- Provides the ability to perform heater maintenance and repairs without station shutdown or heater bypass improves overall gate station reliability.
- Creates verifiable inspection and maintenance records for the new assets.
- Decreases dependency on the pipeline operators to operate and maintain safety critical equipment.

- **For the Tiverton Gate Station**

- Reduces overpressure risk by installing guaranteed three levels of overpressure protection and reliable heat.
- Allows for a greater level of proactive station maintenance that National Grid will perform, including annual regulator boot replacement and monthly station checks, which will greatly mitigate outage risk of the single feed system.

- **For the Wampanoag Trail Gate Station**

- Improves heater efficiency and reduces risks associated with Gas System Operator (“GSO”) changing flows through the station by providing National Grid with the ability to control Wampanoag Trail Heater setpoints with its modern Programmable Logic Controller (“PLC”) system.
- Reduces the potential for overheated gas which may melt regulator soft goods by installing a National Grid Safety Integrity Level (“SIL”) certified heater safety system.

National Grid

Pressure Regulating Facilities

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
<i>Pressure Regulating Facilities</i>	\$8,859	\$7,462	\$7,585	\$123	\$7,706	Bleicken, Joshua	Coombs, Matthew	Zaccari, Justin

The chart below contains the locations of the proposed work under pressure regulating facilities as well as station details and information that influenced each work proposal. The scope of all station replacements is to install the following: a dual-run prefabricated regulator station with three layers of overpressure protection on each run; protective bollards; vents; and a traffic box containing system automation equipment. It is preferred to install the new station in the same location as the old station unless a new location is safer or more strategic. The scope of all station abandonments is to completely isolate, depressurize, cut, cap, and retire in place.

Station Name and Location				Work Plan Details				
Region	Town	Station Number	Station Name	Completion/Planning Comments	Risk Rank	Schedule Risk	Priority	Expected In Service FY23
South	PROVIDENCE	RIS-083	Pettis St @ N Main St	Reg Swap Completed, Replace Station, Design Complete	1		1	Y
South	WEST WARWICK	RIS-133	Cowesett Av @ Quaker Ln	Growthpoint Project, Replace Station, Design Complete	2		2	Y
South	EAST GREENWICH	RIS-069	816 Middle Rd	Replace Station, Design Complete	3		3	Y
South	JOHNSTON	RIS-090	1827 Plainfield Pk @ Simmonsville	Replace Station, Design Complete	6		4	Y
South	CRANSTON	RIS-017	Station St @ Pond St	Replace Station, Design Complete	7		5	Y
South	WARWICK	RIS-036	Post Rd @ Byron Blvd	Replace Station, Design Complete	8		6	Y
South	CRANSTON	RIS-018	Park Av @ Maple Av	Replace Station, re-design complete	14		7	Y
North	PAWTUCKET	RIN-C021	337 Lonsdale Av	Replace Station, design in progress	4		8	N
North	PAWTUCKET	RIN-C022	Weeden St @ Smithfield Av	Replace Station, design in progress	5		9	N
South	EAST PROVIDENCE	RIS-089	Willet Av @ Forbes St 25 PSIG	Replace Station, re-design in progress	10		10	N
South	EAST PROVIDENCE	RIS-071	Willet Av @ Forbes St 5 PSIG	Replace Station, re-design in progress	13		11	N
South	Newport	RIS-N213-HP	Wellington St @ Thames St 40 PSIG	Replace Station, design in progress	9		12	N
South	Newport	RIS-N213-LP	Wellington St @ Thames St LP	Replace Station, design in progress	11		13	N
South	MIDDLETOWN	RIS-N209	Walcott Av @ St Georges	Replace Station with relief valve, re-design in progress	12		14	N

National Grid

A second bypass valve will also be installed at 5 pressure regulating facilities.

LNG

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
LNG	\$6,110	\$5,738	\$10,089	\$4,351	\$6,126	Bleicken, Joshua	Coombs, Matthew	Cardoso, Steven

Program Summary

- **Purpose: Address specific and blanket capital project requirements to support Company's LNG operations.**
- **FY 2023 Workplan incorporates deferrals from FY 2022, for Exeter Facility projects**
 - **Exeter**
 - Installation of 2 new boil-off compressors to replace 2 compressors from early 1970's.
 - Installation of automated emergency shutdown system
 - Installation of high expansion foam system
 - Purchase of critical spares for items that are not readily available (long lead times)
 - **\$600K for LNG Blanket Program**
 - Exeter LNG and existing Cumberland portable LNG plant
 - **\$100K for demolition planning for former LNG transfer station at Navy Base**
 - **\$200K for existing Old Mill Lane site**
 - Additional noise mitigation work and support for sites EFSB filing

National Grid

ISR Spending and In-Service Forecast

In \$000'

Categories	3/31/21 CWIP Balance	FY23 Proposed Spending	FY23 Fcst In-Service & COR	3/31/23 Fcst CWIP Balance
Non-Discretionary				
Public Works	\$4,580	\$20,600	\$20,138	\$5,021
Mandated Programs	\$2,434	\$29,499	\$27,505	\$8,933
Damage / Failure (Reactive)	\$-	\$255	\$6	\$249
Non-Discretionary Total	\$7,014	\$50,354	\$47,649	\$14,203
Discretionary				
Proactive Main Replacement	\$9,942	\$80,234	\$77,148	\$19,557
Proactive Main Replacement - Large Diameter LPCI Program	\$1,193	\$2,850	\$3,106	\$695
Atwells Ave	\$-	\$1,637	\$1,611	\$ (0)
Service Replacement – Proactive	\$215	\$600	\$418	\$146
Reliability	\$12,533	\$46,995	\$41,890	\$19,602
Discretionary Total	\$23,883	\$132,317	\$124,349	\$40,000
Base ISR Capital Total	\$30,897	\$182,670	\$171,998	\$54,023
Southern RI Gas Expansion Projects	\$14,223	\$6,789	\$4,870	\$9,059
Aquidneck Island Portable LNG Relocation	\$-	\$1000	\$25	\$2,150
LNG - Cumberland Tank Replacement	\$-	\$2,500	\$63	\$4,388
Gas ISR Total	\$45,121	\$192,959	\$176,956	\$69,799

National Grid

Appendix/Additional Projects

Corrosion

Categories (\$000)	FY22 Q1 Forecast	FY22 Budget	FY23 Budget	FY22 vs FY23 Budget	FY 2023 PIS	Manager	Budget Sponsor	Investment Owner
Corrosion	\$1,250	\$1,250	\$1,305	\$55	\$1,259	Harmon, Michael	Tropp, Tiffany	Harmon, Michael

Program Overview

- **Cathodic Protection** effectively extends the service life of buried steel facilities and can prolong replacement by 20 years or more.
- Protection is accomplished, in part, through **ensuring proper coating** by establishing proper conditions on pipe segments through **installation of:**
 - **Rectifiers**
 - **Anodes**
 - **Insulators**
 - **Test Stations**
- Program also includes **control line work at existing regulator stations and cathodic protection upgrades.**

Division 1-52

Request:

Please explain the apparent discrepancies in service inventory in the 2019 System Integrity Report (pg. 73) and 2020 (pg. 75) System Integrity Report.

Response:

Page 73 of the 2019 System Integrity Report displays the reported inventory on the 2019 DOT report, which was submitted on March 13, 2020. The Company submitted a supplemental 2019 DOT report on July 30, 2021. The 2019 data in the 2020 System Integrity Report was revised to reflect the data submitted in the Supplemental 2019 DOT report. The Company will update the 2019 System Integrity Report to include the revisions to the 2019 DOT Data.

Division 1-53

Request:

Please explain the apparent discrepancies in service inventory in the 2020 System Integrity Report (pg. 75 vs. pg. 54).

Response:

On July 30, 2021, the Company submitted a Supplemental 2019 DOT report. Page 54 of the 2020 System Integrity Report does not reflect the latest revisions to the 2019 DOT report. Please see the Company's response to Division 1-52 for additional details.

Division 1-54

Request:

Please confirm that the definition of Leak Prone Pipe as provided on pg. 24 of the 2020 System Integrity Report is the same definition used throughout the report. Please also identify the number of miles of "Aldyl-A (MD, 1985 and prior)" main that the Company has in its inventory and verify that it is included in the Company's overall Leak Prone Pipe inventory.

Response:

In the 2020 System Integrity Report, leak prone pipe was defined incorrectly and it doesn't reflect the definition used throughout the report. The definition of Leak Prone Pipe is "Unprotected Steel (bare and coated), cast iron/wrought iron, ductile iron, and Aldyl-A (pre-1985 plastic). The Company LPP inventory includes 50 miles of Aldyl-A.

Division 1-55

Request:

Please provide a further explanation for the chart on page 23 of the System Integrity Report. For example, please explain what it means that the RI system grew by 4 feet of main in 2020.

Response:

The chart on page 23 of the System Integrity report displays the miles of mains added to the distribution system in terms of growth. The units in the y-axis should be miles instead of feet. The Company will make the appropriate revisions to the slide.

Division 1-56

Request:

Please provide more information regarding the 21 corrosion leaks on plastic pipe referenced on pg. 47 of the 2020 System Integrity Report. In this response, please include general information, as well as the type of plastic on which the corrosion happened and the assumed cause of corrosion.

Response:

The 21 corrosion leaks on plastic pipe were attributed to corroded metallic fittings such as risers, tees, and valves. These were not instances of plastic corroding. Refer to Attachment DIV 1-26 for the definition of the Corrosion leak cause as defined in the Instructions for completing Form PHMSA F 7100.1-1.

Division 1-57

Request:

Refer to the table on pg. 61 of the 2020 System Integrity Report. How does the Company intend to achieve the approximately 40% increase in the replacement rate projected here over historic rates?

Response:

The Company has been ramping up its replacement rate for leak prone pipe over the last several years, achieving a fiscal year abandonment of 61.6 miles in Fiscal 2020. The Company currently projects abandonment above the Fiscal 2020 level for Fiscal 2022.

In the upcoming year, the Company plans to complete a deep dive into replacing the remaining miles of leak prone pipe on the gas system. The Company will consider risk on the system, the remaining miles, the remaining timeline in the plan, availability of internal and contractor resources, customer bill impacts, permitting and other factors.

Division 1-58

Request:

In what year does the Company estimate that it will have completed changeouts for its 123,470 inside meters?

Response:

All meters, including inside meters, are changed or attempts exhausted on the 10 or 15-year schedule, depending on meter type.

The Company does not plan to move all inside meters out. However, the Company primarily replaces leak-prone services in conjunction with the Proactive Main Replacement Program. Where feasible, the Company will typically seek to move the meters outside during a service replacement. The applicable meters that will be moved outside follow the same current timeline as the 20-year Proactive Main Replacement Program, which the Company forecasts will be completed in FY 2035.

Division 1-59

Request:

Aside from COVID restrictions in 2020, to what does the Company attribute its declining rate of meter changeouts for the years 2017 through 2020?

Response:

The meter changeout rate declined by approximately 5% from 2017 through 2019. The meter changeout rate is governed principally by the customer response rate to changeout requests within the total meter population available to change.

Division 1-60

Request:

On page 65 of the System Integrity Report, the Company lists its RI meter inventory as approximately 274,000. In its recent 2020 DOT report to PHMSA, the Company lists its service inventory as approximately 194,000 – an 80,000 difference. Please explain the reason(s) for the difference in these two numbers.

Response:

The numbers are different because the relationship between services and meters is not a 1:1 ratio as one service may feed multiple meters/customers.