The Narragansett Electric Company d/b/a National Grid

2021 GAS COST RECOVERY

Testimony and Attachments of:

Gas Supply Panel, Ryan M. Scheib, and Gas Load Forecasting

REDACTED

September 1, 2021

Submitted to: Rhode Island Public Utilities Commission RIPUC Docket No. 5180

Submitted by:

nationalgrid



September 1, 2021

BY HAND DELIVERY AND ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk Rhode Island Public Utilities Commission 89 Jefferson Boulevard Warwick, RI 02888 508

RE: Docket 5180 – 2021 Gas Cost Recovery Filing

Dear Ms. Massaro:

I have attached an electronic version of National Grid's¹ annual Gas Cost Recovery ("GCR") filing, which the Company is submitting pursuant to the Gas Cost Recovery Clause in National Grid's gas tariff, R.I.P.U.C. NG-GAS No. 101, Section 2, Schedule A. The GCR filing reflects the customer class-specific factors necessary to provide National Grid sufficient revenue to recover projected gas costs for the period November 1, 2021 through October 31, 2022. The Company is submitting this filing provisionally to afford sufficient notice to the public of the GCR factors that had been calculated based upon assumptions that no longer hold true due to subsequent events explained below.

After the close of business² on August 31, 2021, the Federal Energy Regulatory Commission ("FERC") issued an Order Rejecting Tariff Records and Directing to Show Cause (the "FERC Order") in a pending matter concerning a substantial rate increase that had been proposed by Texas Eastern Transmission, LP ("TETCO"). TETCO's July 30, 2021 FERC filing was submitted just over a year after the April 1, 2020 effective date of the settlement resolving its previous rate case. On August 11, 2021, the Company filed a protest and request for evidentiary hearing in the FERC docket. The Company prepared its GCR testimony and associated exhibits and schedules anticipating that FERC would issue an order suspending the proposed rates for the maximum period of five months and that the new rates would take effect February 1, 2022, subject to refund based on the outcome of the case. As a result of the FERC Order, TETCO's proposed rate increase will not take effect as anticipated. It is unclear at this time whether TETCO will refile or seek rehearing of the FERCs Order.

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

² National Grid received notice of the FERCs Order at 7:45 PM on August 31, 2021 after this GCR filing had been finalized and sent for printing. Due to this late development, National Grid halted production of hard copies of this filing while it assessed how best to proceed. Through consultation with the Rhode Island Public Utilities Commission's ("PUC") counsel, National Grid determined that it would submit the GCR filing as initially prepared and revise or amend its filing once necessary adjustments are made to the GCR schedules necessary to reflect the FERC Order. Consequently, the Company will submit hard copies of this filing to the PUC on September 2, 2021.

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The Company is currently assessing the impact of the FERC Order on the GCR. At a minimum, the FERC Order will have a significant impact on the testimony and schedules concerning National Grid's gas supply planning for the coming year and the resulting increase in costs to be recovered. The FERC Order will result in a reduction of the proposed GCR factors and resulting projected customer bill impacts from the proposed GCR factors as set forth in this provisional filing. National Grid will, therefore, revise this filing with revised testimony and schedules once appropriate adjustments can be made to account for the impact of the FERC Order.

Subject to the anticipated changes explained above, this initial filing includes the prefiled testimony and attachments of the following witnesses: Elizabeth D. Arangio, Megan J. Borst and Samara A. Jaffe (Gas Supply Panel); Ryan M. Scheib; Theodore E. Poe, Jr. and Shira Horowitz; and John M. Protano. The Gas Supply Panel testimony provides support for the estimated gas costs and items relating to the Company's proposed 2021-22 GCR factors. In addition, the Gas Supply Panel testimony describes modifications that the Company has made to its portfolio for the 2021-22 GCR period.

Similarly, subject to anticipated changes explained above, in his testimony, Mr. Scheib calculates the GCR factors proposed for effect on November 1, 2021 for the following services: (1) firm sales service to customers in the Residential Non-Heating and Heating rate classes and firm sales customers in the Small, Medium, Large, and Extra-Large Commercial and Industrial ("C&I") rate classes; and (2) transportation services provided to Gas Marketers and the associated Gas Marketer Fixed Charges and factors.

In their testimony, Mr. Poe and Ms. Horowitz provide support for the underlying retail and wholesale forecasts of natural gas customer requirements that are used to estimate gas costs in the Company's Gas Cost Recovery submission.³

Finally, in his testimony, Mr. Protano describes the results of the Gas Procurement Incentive Plan ("GPIP") and the Natural Gas Portfolio Management Plan ("NGPMP") for the period April 1, 2020 through March 31, 2021. He also provides an exhibit that illustrates the impact of current financial hedges for the upcoming period of November 2021 through October 2022 in the GPIP.⁴

As described in Mr. Scheib's testimony, based on the GCR factors proposed for effect November 1, 2021through October 31, 2022, an average residential heating customer using 845 therms per year would have seen a total annual bill of \$1,478.21 based on the proposed GCR and DAC factors, which is an increase of \$109.85, or 8.0 percent, from last year's bills. This overall increase is comprised of an increase of \$64.30 as a result of the proposed GCR factors; an

³ National Grid does not anticipate that there will be any changes to the forecast contained in the testimony of Mr. Poe and Ms. Horowitz as a result of the FERC Order.

⁴ The Company is assessing the impact, if any, of the FERC Order on Mr. Protano's testimony and accompanying schedules.

Luly E. Massaro, Commission Clerk Docket 5180 – 2021 Gas Cost Recovery Filing September 1, 2021 Page 3 of 3

increase of \$42.25 as a result of the proposed DAC factors as revised in a supplemental filing on September 1, 2021 in Docket No. 5165; and an increase of \$3.30 in Gross Earnings Tax.

This filing also contains a Request for Protective Treatment of Confidential Information in accordance with Rule 810-RICR-00-00-1.3(H) of the Public Utilities Commission's (PUC) Rules of Practice and Procedure and R.I. Gen. Laws § 38-2-2(4)(B). National Grid seeks protection from public disclosure certain confidential gas-cost pricing information and commercial contract terms which are provided in Attachment GSP-1 to the pre-filed joint direct testimony of the Gas Supply Panel and Attachments RMS-1, RMS-2 and RMS-5 to the pre-filed direct testimony of Mr. Scheib.

Accordingly, National Grid has provided the PUC with two complete unredacted copies of the confidential materials in a sealed envelope marked "Contains Privileged and Confidential Materials – Do Not Release," and has included redacted copies of the materials for the public filing.

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

Enclosures

cc: Docket 5180 Service List

Leo Wold, Esq.
John Bell, Division

Al Mancini, Division (w/confidential Excel files via Egress Switch)

Jerome D. Mierzwa, Division Consultant (w/confidential Excel files via Egress Switch)

STATE OF RHODE ISLAND

RHODE ISLAND PUBLIC UTILITIES COMMISSION

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Annual Gas Cost Recovery Filing)	Docket No. 5180
2021)	
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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 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). 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 September 1, 2021, the Company submitted its 2021 Annual Gas Cost Recovery (GCR) filing in the above-captioned docket. The GCR filing includes confidential gas cost pricing information, contract terms and counter-party identities which are provided in (1) Attachment GSP-1 to the pre-filed joint direct testimony of the Elizabeth D. Arangio, Megan J. Borst and Samara A. Jaffe, referred to as the Gas Supply Panel; (2) Attachments RMS-1,

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

RMS-2, and RMS-5 to the pre-filed direct testimony of Ryan M. Scheib; and (3) Attachment JMP-4 to the pre-filed direct testimony of John M. Protano.² In accordance with Rule 1.3(H)(3), National Grid has provided a redacted public version of the GCR filing and an unredacted, confidential version.

Therefore, the Company requests that, pursuant to Rule 1.3(H), the PUC afford confidential treatment to the gas cost pricing information, contract terms and counter-party identities contained in the following: (1) Attachment GSP-1 to the pre-filed joint direct testimony of the Gas Supply Panel; and (2) Attachments RMS/MJP-1, RMS/MJP-2, and RMS/MJP-5 to the pre-filed joint direct testimony of Messrs. Scheib and Pini.

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) provides that the following types of records shall not be deemed public:

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² Attachment JMP-4 consists of the Company's Natural Gas Portfolio Management Plan report for the period from April 1, 2020 to March 31, 2021. This report was filed with the PUC on June 2, 2021 subject to a separate motion for protective treatment.

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

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*, 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.

III. BASIS FOR CONFIDENTIALITY

The gas cost pricing information, confidential contract terms and counter-party identities – which are provided in Attachment GSP-1 to the Gas Supply Panel testimony, and Attachments RMS-1, RMS-2, and RMS-5 to the pre-filed direct testimony of Mr. Scheib – are confidential and privileged information of the type that National Grid would not ordinarily make public. As such, the information should be protected from public disclosure. Public disclosure of such information could impair National Grid's ability to obtain advantageous pricing or other terms in the future, thereby causing substantial competitive harm. 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.

IV. CONCLUSION

For the foregoing reasons, National Grid respectfully requests that the PUC grant its Motion for Protective Treatment of Confidential Information.

Respectfully submitted,

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID

By its attorney,

Raquel J. Webster (Bar #9064)

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Dated: September 1, 2021

JOINT DIRECT TESTIMONY

OF

GAS SUPPLY PANEL

SEPTEMBER 1, 2021

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THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID RIPUC DOCKET NO. 5180 2021 GAS COST RECOVERY FILING

WITNESSES: GAS SUPPLY PANEL SEPTEMBER 1, 2021

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1	I.	<u>Introduction</u>
2	Q.	Please identify the members of the Gas Supply Panel.
3	A.	The Gas Supply Panel ("Panel") consists of Elizabeth D. Arangio, Megan J. Borst, and
4		Samara A. Jaffe.
5		
6		Elizabeth D. Arangio
7	Q.	Ms. Arangio, please state your name and business address.
8	A.	My name is Elizabeth Danehy Arangio. My business address is National Grid, 40 Sylvan
9		Road, Waltham, Massachusetts 02451.
10		
11	Q.	By whom are you employed and in what capacity?
12	A.	I am the Director of Gas Supply Planning for National Grid USA Service Company, Inc
13		("National Grid USA"). In this position, I am responsible for overseeing the resource
14		portfolio of The Narragansett Electric Company d/b/a National Grid (the "Company").
15		In addition, I am responsible for gas supply planning for the resource portfolios of
16		National Grid's New York and Massachusetts subsidiaries. I also manage National
17		Grid's gas Customer Choice programs. In this testimony, references to the "Company"
18		relate solely to The Narragansett Electric Company.
19		

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1	Q.	Please summarize your educational background and your professional experience.
2	A.	I graduated from the University of Massachusetts in 1991 with a Bachelor of Arts in
3		Business Administration. In 1995, I graduated from Bentley College with a Master of
4		Business Administration.
5		
6		From 1991 to 1994, I worked as a Gas Accounting Analyst in the Marketing Operations
7		Department at Algonquin Gas Transmission Company. In 1994, I joined Boston Gas
8		Company as a Gas Supply Analyst. In 1997, I was promoted to Group Leader
9		Transportation Services. In this role, I was responsible for managing all activities
10		associated with the Customer Choice program. In 1998, I was promoted to Director of
11		Gas Acquisition and Transportation Services. In this role, I was responsible for the
12		administration of the gas-resource portfolio and Customer Choice program in
13		Massachusetts and, as of 2000, the resource portfolio of EnergyNorth Natural Gas, Inc.,
14		in New Hampshire. In February 2004, I assumed the additional responsibility of gas
15		supply planning for the former KeySpan Corporation's New York and Long Island
16		resource portfolios. Following the acquisition of KeySpan Corporation by National Grid
17		plc, I assumed the added responsibility for the gas resource portfolios in upstate New
18		York and Rhode Island. In August 2018, I assumed the added responsibility for all of
19		National Grid's gas Customer Choice programs.

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1	Q.	Are you a member of any professional organizations?
2	A.	Yes. I am a member of the Northeast Gas Association and the New England-Canada
3		Business Council.
4		
5	Q.	Have you previously testified before the PUC or any other regulatory commissions?
6	A.	Yes. I have testified before the PUC on numerous occasions, most recently in support of
7		the Company's 2020 Gas Cost Recovery ("GCR") filing in Docket No. 5066. I have also
8		testified before the Massachusetts Department of Public Utilities, the New Hampshire
9		Public Utilities Commission, and the State of New York Department of Public Service.
10		
11		Megan J. Borst
12	Q.	Ms. Borst, please state your name and business address.
13	A.	My name is Megan J. Borst. My business address is National Grid, 100 East Old
14		Country Road, Hicksville, New York 11801.
15		
16	Q.	Please describe your business position and responsibilities.
17	A.	I am a Lead Planner in the Gas Supply Planning group for National Grid USA. In this
18		capacity, I am responsible for gas supply planning activities for The Narragansett Electric
19		Company's gas supply resource portfolio. I am also responsible for gas supply planning
20		activities for the gas resource portfolio of National Grid's upstate New York subsidiary.

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID RIPUC DOCKET NO. 5180 2021 GAS COST RECOVERY FILING

WITNESSES: GAS SUPPLY PANEL SEPTEMBER 1, 2021

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1	Q.	Please summarize your educational background and professional experience.
2	A.	I graduated from Adelphi University in 2007 with a Bachelor of Science in Mathematics
3		and a Minor in Business. In 2009, I graduated from Dowling College with a Master of
4		Business Administration. From 2006 to 2008, I worked as intern in KeySpan's Risk
5		Management Group and then as an intern on the Gas Scheduling team whereupon I was
6		hired as a full-time employee in June 2007. Following National Grid's acquisition of
7		KeySpan, I was a Scheduler with responsibilities for all of National Grid's portfolios. In
8		2011, I joined the Gas Supply Planning group as a Planner, and have since been
9		promoted to Lead Planner with responsibilities for the Narragansett Electric Company
10		and Niagara Mohawk portfolios. In this proceeding, I am testifying on behalf of The
11		Narragansett Electric Company.
12		
13	Q.	Have you previously testified in regulatory proceedings?
14	A.	No.
15		
16		Samara A. Jaffe
17	Q.	Ms. Jaffe, please state your name and business address.
18	A.	My name is Samara A. Jaffe. My business address is National Grid, 100 East Old
19		Country Road, Hicksville, NY 11801.
20		

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Q. Please state your business position and responsibilities.

2 A. I am the Director of Gas Contracting, Compliance and Hedging for National Grid USA. 3 In this position, I am responsible for the acquisition of long-term gas supply and pipeline 4 capacity; gas contract management; intervention in proceedings before the Federal 5 Energy Regulatory Commission ("FERC"); and compliance with FERC regulations in 6 connection with National Grid's gas trading activities for National Grid's gas distribution 7 companies in Massachusetts, Rhode Island, and New York and oversight of the 8 Company's Hedging program. In this proceeding, I am providing testimony on behalf of 9 The Narragansett Electric Company with respect to gas contracts activity.

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Q. Please summarize your educational background and your professional experience.

I graduated from the State University of New York at Buffalo in 2006 with a Bachelor of Arts degree in Chemistry. In 2012, I graduated from Touro Law Center with a Juris Doctor. In 2016, I graduated from Dowling Institute with a Master of Business Administration. I joined KeySpan in 2007 as a Natural Gas Scheduler with responsibility for scheduling natural gas on interstate pipelines utilized by the Company to meet the requirements of its wholesale firm gas customers. After graduating from Touro Law Center in 2012, I accepted the role of Program Manager for my group and was promoted to Director in April of 2021.

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1 Have you previously testified in regulatory proceedings? Q. 2 A. Yes. I most recently testified before the PUC in support of the Company's 2020 GCR 3 filing in Docket No. 5066. I have also testified numerous times before the Massachusetts 4 Department of Public Utilities on behalf of Boston Gas. 5 6 Q. What is the purpose of your joint testimony in this proceeding? 7 A. Our testimony provides support for the estimated gas costs, and items relating to the 8 Company's proposed 2021-22 GCR factors. In addition, our testimony discusses 9 modifications that the Company has made to its portfolio for the 2021-22 GCR period. 10 11 Q. Are you sponsoring attachments to your testimony? 12 A. Yes. We are sponsoring the following attachments that accompany our testimony: 13 Attachment GSP-1 Projected Gas Costs – **CONFIDENTIAL Information** 14 Attachment GSP-2 NYMEX Strip Comparison & Forward Curves 15 Attachment GSP-3 Rule Curves RFPs for PXP 16 Attachment GSP-4 17 Attachment GSP-5 RFP for AMA Dawn Waddington to Zone 6 18 Attachment GSP-6 RFP for AMA Dracut to Citygate 19 Attachment GSP-7 RFP for AMA Columbia Gas Transmission ("TCo") 20 Attachment GSP-8 RFP for AMA Millennium Pipeline to Ramapo 21 Attachment GSP-9 RFP for Everett Supply

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II. Projected Gas Costs

2	Q.	What commodity prices were used to develop the proposed GCR factors?
3	A.	The proposed GCR factors are based on the New York Mercantile Exchange
4		("NYMEX") forward curve as of the close of trading on August 3, 2021. The NYMEX
5		forward curve, which represents the current value of natural gas at the Henry Hub for
6		delivery in the future, is the baseline price assumption for the GCR. The Company then
7		adjusts this baseline with regional basis forward curves as of August 3, 2021 to estimate
8		prices at the locations at which it expects to purchase gas supplies. The GCR factors also
9		reflect underground storage and liquefied natural gas ("LNG") inventory costs as of
10		August 1, 2021 and the projected cost of purchasing gas through the remainder of the
11		underground and LNG injection season. Attachment GSP-1 page 1 of 17 provides a
12		summary of gas costs by major cost categories; pages 2 of 17 through 13 of 17 shows the
13		cost detail by supply source.
14		
15	Q.	How does the NYMEX forward curve referenced in the GCR year compare to last
16		year's forward curve?
17	A.	Attachment GSP-2 compares NYMEX pricing from August 6, 2020 utilized in last year's
18		GCR filing to NYMEX pricing from August 3, 2021 used in this current filing. On
19		average, the August 3, 2021 NYMEX strip is \$1.183, or 40.2 percent, higher compared to
20		the August 6, 2020 NYMEX strip during the peak season of November through March.

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7		2021-22 as compared to last year's volumes?
6	Q.	What normal heating season and normal year load is the Company planning for in
5		
4		higher compared to the August 6, 2020 NYMEX strip.
3		strip. Overall, the August 3, 2021 NYMEX strip is an average of \$0.858, or 30.8 percent,
2		is on average \$0.625, or 23.4 percent, higher compared to the August 6, 2020 NYMEX
1		During the off-peak season of April through October, the August 3, 2021 NYMEX strip

A. A comparison of the normal heating season and normal year load forecasts for 2020-21 and 2021-22 is provided in the table below.

2020/2021 and 2021/2022 Normal Forecast Comparison

	2020/21	2021/22		
Normal Heating Season (November - March)	Forecast	Forecast	<u>Delta</u>	Delta %
Total Normal Heating Season (Sales + Transportation)	25,505,086	26,011,254	506,167	2.0%
Normal Heating Season - Sales	20,908,961	21,409,531	500,570	2.4%
Normal Heating Season - Transportation	4,596,125	4,601,723	5,598	0.1%
	2020/21	2021/22		
Normal Year	Forecast	<u>Forecast</u>	<u>Delta</u>	Delta %
Total Normal Year (Sales + Transportation)	36,152,015	36,469,985	317,970	0.9%
Normal Year - Sales	28,669,989	29,229,975	559,987	2.0%
Normal Year - Transportation	7,482,026	7,240,009	(242,017)	-3.2%

The forecast filed in Docket No. 5066 against this year's forecast.

Volumes include only customers utilizing Company assets.

Volume are in dekatherms (Dth)

8

- 1 Q. What design day, design heating season and design year load is the Company
- 2 planning for in 2021-22 as compared to last year's volumes?
- 3 A. While the GCR factors are based on customer requirements assuming normal weather, a
- 4 comparison of the design day, design heating season and design year load forecasts for
- 5 2020-21 and 2021-22 is provided in the table below.

2020/2021 and 2021/2022 Design Forecast Comparison

	2020/21	2021/22		
<u>Design Day</u>	Forecast	Forecast	<u>Delta</u>	Delta %
Total Design Day (Sales + Transportation)	383,384	393,077	9,692	2.5%
Design Day - Sales	326,920	334,030	7,110	2.2%
Design Day - Transportation	56,464	59,046	2,582	4.6%
	2020/21	2021/22		
Design Heating Season (November - March)	<u>Forecast</u>	<u>Forecast</u>	<u>Delta</u>	Delta %
Total Design Heating Season (Sales + Transportation)	29,490,075	30,148,659	658,584	2.2%
Design Heating Season - Sales	24,373,987	24,949,968	575,981	2.4%
Design Heating Season - Transportation	5,116,088	5,198,691	82,603	1.6%
	2020/21	2021/22		
Design Year	Forecast	Forecast	Delta	Delta %
Total Design Year (Sales + Transportation)	40,914,912	41,406,253	491,341	1.2%
Design Year - Sales	32,767,167	33,417,434	650,268	2.0%
Design Year - Transportation	8,147,745	7,988,819	(158,926)	-2.0%
2 to 5 to 1	3,1 17,7 13	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(150,520)	 0/0

The forecast filed in Docket No. 5066 against this year's forecast.

Volumes include only customers utilizing Company assets.

Volume are in dekatherms (Dth)

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1 Did the Company perform a cold snap analysis for the 2021-22 winter season? Q. 2 A. Yes. As part of its annual portfolio planning process, the Company reviewed a cold snap 3 scenario and design day and design year scenarios for the upcoming winter season. The 4 cold snap analysis is set forth in the Company's Long-Range Resource and Requirements 5 Plan for the Forecast Period 2021/22 to 2025/26 dated June 30, 2021 (Docket No. 5043) 6 (the "LRP"). 7 8 Q. In addition to planning for design day, design year and cold snap requirements, is 9 the Company continuing to plan to meet forecast peak hour requirements? 10 A. Yes. The Company will continue planning for forecast peak hour requirements in 11 addition to design day, design year and cold snap requirements. 12 13 Q. How does the Company determine peak hour requirements? 14 Once the design day sendout requirement for all firm customers is established, the A. 15 Company converts this sendout to a peak hour based on a 5% peak-hour factor (i.e. the 16 peak hour requirement represents 1/20th of the peak day requirement). The Company 17 then applies the peak-hour requirement to its Synergi network analysis modeling software 18 by means of growth factors generated from the zonal (i.e., zip code) forecast. The

¹ This design day requirement reflects total firm load, including FT-1 capacity exempt design day load and the FT-1 capacity eligible storage and peaking design day load.

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WITNESSES: GAS SUPPLY PANEL SEPTEMBER 1, 2021 PAGE 11 OF 27

1		resulting peak-hour Synergi models are used to perform various analyses necessary for
2		distribution system operations (e.g., regulator pressure settings, LNG requirements) and
3		capital planning.
4		
5	Q.	How are projected gas costs calculated?
6	A.	Consistent with prior filings, projected gas costs are calculated using the SENDOUT®
7		model to perform a dispatch optimization of the portfolio of gas supply, pipeline
8		transportation, underground storage, and peaking supplies. SENDOUT® allows the
9		Company to determine the optimal dispatch of its existing resources subject to
10		contractual and operating constraints to minimize the cost of supply over the year. The
11		pricing of various pipeline services is based directly on the pipeline tariffs and the rates in
12		effect as of August 1, 2021. The pricing of gas supplies is based on the 8/3/21 NYMEX
13		forward curve and regional basis curves, also from 8/3/21 as described above.
14		
15	Q.	How did the Company categorize the projected gas cost components?
16	A.	For the purpose of this filing, gas costs are disaggregated into two components: (1) Fixed
17		Costs, and (2) Variable Costs. Fixed Costs include all fixed costs related to the purchase,
18		storage, or delivery of firm gas, including pipeline and supplier fixed reservation costs
19		and demand charges. The Company will incur Supply Fixed Cost Components in

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2021 GAS COST RECOVERY FILING WITNESSES: GAS SUPPLY PANEL

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1 consideration of a right, but not the obligation, to call on transportation and/or supply 2 needed to meet customers' supply requirements. 3 4 Variable Costs include all variable costs of firm gas, including, but not limited to, 5 commodity costs, taxes on commodity and other gas supply expenses incurred to 6 transport supplies, transportation fees, storage commodity costs, taxes on storage 7 commodity and other gas storage expense incurred to transport supplies, and inventory 8 commodity costs. 9 10 A summary of gas costs included in the GCR and disaggregated into these cost 11 components by month for the period November 2021 through October 2022 is shown in 12 Attachment GSP-1 page 1 of 17. 13 14 O. Please describe Attachment GSP-1, Pages 2 through 17. 15 A. Attachment GSP-1 includes the following information: 16 Pages 2 through 12: show the supporting detail for gas costs included in this filing 17 for the period November 2021 through October 2022; 18 Pages 2 through 4: show a summary of volumes and costs by supply path;

o Pages 5 through 6: show the detail pertaining to Commodity costs listed by

supply source;

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THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID RIPUC DOCKET NO. 5180 2021 GAS COST RECOVERY FILING

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1	o Pages 7 through 10: show the variable and fixed costs detail for transportation
2	and storage;
3	o Page 11: includes the detail supporting the supplier fixed costs;
4	o Page 12: shows the fixed costs attributable to hourly peaking needs;
5	• Page 13: includes a summary of the projected underground storage and LNG
6	inventories;
7	• Pages 14 through 17: show the optimized, forecasted sendout by supply source
8	under normal weather conditions from the SENDOUT® model and the detailed
9	makeup of supply by pipeline source, storage contract, and peaking
10	facility/contract;
11	o Pages 14 through 15: show the forecasted volumes at the receipt or purchase
12	point;
13	o Pages 16 through 17: show the forecasted volumes at the point of delivery
14	after all pipeline fuel is accounted for; and
15	
16	The pricing included in this filing reflects actual pricing and indicative pricing and terms
17	based on the Company's current contracts with suppliers. To comply with confidentiality
18	terms in the Company's agreements with suppliers, charges for the supply contracts have
19	been redacted in the public version of the filing.
20	

SEPTEMBER 1, 2021 PAGE 14 OF 27

1	Q.	Please describe the Company's process for calculating fixed costs associated with
2		peak hour requirements.
3	A.	The Company has identified the various contracts needed to support peak hour demand
4		that is in excess of peak day demand. While all contracts are required to meet total peak
5		hour demand, the fixed costs associated with the following assets have been specifically
6		allocated to the peak hour; (1) portable LNG; (2) a portion of the Company's
7		transportation contract on Tennessee with a receipt point of Everett, MA; (3) citygate
8		delivered arrangement on Algonquin; and (4) LNG trucking. The fixed costs of these
9		assets will be incorporated into the System Pressure Factor calculations and will be
10		charged to all customers through the DAC (as discussed further in the Direct Testimony
11		of Ryan Scheib).
12		
13	Q.	Please describe the Company's process for calculating variable costs associated with
14		peak hour requirements.
15	A.	As a result of discussions with the Division in 2020, the Company intends to include the
16		2021/22 incremental variable costs associated with the peak hour resources in the DAC
17		reconciliation if these costs are significant. As was the case for 2020/21, the Company
18		will track the volumes and variable costs of these resources when they are dispatched to
19		meet the hourly requirements of the Company's customers and will work with the
20		Division after the winter to determine whether they are significant enough to include in

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID RIPUC DOCKET NO. 5180 2021 GAS COST RECOVERY FILING

WITNESSES: GAS SUPPLY PANEL SEPTEMBER 1, 2021 PAGE 15 OF 27

1 the DAC reconciliation. The Company is not proposing to include any variable costs 2 associated with 2020/21 supplies in the 2021/22 DAC reconciliation as no supplies were 3 dispatched to specifically meet peak hour requirements during the 2020/21 winter season. 4 5 Q. How do the gas costs presented in the Company's Gas Cost Recovery filing compare 6 with those submitted to the Division in the Company's Long-Range Plan filed in 7 **Docket No. 5043?** 8 A. Total gas costs are \$21.6 million higher in this GCR filing compared with the costs 9 forecasted in the Company's LRP. The differences are summarized in the following

	Difference in \$ Millions
Cost Item	(GCR value – LRP value)
a. Fixed Costs	\$3.58
b. Fixed Cost Credits	\$2.14
c. Net Fixed Costs (a-b)	\$1.44
d. Variable Costs	\$20.17
e. NGPMP Credit	\$0.00
f. Total Gas Costs (c+d-e)	\$21.61

11

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table:

12 Q. Please summarize major drivers for the differences in costs between the 2021 LRP

13 (Docket No. 5043) and this 2021 GCR.

A. Total gas costs increased by \$21.61 million between the 2021 LRP and this 2021 GCR

filing.

16

SEPTEMBER 1, 2021 PAGE 16 OF 27

1		Fixed costs increased by \$1.44 million. This increase is driven primarily by an increase
2		in supplier demand charges and Texas Eastern's proposed rate increases, further
3		discussed below. This increase was offset by fixed cost credits of \$2.14 million that were
4		not included in the LRP. The Company now estimates the fixed costs credits and hourly
5		fixed cost credit to be \$1.5 million and \$6.7 million, respectively.
6		
7		Total variable costs increased by \$20.41 million from the 2021 LRP to the 2021 GCR
8		due primarily to an increase in gas commodity costs. This is largely the result of an
9		increase in forward prices; the average November 2021 through March 2022 NYMEX
10		forward curve increased by \$0.83 per dekatherm or 25% and by \$0.66 per dekatherm or
11		22% over the full 2021/22 gas year.
12		
13	Q.	Please describe the impact of any pending rate proceedings impacting the
14		Company's transportation and/or storage providers.
15	A.	On July 31, 2020, Columbia Gas Transmission, LLC ("TCo") filed a rate increase request
16		with the FERC. This is TCo's first rate increase request since 1995 and, since then, TCo
17		has made substantial capital investments in modernizing its pipeline system. TCo's
18		proposed rates, if approved, represent a 78% increase for transportation service rates and
19		an increase of 134% for storage service rates. The proposed rates took effect February 1,
20		2021, subject to refund pending the outcome of settlement negotiations between TCo and

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WITNESSES: GAS SUPPLY PANEL SEPTEMBER 1, 2021 PAGE 17 OF 27

1 intervening shippers, including the Company. A settlement in principle has been reached 2 in the docket; however, it has not been memorialized in the docket. Once such settlement 3 has been filed with the FERC and the rates are publicly known, the Company will make 4 necessary adjustments to the applicable rates for TCo services. 5 6 On July 30, 2021, Texas Eastern Transmission, LP ("TETCO") filed for a rate increase 7 with the FERC. TETCO's filing is submitted just over a year after the April 1, 2020 8 effective date of the settlement resolving its previous rate case in FERC Docket No. 9 RP19-343, which resulted in a significant increase in rates and translate to a 76.6 percent 10 increase for transportation service reservation rates under Rate Schedule FT-1 for M1-M3 11 service, a 75.2 percent increase for transportation service reservation rates under Rate 12 Schedule CDS for M1-M3 service and a 48.2 percent increase to the Rate Schedule SS-1 13 storage reservation rate. On August 11, 2021, the Company filed a protest and request for 14 evidentiary hearing in the docket as part of The Northeast Customer Group. The 15 Company anticipates that FERC will issue an order suspending the proposed rates for the 16 maximum period of five months and that the new rates will take effect February 1, 2022, 17 subject to a refund based on the outcome of the case. 18 19 On August 17, 2021 Eastern Gas Transmission and Storage ("EGTS") held an 20 informational session on the pipeline's plans for filing a Section 4 rate case with the

SEPTEMBER 1, 2021 PAGE 18 OF 27

1		FERC on September 30, 2021, and this will be the pipeline's first time doing so since
2		1997. Based on the information the pipeline provided to all customers at the
3		informational session, the Company anticipates that the proposed rate increase will reflect
4		the pipeline's operating cost changes, investments in infrastructure and increased risk
5		profile.
6		
7		In addition to the pending rate changes, the Company has updated the rates for storage
8		service on NGLNG to use the settlement rates that took effect in June 2021; these rates
9		reflect an increase of approximately \$1.5 million dollars per year as compared to those
10		included in last years' GCR.
11		
12	III.	Gas Supply Portfolio
13	Q.	Have there been any significant changes to the way the Company purchases gas?
14	A.	The Company's portfolio continues to be well positioned to take advantage of
15		opportunities presented by the development of the Marcellus basin utilizing its
16		economically-priced market area transportation on existing long and short-haul capacity.
17		On most days, the Company is able to purchase less expensive supplies at the TETCO
18		Market Area 2 (M2) and Market Area 3 (M3) points delivered to the Company's
19		citygates on the Algonquin pipeline, as well as the Tennessee pipeline, Zone 4 point,
20		using existing pipeline contracts previously used to purchase Gulf of Mexico supplies.

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1		The Company can take advantage of these less expensive supplies without incurring any
2		additional fixed costs while still maintaining optionality to reach back to the Gulf basin
3		should economics or reliability dictate it is prudent to do so. Additionally, the Portland
4		Natural Gas Transmission System ("PNGTS") expansion was fully phased in as of
5		November 2021, which increased the Company's position back to Dawn, Ontario to feed
6		a significant portion of its TGP capacity and mitigate its historical exposure at Dracut.
7		
8	Q.	Have there been any changes and/or additions to the Company's capacity portfolio
9		since last year that should be noted?
10	A.	Yes. Each of the changes to the Company's transportation capacity portfolio is further
11		described below. Where fixed and variable costs and credits of the below assets are
12		reasonably known, the Company has included them in this GCR filing; where fixed and
13		variable costs are not known, the Company has included estimates based on historical
14		information or indicative pricing from the market.
15		
16		<u>NGLNG</u>
17		The Company previously entered into a precedent agreement for a term of 20 years for
18		liquefaction services at NGLNG's currently-existing storage facilities located in
19		Providence, Rhode Island. On October 17, 2018, FERC issued the Order granting a
20		certificate of public convenience and necessity to National Grid LNG LLC in FERC

SEPTEMBER 1, 2021 PAGE 20 OF 27

Docket No. CP16-121-000 for the Fields Point Liquefaction Project. NGLNG filed its acceptance of the certificate of public convenience and necessity on October 29, 2018 and the Implementation Plan was filed on November 1, 2018. Based on the current timeline to construct and test the facilities, NGLNG expect to begin service of the liquefaction during October of 2022. Due to the potential mid-month in service date, for the purposes of the GCR, the Company has not assumed it will be responsible for fixed costs until November 1, 2022. Once in service, the Company will be able to utilize its existing Algonquin capacity to transport volumes to the NGLNG plant in Providence for liquefaction during the off-peak period. The LRP reflected an in-service date of September 1, 2021, as such, this has resulted in a fixed cost savings in the GCR of nearly \$660,000. Northeast Energy Center, LLC (Northeast Energy) The Company has entered into a Precedent Agreement for up to 1,780 Dth per day and 380,920 Dth per refill season for a term of fifteen years, commencing upon completion of the necessary facilities. The Northeast Energy project is located in central Massachusetts and was originally expected in-service date of April 1, 2020. However, as a result of a revised scope to the permitting process and the impact of COVID-19, the project continues to await receipt of the necessary authorization to commence construction. Based on the current timeline in which Northeast Energy anticipates

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THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID RIPUC DOCKET NO. 5180

2021 GAS COST RECOVERY FILING WITNESSES: GAS SUPPLY PANEL

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1	receipt of its necessary permits, the facility is now expected to be in service in time for
2	the 2023 refill season. The Northeast Energy Project will interconnect with the
3	Tennessee Gas Pipeline and allow for the Company to utilize its existing Tennessee
4	capacity to transport volumes from liquid supply basins to the proposed liquefaction
5	facility located in Zone 6. The LNG will be trucked from the facility to the Company's
6	LNG facilities in Rhode Island.
7	
8	As a result of the delays in the NGLNG and Northeast Energy liquefaction projects, the
9	Company has estimated the costs of LNG refill during the 2022 off-peak season based
10	on the costs of its current arrangements.
11	
12	PNGTS Capacity
13	The PNGTS capacity is now fully in service, allowing the Company to access up to
14	29,000 Dth/day from Dawn, Ontario by way of agreements with Enbridge, TransCanada
15	and PNGTS to deliver firm supplies into Dracut as part of the PXP Project.
16	
17	In order to supply this path, the Company issued RFPs soliciting proposals for AMAs to
18	manage both its Canadian and/or domestic transportation capacity. Through the RFP
19	process, the Company was willing to consider AMAs that only required assignment of
20	the Company's capacity on Enbridge and TransCanada to East Hereford and Asset

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Management Arrangements ("AMA") that included a release of the Company's capacity on the downstream Portland and Tennessee assets for deliveries into the Company's Tennessee citygate. Copies of each of the RFPs are found in Attachment GSP-4. Based on the results of the RFPs, the Company will maintain the Portland and Tennessee capacity and move forward with AMAs for supplies delivered into East Hereford that will be transported by the Company to its citygates using the Company's Portland and Tennessee contracts. Subject to satisfying the gas supply requirements associated with the AMA, the named asset manager has the right to utilize the assigned Canadian capacity for its own account. In exchange, the Company will receive an asset management fee, which is then fully credited to the customers. The Company is presently negotiating transaction confirmation(s) to memorialize these arrangements. As part of the agreement(s), the Company will reserve the right to withhold the necessary amount of capacity needed to satisfy its assignments to Marketers. **Dracut Capacity** For the 2021/22 heating season, the Company issued an RFP soliciting offers for an AMA to provide supply and manage its capacity from Dracut, MA to the Company's TGP city gate for a term of one year beginning November 1, 2021. The RFP contemplated a total MDQ of 15,000 Dth per day to be managed by the asset manager,

after releases to Marketers were accounted for. Based on the results of the RFPs, the

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THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID RIPUC DOCKET NO. 5180 2021 GAS COST RECOVERY FILING

WITNESSES: GAS SUPPLY PANEL SEPTEMBER 1, 2021

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Company will release the Tennessee capacity under an AMA and will have a call option at its city-gate. Subject to satisfying the gas supply requirements associated with the AMA, the named asset manager has the right to utilize the assigned capacity for its own account. In exchange, the Company will receive an asset management fee, which is then fully credited to the customers. The Company is presently negotiating a transaction confirmation to memorialize this arrangement. Please see Attachment GSP-6 for a copy of the RFP. **Incremental Winter Supplies** Beginning with the 2019/2020 heating season, the Company entered into an arrangement with Constellation LNG LLC ("Constellation") whereby the Company has the right, but not the obligation, to call on Constellation to deliver up to 14,100 Dth/day to the Company's citygates on Algonquin. These supplies are backed by firm capacity and are needed to meet forecasted design hour and design season requirements and remain available to the Company through the 2022/23 heating season. For the 20201/22 heating season, the Company issued an RFP for a supply deal for a term of four months beginning December 2021 through March 2022. The RFP requested a maximum daily quantity ("MDQ") of 5,000 Dth/day with a maximum seasonal quantity ("MSQ") of 600,000 Dth. These supplies will be delivered directly Everett, MA to fill the

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1 Company's Tennessee transportation that is not currently satisfied through a long-term 2 agreement. The Company is presently negotiating a transaction confirmation to 3 memorialize the trade. Please see Attachment GSP-9 for a copy of the RFP. 4 5 Incremental Portable LNG Storage and Vaporization Contracts 6 To support operations at Cumberland beginning with the 2018/2019 winter season, the 7 Company previously entered into an equipment rental and support services agreement 8 with Prometheus Energy Group, Inc.² (Stabilis Energy). The Company engaged in 9 discussions with Stabilis regarding an extension of the original agreement and was able 10 to negotiate an extension of the equipment and rental services agreement at Cumberland 11 through the 2021/22 heating season. 12 13 In addition to the portable operations at Cumberland, beginning with the 2019/20 14 heating season, the Company has a multi-year contract for LNG storage and 15 vaporization services at Old Mill Lane in Portsmouth with Stabilis Energy. The 16 agreement allows the Company to access equipment and personnel sufficient to vaporize 17 650 Dth per hour at the injection site and, with minimal notice to Stabilis, to deploy the

² Prometheus Energy Group, Inc. was acquired by Stablis Energy, LLC.

SEPTEMBER 1, 2021 PAGE 25 OF 27

1		contingency services. The rental and support services agreement with Stabilis Energy at
2		Old Mill Lane is available to the Company through the 2022/23 heating season.
3		
4		Incremental Winter Liquid Volumes (LNG)
5		To support the portable LNG storage operations at Cumberland and Old Mill Lane, the
6		Company will need to pursue a supplemental winter-only LNG purchase agreement. The
7		Company may also need to purchase additional winter only liquid should it be
8		determined that the Exeter and NGLNG/Providence LNG facilities will be utilized more
9		actively for balancing purposes during the 2021/22 winter season. Since the costs of
10		these supplies are not yet known, the Company has used an estimate based on historical
11		winter LNG refill deals in its GCR forecast.
12		
13	Q.	How will the Company supply the Dawn capacity path in Ontario, Canada to
14		Tennessee Zone 6 via Iroquois for the 2021-22 year?
15	A.	The Company issued an RFP for an Asset Management Arrangement for a term of one
16		year effective November 1, 2021. The RFP requested an MDQ of 1,000 Dth/day with a
17		monthly option for the Company to elect a baseload quantity and any remaining volumes
18		available as a daily call option during the months of November 2021 through April 2022.
19		These supplies will be delivered directly to the Company's TGP city gate in Lincoln, RI

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by the asset manager. Subject to satisfying the gas supply requirements associated with the AMA, the named asset manager has the right to utilize the assigned capacity for its

own account. In exchange, the Company will receive an asset management fee, which is

then credited to its customers. The Company is presently negotiating a transaction

confirmation to memorialize the trade. Please see Attachment GSP-5 for a copy of the

RFP.

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Q. Will the Company be entering into an AMA using its Columbia Gas Pipeline transportation for the 2021-22 year?

10 A. The Company issued an RFP for an AMA for a term of one year effective November 1, 11 2021. The RFP requested a MDQ of 10,000 Dth/day for volumes available as a daily call 12 option during the months of November 2021 through April 15, 2022 via the release of a 13 portion of the Company's capacity from Broad Run to the interconnect with Algonquin at 14 the Hanover, NJ interconnect. These supplies will be delivered directly to the 15 interconnection between Columbia and Algonquin at Hanover by the asset manager. 16 Subject to satisfying the gas supply requirements associated with the AMA, the named 17 asset manager has the right to utilize the assigned capacity for its own account. In 18 exchange, the Company will receive an asset management fee, which is then credited to 19 its customers. The Company is presently negotiating a transaction confirmation to 20 memorialize the trade. Please see Attachment GSP-7 for a copy of the RFP.

Q.	Will the Company be entering into an AMA using its Millennium Pipeline
	transportation for the 2021-22 year?
A.	The Company issued an RFP for an AMA for a term of one year effective November 1,
	2021. The RFP requested a MDQ of 5,000 Dth/day for volumes available as a daily call
	option during the months of November 2021 through April 2022 via the release of a
	portion of the Company's capacity from Corning-Empire PL to the interconnect with
	Algonquin at the Ramapo interconnect. As a result of ongoing restrictions on Texas
	Eastern and Algonquin that may impede operational flexibility, if the Company were to
	enter into an AMA resulting from this RFP, the Company determined it would not award
	this RFP. Please see Attachment GSP-8 for a copy of the RFP.
Q.	Does this conclude your testimony?
A.	Yes.
	A. Q.

Attachments of the Gas Supply Panel

Attachment GSP-1	Projected Gas Costs – CONFIDENTIAL Information
Attachment GSP-2	NYMEX Strip Comparison & Forward Curves
Attachment GSP-3	Rule Curves
Attachment GSP-4	RFPs for PXP
Attachment GSP-5	RFP for AMA Dawn Waddington to Zone 6 Lincoln
Attachment GSP-6	RFP for AMA Dracut to Citygate
Attachment GSP-7	RFP for AMA Columbia Gas Transmission ("TCo")
Attachment GSP-8	RFP for AMA Millennium Pipeline to Ramapo
Attachment GSP-9	RFP for Everett Supply

Attachment GSP-1

Summary of Projected Gas Costs

National Grid Rhode Island Gas Cost Recovery Cost of Gas (\$000)		Nov-21	۵)ec-21		Jan-22	R	Feb-22	Mar-22	7.	Apr-22	W _e	May-22	Jun-22	2	Jul-22	Au	Aug-22	Sep-22		Oct-22	Total	a
Normal Weather Scenario - Sales																							
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-																							
Withdrawal																							
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Total Storage and Liquefaction				_		_		_															12,296.6
TOTAL VARIABLE COSTS	φ.	9,832.1	\$ 1	15,740.1	s	20,722.6	\$ 17	17,971.5	\$ 14,2710	710 \$	6,484.1	\$	3,064.7	\$ 2,088.4	\$ 4.8	1,714.6	\$	1,715.4	\$ 1,874.5	4.5 \$	3,814.2	\$6	99,293 2
TOTAL FIXED AND VARIABLE COSTS	\$	15,707.3	\$ 2	23,852.1	\$	28,8305	\$ 26	26,627.7	\$ 22,927	27.2 \$	12,8833	, 6	9,463.9	\$ 8,48	,487.6 \$	8,113.8	\$	8,114 5	\$ 8,273.7	s	10,213.4	\$ 183	183,495.1
NGPMP Credit	s.	6.699	s.	6.699	s	6 699	s.	6.699	\$	\$ 6699	6 699	s,	6.699	\$	\$ 66	6.699	s.	6 699	\$ 669.	9.9	6.699	₩ •	8,039 2
TOTAL GAS COSTS																						\$ 175,455.884	55.884

1,418 357 172 315 505 398 398 2,850 2,912 1,712 7,474 3,541 4,517 29,230 29,230 22,694 1,571 226 400 209 294 27 458 255 740 21 36 472 252 759 215 32 1,111 -785 785 286 222 56 295 520 266 786 652 652 -51 536 144 730 225 222 1,051 635 Jun-22 28 258 105 215 415 888 -105 392 774 1,937 1,157 1,157 223 722 51 1,417 279 28 472 279 779 Apr-22 1,595 87 83 208 177 2,246 2,246 374 248 398 1,019 4,016 227 178 914 205 2,673 4,197 589 264 412 1,265 Feb-22 44 902 529 645 293 462 1,400 5,397 87 988 561 49 53 237 118 234 3,044 Normal Weather Scenario - Sales 415 251 416 1,081 Dec-21 4,374 4,374 222 28 998 538 2,907 356 194 25 574 2,852 2,852 64 421 411 Dawn / Niagara / Waddington Dominion / Transco Leidy Narragansett Electric Company TETCO CDS Long Haul TETCO SCT Long Haul AGT Storage Refill TGP Storage Refill Sendout Volumes (MDth) Volume & Cost Summary Dawn via PNGTS TCO Appalachia TGP ConneXion TGP Long Haul **Fotal Tennessee Fotal Algonquin Fotal Purchases** Liquefaction **Fotal Sendout** LNG Truck City Gate LNG Truck LNG Vapor Datacheck Delta otal Other **Tennessee** AGT M3 Storage Storage Ā

Volume & Cost Summary Cost of Gas (\$000)	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Tota	-
DEIMAND														
TETCO CDS Long Haul Transportation	\$ 1,000 \$	1,000 \$	1,000	1,456		\$ 1,456	5 1,456	\$ 1,456	\$ 1,456	\$ 1,456	1,456 \$	1,	\$ 16,104	_
TETCO SCT Long Haul Transportation		18 \$	18 \$	56	\$ 26	\$ 26	\$ 26	\$ 26	\$ 26	\$ 26 \$	26 \$, 26	\$ 287	
AIM Transportation		260 \$	260 \$	260	\$ 760	\$ 760	\$ 760	\$ 760	\$ 760	\$ 200 \$	3 760 \$	2092	\$ 9,123	~~
AGT M3 Transportation			127 \$	127	\$ 127	\$ 127	\$ 127	\$ 127	\$ 127	\$ 127 \$	3 127 \$	127		
TCO Appalachia Transportation		703 \$		703	\$ 703	\$ 703	\$ 703	\$ 703	\$ 703	\$ 703	\$ 703 \$	202	\$ 8,437	
TGP Long Haul Transportation			452 \$		\$ 452	\$ 452	\$ 452	\$ 452	\$ 452	\$ 452 \$	\$ 452 \$	452	\$ 5,419	_
TGP ConneXion Transportation	\$ 216 \$	216 \$	216 \$	216	\$ 216	\$ 216	\$ 216	\$ 216	\$ 216	\$ 216 \$	3 216 \$	216	\$ 2,592	•
Dawn via PNGTS Transportation	\$ 1,112 \$	1,112 \$	1,112 \$	1,112	\$ 1,112	\$ 1,112	\$ 1,112	\$ 1,112	\$ 1,112	\$ 1,112 \$	\$ 1,112 \$	1,112	\$ 13,345	
Dracut Transportation		85 \$	85 \$	82	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85 \$	\$ 85 \$	82	\$ 1,019	_
Dawn / Niagara / Waddington Transportation		32 \$	32 \$	32	\$ 32	\$ 32	\$ 32	\$ 32	\$ 32	\$ 32 \$	\$ 32 \$	32	\$ 387	
Dominion / Transco Leidy Transportation		17 \$	17 \$	17	\$ 17	\$ 17	\$ 17		\$ 17	\$ 17	\$ 17 \$	17	\$ 204	_
Manchester Lateral / Yankee Interconnect	(4	257 \$	253 \$	253	\$ 253	\$ 253	\$ 253	\$ 253	\$ 253	\$ 253	\$ 253 \$	253	m	_
Everett Transportation		105 \$				105	105	105	105			105	\$ 1255	
Storage Delivery		462 \$	462 \$	485		7 727	454	454	4 454			454	5 5 5 28	. ~
Storage Capacity		284 \$	284	345	345	345	345	345	\$ 345	345	345	345	3 954	
NGI NG		201	100	5 6		2010	293	207	200	5 6	7 7 7 7	5 6	2000	
100 Table 1	, 162 Ç	t 167	, TC2	167	7 721	727	727	7 7 7	7 231	2.71	ć 167	167	7 3,400	
בועס ביייי ביייי בייייי בייייי בייייי בייייי בייייי בייייי ביייייי	•	•	•											
Liqueraction	^ =	ر ا	'		·	· =	- - -	' 	۰ -	` -	^ =	' -	٠ <u>.</u>	
Portable LNG	<i>-</i> ∧-												1,256	•
Supplier Reservation	\$					_	_	_	_	_	_	_	\$ 10,865	
Total Domand	6.021	\$ 6960	0 962	10 411	10 711	¢ 6515	6 5 15	6 5 45	6 5 7 5	¢ פ בעב	2 בעב	6 5 7 5	\$ 00.200	
	2,02	2,00		10,111	10,111	5 1) (5 1	5 1			
Datacheck	\$ 170'9 \$	9,867	9,863 \$	10,411	5 10,411	1	5 6,545	5 6,545	5 6,545	, 6,545	\$ c5c,0 \$	Ó	\$ 92,389	_
Delta			<i>٠</i>				· s-	ب	ب	· ·		'	· •	
	10-VON	Dec-21	lan-22	Feh-72	Mar-22	Anr-22	May-22	Lin-22	1111-22	Δ11σ-22	Sen-22	Oct-22	Tota	-
			1	2	3	1	1 65:::	1	1	0 0 0)))	,		.
	•					,	,				!			
TETCO CDS Long Haul	\$ 188'5 \$		4,548 \$	3,967	\$ 4,139	5 153	5 1,0/1	999 5	5 2,000	5 1,980	1,947	2,495	\$ 31,116	
TETCO SCT Long Haul			127 \$	119	\$ 14	· ·	' S	· \$	ج	· ·		'	\$ 297	
AIM		842 \$	953 \$	856	\$ 827	\$ 206	\$ 572	\$ 229	\$ 576	\$ 561	\$ 490 \$	517	\$ 7,753	
AGT M3	\$ 243 \$		628 \$	309	\$ 750	\$ 4,531	\$ 1,891	\$ 1,103	· \$	- \$	3 14 \$	984	\$ 10,597	
TCO Appalachia	\$ 1,534 \$	3,814 \$	3,925 \$	3,528	\$ 3,332	\$ 258	\$ 135	2 2	\$ 132	\$ 131	\$ 62	53	\$ 16,928	
TGP Long Haul	1,329		2,614 \$		\$ 1,424	\$ 651	,	· \$	· \$	\$ 155	٠,	536	\$ 9,364	
TGP ConneXion			1,159 \$		\$ 921	\$ 541	\$ 780	\$ 297	\$ 632	\$ 808 \$	3 712 \$	736		
Dawn via PNGTS	\$ 66 \$		2,106 \$	1.907		\$ 12	. 45	. 5	۰ ح	. 45	. 40	,	\$ 5,984	_
Dracut	·			. '		. 40	\$ 463	\$ 291	. 40	. 5	190 \$,	\$ 944	
Dawn / Niagara / Waddington	\$ 12 \$	137 \$	203 \$	152	99 \$	5			. 45		. 10	,	\$ 664	
Dominion / Transco Leidv		0.0	134 \$	۰	-	158 \$	α	48	47	787	, v	41	8	4 1055
1000 Distract)·	H	,				_	_	-) 	-		
Storage Withdrawals	•	1 049 \$	2 368 \$	2 543	2 3 40 \$	1536 \$	197	- ,	- '	• ·	■ ¥ ■ , _ •	- - ;	\$ 10.034	
	7 6			5 6 6		, ,				ر ک ب			10,01	
LING Vapor	Λ CS Λ	ν 80 80	234 V	23.00	γ	68	A A	88	ج ع		88	A.	78 1 87	
בואס וומכא	•	•	-	_						- `				
City Gate	^ '	Λ	<i>γ</i> -		· ·	· ·	· ^	ب	· ^	· ·	<i>^</i>		· ^	
TOTAL COMMODITY													\$ 111,590	
Datacheck													\$ 111,590	_
Delta	\$ - \$	٠,	٠,		- \$	-	· \$	· \$	· \$	· •	٠,	'	· \$	

Total	203,979	1,942	6,776	3,578	12,297	\$ 191,682	99,293	365	\$3 397	
	\$	∽	\$	Ş	s	₩.	₩.			
Oct-22	12,166	1	1,042	641				31	\$2.428	\$3 320
	ş	↔	\$	❖				_		
Sep-22	10,268		1,059	628				30	\$2.387	\$3.301
	\$	∽	\$	Ş					_	
Aug-22	\$10,277		667 \$ 1,362 \$ 1,287	\$ 730				31	\$2.630	\$3.315
22	4		5 3	3				31	02	80
-Inf	\$10,25	· •	\$ 1,36	\$ 403				,	\$2.702	\$3.3(
Jun-22 Jul-22 Aug-22	\$ 15,883 \$ 25,607 \$ 30,585 \$ 28,382 \$ 25,632 \$ 13,481 \$ 11,720 \$ 9,723 \$10,254 \$10,277 \$ 10,268 \$ 12,166 \$ 203,979	1	299	297				30	\$2.698	\$3.273 \$3.308 \$3.315
	⊹	↔	\$	ş						
May-22	11,720	ı	1,205 \$	780				31	\$2.648	\$3.244
	\$	∽		ş						
Apr-22 May-22	13,481		156 \$	66				30	\$2 887	\$3 331
	ş	··	\$	Ş					_	_
Mar-22	25,632			-				31	\$3.554	\$3.930
	❖	↔	Ş	s	_					
Feb-22	28,382		'	-	_			28	\$3.767	\$4.17
~	Ş	·V	Ş	\$	_			_	_	
Jan-22	30,585	-	'	-	_			31	\$3 840	\$4.190 \$4.256 \$4.175 \$3.930 \$3.331 \$3.244
	⋄	·›	s	\$				1	6	_
Dec-21	25,607	-	'	•	_			31	\$3.599	\$4.190
	\$	∽	\$	Ş				0	00	
Nov-21	15,883	,	١,	-				30	\$3.448	\$4.089
	\$	∽	Ş	ş	_					

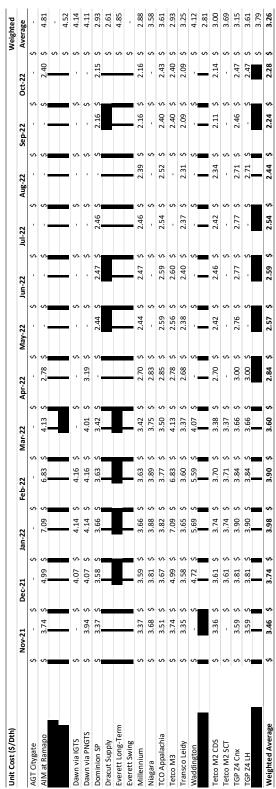
TOTAL GAS COST
Commodity to Sendout

LESS: Liquefaction LNG Truck AGT Storage Refill TGP Storage Refill Total Liquefaction & Storage

TOTAL DC+CC

807.5 **97,302.8** 10/1/2022 Grand Total 9/1/2022 8/1/2022 129.6 7/1/2022 6/1/2022 5/1/2022 Normal Year 3/1/2022 2/1/2022 1/1/2022 12/1/2021 13,023.6 11/1/2021 98.2 Commodity Cost (\$000) Dracut Supply Everett Long-Term Everett Swing Dawn via IGTS Dawn via PNGTS Dominion SP CO Appalachia etco M2 CDS ansco Leidy AGT Citygate etco M2 SCT **Srand Total** GP Z4 Cnx

National Grid Rhode Island Gas Commodity Costs



Grand Total 381.5 43.6 Oct-22 78.2 Sep-22 570.8 129.6 Aug-22 130.6 Jul-22 Jun-22 773.9 133.0 May-22 National Grid Rhode Island Gas Commodity Costs Normal Year 3.0 Apr-22 818.3 Mar-22 Feb-22 Jan-22 Dec-21 Nov-21 Commodity to Injections (\$000) Dracut Supply
Everett Long-Term
Everett Swing
Millennium Dawn via IGTS Dawn via PNGTS Dominion SP Niagara TCO Appalachia Tetco M2 CDS Tetco M2 SCT AGT Citygate ransco Leidy Grand Total GP Z4 Cnx etco M3 3P Z4 LH

35

National Grid Rhode Island Transportation Variable Costs Normal Year (\$000)

Transportation Costs																							
	11/:	11/1/2021 12/1/2021 1/1	12/1/	2021		/2022	2/1/2022		3/1/202	2 4	3/1/2022 4/1/2022		5/1/2022	6/1/2022 7/1/2022	2 7/	1/2022		8/1/2022	9/1/20	22 10	0/1/20	22 Gra	9/1/2022 10/1/2022 Grand Total
Dracut	⋄	0.4	ş	6.1	ک	13.7 \$	12.4	4.	6.7	\$ 7		⋄		- \$	s		ş	,	\$	-γ-	'	s	39.2
Everett	사		Vi	2.8	٠ S	7.6 \$	ω,	5.6 \$	0.1	1 \$		솨	-	10	Ş		ᄽ	۰,۱	ا' ا	Ş	'	❖	16.2
							T	Ī														↔	303.7
Manchester Lateral	↔	1	-γ-		÷	٠ -	'	\$·		❖		δ.	-	-	٠		ς.	,	٠,	÷		❖	
Niagara	٠	0.2	\$	2.2	ş	2.5 \$	1	1.6 \$	9.0	5 \$	2.4	❖	1	٠ \$	❖		Ŷ	,	٠,	Ş	'	❖	9.6
Storage Delivery	٠	40.1	\$	67.3	\$	69.2 \$	61.9	ę. Ş	63.2	5 \$	21.5	δ.	8.4	\$ 3.9	\$ 6	4.4	ş	5.9	٠,٧	6.3 \$	11.7	\$ 7.	363.8
Yankee Interconnect	ş	1	\$		ş	٠	'	₩	1	s	,	ş	1	10	٠	,	Ŷ	,	10	÷	'	❖	
AIM	٠	12.9	Ş	12.8	\$	13.5 \$	12.2	.2 \$	13.1	1 \$	4.1	❖	12.9 \$	\$ 12.4	٠ ج	12.8	Ş	12.8	\$ 12	12.4 \$	13.1	.1 \$	144.9
Transco	٠	2.8	\$	5.5	\$	11.7 \$		9.3 \$	8.2	\$ 5	0.3	❖	0.1 \$	\$ 0.1	\$ 1	0.1	÷	0.1	٠,	0.1 \$		6.1 \$	44.5
TCO (Pool)	٠	13.0	\$	25.9	\$	25.7 \$	23.4	4.	24.6	5 \$	8.4	ş	6.8	9.9 \$	\$		÷	,	٠,	0.2 \$	c	3.7 \$	138.3
TETCO SCT Long Haul	s	1	\$	3.9	\$	13.3 \$	19.0	.o \$	2.5	۲. ج		❖	-	· \$	٠		٠	,	٠,	÷		❖	38.7
AGT M3	❖	38.8	\$	50.0	\$	54.9 \$	48.0	0.	43.0	\$ 0	32.8	❖	9.0	\$ 3.0	\$	6.7	٠	5.7	\$	8.6 \$	20.1	.1 \$	320.6
TETCO CDS Long Haul	٠	96.5	\$	97.9	\$ 10	101.6 \$	111.8	% \$	125.7	\$ 2	4.3	ş	18.6	\$ 11.1	\$ 1	52.4	\$	55.0	\$ 63	63.9 \$	87.7	.7 \$	826.4
Dominion	❖	0.3	φ.	0.4	ب	\$ 6.0	0	9.0	0.3	\$ \$	•	❖	0.3	\$ 0.3	\$ ~	0.3	❖	,	٠,	0.3 \$	0	0.3 \$	3.8
Dawn via Waddington	❖	1	❖	0.4	ب	1.4 \$	П	1.3 \$	9.0	5 \$		❖	1	- \$	❖	,	❖	,	10	٠	'	❖	3.7
Dawn via PNGTS	❖	0.5	\$	1.2	\$	3.6 \$	æ	3.1 \$	1.7	\$ 2	0.1	❖	5.6	\$ 3.4	\$		❖	,	.7	2.4 \$	'	❖	21.7
TGP Long Haul	❖	18.2	۰ ج	41.5	\$	64.7 \$	59.0	.o ئ	37.4	4	16.2	↔	1	- \$	❖	,	↔	2.5	٠,	Ş		14.7 \$	254.2
TGP ConneXion	❖	1.7	\$	2.3	\$	2.6 \$	2	2.4 \$	2.2	\$ 2	1.5	❖	1.3	\$ 0.5	⊹	1.4	❖	1.7	\$	1.5 \$		2.0 \$	21.0
Portable LNG	솨	1	-¢-		\$	- ک	'	Ş		Ş	1	٠	-	10	Ş	-	Ş	,	10	Ş		❖	
Grand Total																						❖	2,550.5

National Grid Rhode Island Storage Variable Costs Normal Year (\$000)

Storage Costs																								
	11/:	1/2021	12/1	/2021	1/1/	2022	2/1/202	3	/1/2022	4/1	/2022	11/1/2021 12/1/2021 1/1/2022 2/1/2022 3/1/2022 4/1/2022 5/1/2022 6/1/2022 7/1/2022 8/1/2022 9/1/2022 10/1/2022 Grand Total	2.	/1/2022	7/1	/2022	8/1/	2022	9/1	/2022	10/1	/2022	Grand T	otal
Columbia FSS	s	0.1	ş	0.5	\$	1.1	\$ 0.8	₩.	0.5	s	0.0	\$ 0.8	\$ 8	0.0	ş	8.0	\$	0.8	ş	0.5	φ.	0.3	\$	6.2
Dominion GSS	φ.	0.4	ş	4.6	\$	8.4	\$ 3.9	\$	2.8	s	1.8	\$ 4.8	∞	4.5	ş	4.4	ş	4.2	φ.	3.8	❖	3.7	\$	43.7
Dominion GSSTE	φ.	3.6	ş	3.7	\$	3.7	\$ 3.3	⟨\$	3.7	ş	1.8	\$ 4.0	\$ 0		ş	5.8	\$	5.4	\$	2.0	ş	4.8	\$	44.7
Providence LNG	ş		\$		\$		- \$	\$		ş		- \$	ş		φ.		φ.		ş		❖		\$,
Tennessee FSMA	\$		ب	1.2	\$	1.5	\$ 15		2.0	\$,	\$ 1.5	5		\$	0.4	\$	1.5	\$	1.4	ş	1.5	\$	12.3
Tetco FSS1	φ.	9.0	ş	0.8	\$	8.0	\$ 0.7	\$		ş	0.0	\$ 0.4	4 \$	0.4	ş	0.4	\$	4.0	ş	0.4	ş	0.4	\$	5.5
Tetco SS1	φ.	21.4	ş	29.0	\$	27.8	\$ 27.8	δ.		ş	8.0	\$ 9.5	5 \$	8.9	ş	9.6	\$	9.6	ş	9.3	ş	9.6	\$ 1	163.3
Exeter LNG	φ.		ş		\$		- \$	Ş		s		- \$	❖		s		❖		ş		❖		\$	
Grand Total	❖	26.0 \$	ş	39.8 \$		39.6	\$ 38.1	s	9.0	ş	4.5	\$ 20.9	\$ 6	13.9	ş	21.3	ş	21.9	ş	20.4	ş	20.3	\$ 2	275.7

	11/1/	: 1202	12/1/2	021	11/1/2021 12/1/2021 1/1/2022 2/1/2022 3/1/2022 4/1/2022 5/1/2022 6/1/2022 7/1/2022 8/1/2022 9/1/2022 10/1/2022 Grand Total	7	/1/2022	3/1	/2022	4/1/	2022	5/1/	/2022	6/1/205	7	/1/2022	8	1/2022	9/1/	/2022	10/1	/2022 (Grand	Total
Columbia FSS	\$	10.1	\$	9.8	\$ 183.0	\$	142.3	\$	89.1 \$	\$	3.0	\$		- \$	\$		\$		\$		\$		\$	517.3
Dominion GSS	\$	33.0	\$ 71	1.3	63.0 \$ 711.3 \$ 731.8 \$ 600.3 \$	ş	600.3		428.8	ş		ş		- \$	Ş		ş		\$		ş		\$ 2,	2,535.3
Jominion GSSTE	\$ 3.	78.7	\$ 39	1.4	\$ 391.4	÷	353.6	δ.	391.4	\$ 1	189.4	ş		- ج	❖		s		ς.		÷		\$ 2,	0.960,
exeter LNG	\$	7.2	\$ 2	8.1	\$ 101.4	ş	105.2		293	❖	28.7 \$	ş	29.6	\$ 28.5	5 \$	29.5	ş	29.4	\$	28.4	❖	29.3	\$	494.6
Providence LNG	\$	57.7	\$ 5	9.7	\$ 433.0	ş	293.2	\$	61.1	\$	59.9	\$	61.8	\$ 59.7	7 \$	61.6	ş	61.5	\$	59.5	ς.	61.5	\$ 1,	,330.1
Tennessee FSMA	ş		- \$ 326.2	6.2	\$ 414.4	ş	428.5		572.6	ş		ş		٠ \$	\$-		ş		\$		ς.		\$ 1,	,741.8
Tetco FSS1	\$	5.9	25.9 \$ 33	33.6	\$ 32.3	ş	32.3	ς.		ş	,	ş		- \$	❖		ş		\$		ς.		\$	124.1
Fetco SS1	\$ 5.	28.3	528.3 \$ 716.2	6.2	\$ 688.6	ş	9.889	\$		ş		ş		- ج	Ş		ş		\$		ş		\$ 2,	,621.7
Grand Total	\$ 1,0	9.0	\$ 2,35	6.4	\$ 1,090.8 \$ 2,356.4 \$ 2,976.0 \$ 2,644.0 \$ 1,572.3 \$ 281.0 \$	S	2,644.0	\$ 1,	572.3	\$ 2	81.0		91.4	\$ 88.	3	88.3 \$ 91.0 \$	ş	\$ 6.06		\$ 6.78	÷	\$ 2.06	_	1,460.8

njection Value																										
	11/1	/2021	12/	1/2021	7	1/2022	2/1	/2022	3/1	/2022	4/1	/2022	5	1/2022	6/1	/2022	7	1/2022	8/1	1/2022	6	1/2022	10/1	./2022	Gra	11/1/2021 12/1/2021 1/1/2022 2/1/2022 3/1/2022 3/1/2022 5/1/2022 5/1/2022 6/1/2022 7/1/2022 8/1/2022 9/1/2022 10/1/2022 Grand Total
Columbia FSS	s		⋄		ş		s		s		ş	3.0	ş	134.5	s	6.7	ş	132.2	ş	131.1	s	- \$ 3.0 \$ 134.5 \$ 6.7 \$ 132.2 \$ 131.1 \$ 79.2 \$ 44.2 \$	s	44.2	ş	530.8
Dominion GSS	φ.		δ.		ş		φ.		ş		\$	199.8	ş	; 199.8 \$ 482.9 \$ 460.4 \$ 446.9 \$	s	460.4	ş	446.9	ş	412.4	ş	412.4 \$ 342.1 \$ 337.7 \$	ş	337.7	ş	2,682.2
Dominion GSSTE	ᠰ	٠,	Υ·	٠,	Υ	٠,	γ.	٠,	ş		Ş		Ş	374.9	Ş		Ş	546.7 \$ 500.1	Ş	500.1	Υ	\$ 412.5 \$		408.4	Ş	2,242.6
																									ş	527.6
																									ş	1,414.9
ennessee FSMA	φ.		❖		ş		↔		٠		↔		❖	468.9	ş		٠	113.4	Ŷ	461.5	↔	\$ - \$ 468.9 \$ - \$ 113.4 \$ 461.5 \$ 405.3 \$ 422.1	↔	422.1	٠	1,871.2
Tetco FSS1	φ.		ş		ş		ş		ş		ş	2.4	❖	\$ 23.0 \$	ş	22.6 \$	ş	23.0 \$		22.3 \$	ş	19.5 \$	١.	20.5	ş	133.4
etco SS1	\$		\$		ş		φ.		ş		ş	49.6	45-	500.9	s	474.0	ş	502.7	ş	488.7	ş	500.9 \$ 474.0 \$ 502.7 \$ 488.7 \$ 428.1 \$ 449.9	ş	449.9	ş	2,893.9
Grand Total	s	29.2	ş	١.	တ		ş	١.	ş	950.4	ş	451.6	S	2,110.2	\$ 1.	9.680	\$ 1	.994.5	\$ 2.	016.2	\$ 1	,848.6	\$ 1,	806.2	ş	\$ 950.4 \$ 451.6 \$ 2,110.2 \$ 1,089.6 \$ 1,994.5 \$ 2,016.2 \$ 1,848.6 \$ 1,806.2 \$ 12,296.6

National Grid Rhode Island Transportation Fixed Costs Normal Year (\$000)

Transportation Costs																						
	11/1/	/2021	11/1/2021 12/1/2021 1/1/	2021	1/1/2022		2/1/2022	3/1/2022		4/1/2022	5/1/2022	122	6/1/2022		7/1/2022		8/1/2022	9/1/2022	10/	1/2022 G	9/1/2022 10/1/2022 Grand Total	
Dracut	ᡐ	83.6 \$		\$ 0.58	85.0	\$	\$ 0.58	85.0	\$ 0	85.0 \$	\$ 85.0	.0 \$	85.0	ş	85.0	s	\$ 0.58	85.0	φ.	\$ 0 58		1,018.9
Everett	\$ 1	104.5	\$ 1(104.5 \$	104.5	٠	104.5 \$	104.5	5 \$	104.5	\$ 104.5	5.	104.5	ş	104.5	\$	104.5 \$	104.5	ş	1045\$		1,254.5
LNG	ᡐ	,	❖	٠ \$		٠	٠	,	s	,	10	-\$-		ş		ş	٠		ş	\$,.	
Manchester Lateral	\$ 2	209.6	δ.	209.6 \$	209.6	٠	\$ 9.602	309.6	\$ 9	209.6	\$ 209.6	9.	209.6	ş	209.6	\$	\$ 9.602	209.6	ş	209.6 \$,.	2,515 5
Niagara	ᡐ	6.7	↔	6.7 \$	6.7	٠	6.7 \$	5 6.7	7 \$	6.7 \$	9	6.7 \$	6.7	٠Ş	6.7	-ζ-	6.7 \$	6.7	٠Ş	6.7 \$		9.08
Storage Delivery	۶ł 4	462 0	\$ 4	462.0 \$	462.0	δ.	485.3 \$	485.3	3 \$	454.5	\$ 454.5	5.	454.5	Ş	454.5	Ş	454.5 \$	454.5	ς,	454.5 \$		5,537.7
Yankee Interconnect																				ν}	40	523.5
AIM	\$ 7	760 2	÷	760.2 \$	760.2	❖	7602 \$	760.2	2 \$	760.2	\$ 760.2	.2 \$	760.2	ş	760.2	\$	760.2 \$	760.2	❖	760.2 \$		9,122.8
Transco	φ.	9.4 \$		9.4 \$	9.4	↔	9.4 \$	9.4	4 \$	9.4	\$	9.4 \$	9.4	٠	9.4	ş	9.4 \$	9.4	s	9.4 \$		113.1
TCO (Pool)	\$ 7	703.1	\$ 70	703.1 \$	703.1	δ.	703.1 \$	703.1	1 \$	703.1 \$	\$ 703.1	.1 \$	703.1	s	703.1	\$	703.1 \$	703.1	ş	703.1 \$		8,436.7
TETCO SCT Long Haul	φ.	179	φ.	17.9 \$	17.9	δ.	26.0 \$	5 26.0	\$ 0	26.0 \$	\$ 26	26.0 \$	26.0	٠	26.0	ş	26.0 \$	26.0	↔	260 \$		287.4
AGT M3	\$ 1	\$ 1268 \$		126.8 \$	126.8	δ.	126.8 \$	126.8	\$ 8	126.8 \$	\$ 126.8	8.	126.8	٠	126.8	\$	126.8 \$	126.8	↔	126.8 \$		1,521.5
TETCO CDS Long Haul	\$ 1,0	00.1	\$ 1,00	00.1 \$	\$ 1,000.1 \$ 1,000.1 \$ 1,000.1	\$ 1	1,455.9 \$	1,455.9	\$ 6	1,455.9 \$	\$ 1,455.9 \$	ę. Ş	1,455.9	٠	1,455.9	\$ 1,4	1,455.9 \$	1,455.9	٠	1,455.9 \$		16,103.6
Dominion	φ.	7.1 \$		7.1 \$	7.1 \$	❖	7.7 \$		7.7 \$	7.7	\$ 7	7.7 \$	7.7	↔	7.7	ş	7.7 \$	7.7	❖	7.7 \$		90.7
Dawn via Waddington	❖	25.5	\$	25.5 \$	25.5	❖	25 5 \$, 25.5	5	25.5 \$	\$ 25.5	.5 \$, 25.5	❖	25.5	\$	25.5 \$	25.5	↔	25 5 \$		306.1
Dawn via PNGTS	\$ 1,1	12.1	\$ 1,112.1 \$ 1,112.1 \$	12.1 \$	1,112.1	\$ 1	1,112.1 \$	1,112.1	1 \$	1,112.1 \$	\$ 1,112.1	.1 \$	1,112.1	٠	1,112.1	\$ 1,1	1,112.1 \$	1,112.1	\$ 1	1,112.1 \$		13,345.1
TGP Long Haul	\$ 4	\$ 451.6 \$		451.6 \$	451.6	ş	451.6 \$	451.6	\$ 9	451.6 \$	\$ 451.6	.6 \$	451.6	ş	451.6	\$	451.6 \$	451.6	❖	451.6 \$		5,418.6
TGP ConneXion	\$ 2	2160	٠	216.0 \$	216.0	ş	216.0 \$	216.0	\$ 0	216.0	\$ 216.0	چ	216.0	٠	216.0	\$	216.0 \$	216.0	٠	216.0 \$		2,591.7
Portable LNG																				ν}	40	1,256.4
Grand Total																				٠ ا		69,524.7

National Grid Rhode Island Storage Fixed Costs Normal Year (\$000)

Storage Costs

	11	/1/2021	12	/1/2021	1	11/1/2021 12/1/2021 1/1/2022 2/1/2022 3/1/2022 4/1/2022 5/1/2022 6/1/2022 7/1/2022 8/1/2022 9/1/2022 10/1/2022 Grand Total	2/1	/2022	3/1/	,2022	4/1	/2022	5/1	/2022	6/1/	2022	7/1/	2022	8/1/	2022	9/1,	/2022	10/1	/2022	Gran	d Total
Columbia FSS	\$	23.2	\$	23.2	٠	23.2	\$	23.2	-{Λ	23.2	\$	23.2	\$	23.2	s	23.2	\$	23.2 \$	10	23.2	\$	23.2	\$	23.2	ς.	278.4
Dominion GSS	❖	36.4	❖	36.4	❖	36.4	ş	36.4	τΛ.	36.4	\$	36.4	\$	36.4	S	36.4	\$	36.4 \$	10	36.4	\$	36.4	ş	36.4	ş	436.9
Dominion GSSTE	❖	46.8	❖	46.8	❖	46.8	ئ	46.8	ζ.	46.8	\$	46.8	\$	46.8	٠ ٠	46.8	\$	46.8 \$	10	46.8	\$	46.8	\$	46.8	ş	561.5
Exeter LNG	❖		\$		❖		ş	1	ς.		\$		\$		ئ		\$	٠	τΛ.		\$		\$		ş	
Providence LNG	❖	290.5	ş	290.5	ς٠	290.5	Ş	290.5	\$ 2	90.5	\$	290.5	\$	290.5	\$ 2	90.5	\$ 2	90.5 \$	\$ 2	90.5	\$	290.5	\$	290.5	ş	3,486.2
Tennessee FSMA	❖	42.3	❖	42.3	❖	42.3	ş	42.3	τΛ.	42.3	\$	42.3	\$	42.3	Ŷ	42.3	Ŷ	42.3 \$	10	42.3	\$	42.3	ş	42.3	ş	507.8
Tetco FSS1	❖	3.5	❖	3.5	❖	3.5	ئ	4.7	٠,	4.7	\$	4.7	\$	4.7	ب	4.7	\$	4.7 \$	τΛ.	4.7	\$	4.7	\$	4.7	ş	53.0
Tetco SS1	❖	132.1	\$	132.0	❖	132.0	\$	191.2	\$ 1	91.2	\$	191.2	\$	191.2	\$ 1.	91.2	\$ 1	91.2 \$	\$ 1	91.2	\$ 1	191.2	ۍ '`	191.2	φ.	2,116.7
Grand Total	÷	574.8	❖	574.7	\$	574.7	ş	535.1	\$	35.1	ş	635.1	Ŷ	635.1	\$	35.1	\$	35.1 \$	\$	35.1	\$	35.1	\$	535.1	\$	7,440.5
			ĺ																							Į

National Grid Rhode Island Supply Fixed Costs Normal Year (\$000)

Supply Costs																
		11/1/2021	ı	12/1/2021	1/1/2022	2/1/2022	3/1/2022	4/1/2022	5/1/2022	2 6/1/2022	7/1/2022	8/1/2022	9/1	/2022 10/1/	2022 G	/2022 Grand Total
Everett Supply Deal															\$	6,822 5
Ramapo	↔		÷	٠.	٠,		ج	ج	ب	- ↔	٠ ۍ	٠	❖	↔	,	
Dawn East Hereford	❖		ş	٠ >	٠,		٠ ٠	٠ ٠	٠ ۍ	· \$	٠ ٠	٠,	\$	⋄	,	٠
Dawn Waddington	↔		÷	· ·	٠,		٠ ۍ	٠ ۍ	٠ ۍ	- ۍ	٠ ٠	٠,		↔	,	٠
Dominion South Point	₩.		ş	٠	٠	•	, \$	٠ ٠	' \$, \$, \$	· \$	\$	❖	,	
Millenium East	₩		ş		٠	•	٠ ٠	٠ ٠	' \$	· \$, \$, \$	\$	❖	,	
Niagara	₩.		ş	\$		•	٠ ٠	٠	٠ ٠	٠,	٠ ډ	, \$	\$	❖	,	,
TCO Appalachia	↔		÷	٠	٠,		٠ ٠	٠	٠ ۍ	- ج	٠ ٠	٠		❖	,	,
TCO M3	\$		❖	٠ >	٠,		٠ ٠	٠ ٠	٠ ٠	- ج	, \$, \$		❖	,	
Tetco M3	÷		ş		٠	•	٠ ٠	٠ ٠	' \$	· \$, \$, \$	\$	❖	,	
Transco Leidy	ş		ş	\$·	,		٠,	٠	٠ ٠	· \$	٠ ٠	٠,	\$	٠Ş	,	
Waddington	↔		÷	٠	٠,		٠ ٠	٠	٠ ۍ	- ج	٠ ٠	, \$		❖	,	,
Dracut Supply Deal	₩	٠,	ൾ	-	\$		٠ \$	٠,	ارہ 1 ا	' i	' ' ' '	٠, ۱,	٠, ۱,	₩	,	
Everett Supply Deal2															0,	1,250 0
TGP Citygate	₩.		ş	٠,۱	٠,	'1	۱ ، د کا	ار. ا	٠, م	٠ _١ ٠	٠, ٠,	٠, ١,	ار ا	-γ-	' '	
Summer Liquid Refill	v														0,	4.6
Tetco M2 CDS	↔		❖	٠	٠,		٠ ٠	٠	٠ ٠	٠	, \$, \$		❖	,	
Tetco M2 SCT	❖		ş	· ·	٠,		٠ ٠	٠ ٠	٠ ۍ	· \$	٠ ٠	٠,	\$	⋄	,	٠
TGP Z4 CnX	s		÷	٠	٠,		٠,	٠ ٠	٠ ۍ	- ج	٠ ٠	, \$		❖	,	,
TGP Z4 LH	νı		Ş	·₁	. ı	' :	٠. ٠.	٠ ١	٠, د	' I ∀H	٠. د	٠. د	٠, د	νı	,	٠
Summer Trucking															0,	\$ 98.7
AGT Citygate															0,	\$ 2,7923
Winter Trucking																3,668.1
Proposed Summer Liquid															0,	787.6
Grand Total															, o,	15,423.7

\$ 209 \$ 1,629.5 \$ 1,629.5 \$ 1,629.5 \$ 1,629.5 \$ 209 \$ 20.9 \$ 20.9 \$ 20.9 \$ 20.9 \$ 6,685.2 Total Oct-22 Sep-22 Aug-22 Jul-22 Jun-22 May-22 Apr-22 National Grid Rhode Island Hourly Peaking Fixed Costs Normal Year (\$000) Mar-22 Feb-22 Jan-22 Dec-21 Nov-21 **Total Hourly Peaking Fixed Costs** Transportation Fixed Costs Portable LNG **Hourly Peaking Fixed Costs** Winter Trucking Everett Supply Deal2 **Supplier Fixed Costs** Everett

National Grid Rhode Island Storage Inventory Normal Year (\$000; MDth)

Storage Inventory																									
			11/1/2021 12/1	12	/1/2021	1/	1/1/2022		2/1/2022		3/1/2022		4/1/2022	5/1/2022	202	6/1/2022		7/1/2022	2	8/1/2022	022	6	9/1/2022	10/	10/1/2022
ING	Beg Inv Value	❖	3,3905 \$ 3,	\$	3,334.9 \$		3,247.1	χ.	2,712.7	\$	2,3143 \$	٠,	3,174.4 \$		3,282.6 \$	3,316.3	ş	3,354.0 \$	\$ C		3,492.6	\$	3,401.7	3	3,475.7
ING	Beg Inv Volume		753 0		738.8		719.4		601.0		512.7		6743	59	698.7	707.3		716.5	2		747 8		728.3		745.3
LNG	End Inv Value	↔	3,3349 \$	ş	3,247.1 \$		2,712.7	Ş	2,314.3	ş	3,174.4	ş	3,282.6 \$		3,316.3 \$	3,354.0 \$	₩.	3,492.6	5	3,40	3,401.7	٠Ş.	3,475.7		3,508.3
LNG	End Inv Volume		7388		719.4		601.0		512.7		6743		698.7	70	707.3	716.5		747.8	00	728 3	83		745.3		753.0
AGT Storage	Beg Inv Value	⋄	7,245.1 \$	ş	6,302.1 \$	7	4,874.3	ş	3,270.2	s	1,7879	ş	1,135.1 \$		1,098.2 \$	2,303.7	\$	2,970.6	5 \$	4,3323	23	\$	5,618.9	44	5,677.5
AGT Storage	Beg Inv Volume		3,191.7		2,769.4	, ,	2,139.5		1,438.7		789.1		506.9		476.3	948.2		1,206.	~	1,742.4	2.4		2,262.2	7	2,733.8
AGT Storage	End Inv Value	↔	6,302.1 \$		4,874.3 \$		3,270.2	ς.	1,787.9	٠	1,135.1	ş	1,098 2 \$	2,30	2,303.7 \$	2,970.6	\$	4,332.3	3 \$	5,61	5,6189	ş	6,677.5		7,719.0
AGT Storage	End Inv Volume		2,769.4		2,1395		1,438.7		789.1		206 9		4763	94	948.2	1,206.3		1,742.	4	2,26.	2 2		2,733.8	m	3,191.7
TGP Storage	Beg Inv Value	ş	3,333 8	Ş	3,270.7 \$		2,429.9	Ş	1,592.5	s	829 2	ş	\$	U)	99.3 \$	879.0	₩.	1,175.	\$ L	1,5788	8 8	ş	2,308.4	2	2,936.5
TGP Storage	Beg Inv Volume		1,353.6		1,328.6		985.3		642.4		333 2			(1)	32.6	312.0		417.4	4	561.1	1.1		87928	-	1,078.8
TGP Storage	End Inv Value	↔	3,270.7 \$	\$	2,4299 \$		1,592.5	ş	829.2	s		ş	\$ 66	87	\$ 0.628	1,175.7	\$	1,578.8	8	2,308.4	8.4	\$	2,936.5		3,577.8
TGP Storage	End Inv Volume		1,328.6		985.3		642.4		333.2				32.6	31	2.0	417.4		561.1		82	876 8		1,078.8	-	1,334.2

Gas Cost Recovery													
Receipt Point Volumes (MDth)	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
To City Gate													
GAS PURCHASES													
AGT Citygate	•												
AIM at Ramapo	∞	2	14	14	∞	17				•	•	4	89
Dawn via IGTS	,	S	17	16			•		٠	•		•	39
Dawn via PNGTS	25	211	504	455	245	4			•	•	•	•	1,444
Dominion SP	16	17	17	15	17		17	16	17		16	17	166
Dracut Supply	٠	,			,		174	107		٠	26	٠	357
Everett Long-Term													206
Everett Swing	, '	١,			ı '	, '	. '	, '	. '	'	'	, '	,
o.				٠			٠		•	٠	٠	٠	,
	222	229	229	207	229	57	229	222	229	229	222	229	2,532
	3	30	33	21	6	32			٠	•	٠	٠	127
Proposed Liquid				٠					٠	٠	٠	٠	1
TCO Appalachia	431	1,025	1,014	926	938	88						4	4,425
Tetco M2 SCT		6	30	27	4				٠	٠	٠	٠	69
Tetco M2 CDS	1,118	1,145	1,179	1,033	1,179				302	333	431	929	7,376
	64	. 29	88	45	180	1,610	729	419	٠	٠	9	404	3,574
TGP Z4 Cnx	196	254	296	268	251	147			83	98	34	142	1,756
	360	420	653	296	378	210			٠	٠	٠	109	2,726
Transco Leidy	10	19	37	30	27	æ	2	2	2	2	2	20	158
Waddington	•	0	0	0	8	•		•	•	٠	•	•	∞
TOTAL PURCHASES TO CITY GATE	2,455	3,482	4,350	3,826	3,476	2,168	1,151	767	633	029	787	1,586	25,332
STORAGE WITHDRAWALS													
Columbia FSS	4	36	73	26	35	1			٠	٠	٠	٠	205
Dominion GSS	25	291	301	247	176				•			•	1,039
Dominion GSSTE	169	175	175	158	175	85		•	,	•	•	•	936
	9	9	22	23	9	9	9	9	9	9	9	9	106
Providence LNG	13	13	96	65	13	13	13	13	13	13	13	13	292
Tennessee FSMA		135	171	174	229				٠	•		٠	709
	238	322	310	310					•			٠	1,180
	11	15	14	14	1	1		1			•	1	54
TOTAL WITHDRAWALS TO CITY GATE	466	993	1,162	1,047	635	104	19	19	19	19	19	19	4,522
GRAND TOTAL TO CITY GATE	2,921	4,475	5,512	4,873	4,111	2,272	1,171	786	652	670	806	1,605	29,854
AL TO CITY GATE	2,921	4,475	5,512	4,873	4,111	2,272		1,171		786	. 786 652	. 786 652 670	. 786 652 670 806

The Narragansett Electric Company

The Narragansett Electric Company Gas Cost Recovery													
Receipt Point Volumes (MDth)	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
To Storage Injection													
GAS PURCHASES													
AGT Citygate	•								•	1	•	٠	,
AIM at Ramapo	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	
Dawn via IGTS	•	•	•	•	,		,		•	1	•	•	,
Dawn via PNGTS	•	•	•	•	,	•	,	•	,	1	•	•	
Dominion SP	٠	٠	٠	٠	•	٠	•	٠	•	•	٠	٠	
Dracut Supply	٠	٠			•	•	•	٠	٠	٠	٠	٠	•
Everett Long-Term								٠	•	•	•	٠	
Everett Swing	, 1	' 1	' 1	' 1		٠,	٠,	٠,	1	' '	' 1	٠,	,
Liquid													186
Millennium									•	•	•	٠	
Niagara	•	•	•	•	•		•	٠	•	٠	•	٠	
Proposed Liquid	•	•	•	•	,	43	28	28	51	1	36	27	213
TCO Appalachia	•	٠	٠	٠		1	51	3	51	51	33	18	208
Tetco M2 SCT	•	٠	٠	٠					•	1	٠	٠	,
Tetco M2 CDS	٠	٠	٠	٠	•	55	428	260	493	478	448	448	2,610
Tetco M3	•	٠	٠	٠	•	•	•	•	•	•	•	•	
TGP Z4 Cnx													` .
TGP 24 LH											26		
Transco Leidy													
Waddington						,		,					
TOTAL PURCHAS ENJEG TIONS	2		1	1	181	132	788	396	739	962	692	750	4,557
STORAGE WITHDRAWALS													
Columbia FSS	1	,	ı	1		,		1		,	1	1	
Dominion GSS	,	٠	,	,	,	,	,	٠	٠	,	,	٠	,
Dominion GSCTE	,	٠	,	,	,		,	٠	٠	•	,	٠	
Exeter LNG										•		٠	,
Providence LNG	•								•	1	•	٠	,
Tennessee FSMA	٠	٠							٠	•	٠	٠	,
Tetco SS1						٠		•	٠	٠	٠	٠	,
Tetco FSS1	•	•	•	•	•	•	•	•	•	•	•	•	
TOTAL WITHDRAWALS TO STORAGE INJECTION			•		•	•	•	1	1	•	•	•	
GRAND TOTAL TO CITY GATE	Ŋ	•	•	•	181	132	788	396	739	962	692	750	4,557

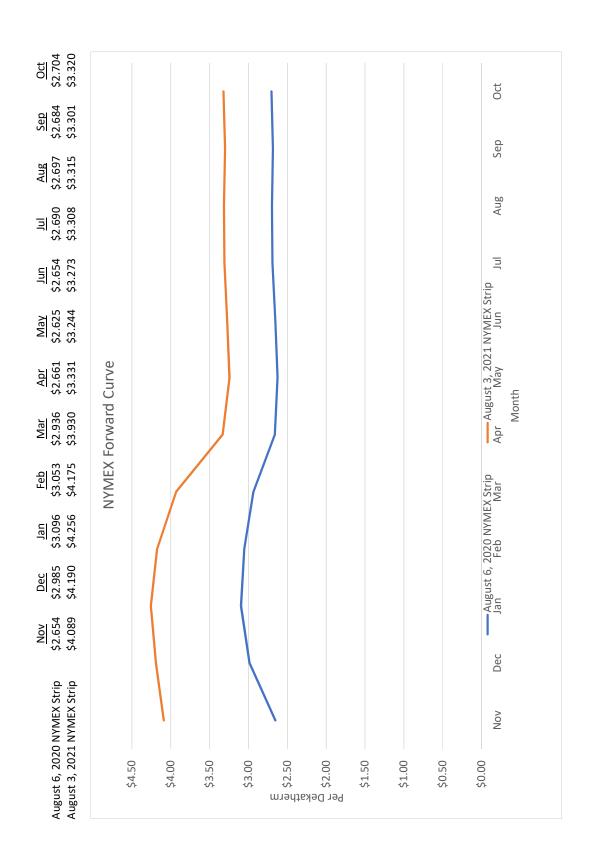
Gas Cost Recovery													
Delivery Point Volumes (MDth)	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
To City Gate													
GAS PURCHASES													
AGT Citygate	•									•			,
AIM at Ramapo	∞	2	14	13	7	17				•		4	65
Dawn via IGTS	•	5	17	16								•	37
Dawn via PNGTS	24	208	496	447	241	4				•		•	1,418
Dominion SP	16	16	16	15	16	•	16	16	16	•	16	16	160
Dracut Supply	•					•	174	107		•	9/	٠	357
Everett Long-Term	•	88	237	175	2	,			•	•	٠	٠	505
Everett Swing	,				,				,	•			•
Liauid		_		_	_				_		_	_	,
Millennium	215	220	220	199	220	55	223	215	222	222	215	222	2,445
Niagara	æ	30	32	20	6	32						•	126
Proposed Liquid	,											•	1
TCO Appalachia	421	866	886	905	914	98					٠	ĸ	4,312
Tetco M2 SCT	٠	∞	29	26	3	,			,	,		•	. 67
Tetco M2 CDS	1.087	1.112	1.145	1.003	1.145				293	324	419	638	7.165
Tetco M3	64	28	87	44	178	1.595	722	415			9	400	3.541
TGP 74 Cnx	194	751	793	264	248	145	! ,	} '	83	85	34	140	1,735
TCD 24 LH	356	111	577	100	27.7	800			1	3	5	101	2,733
- C1 24 C1 - C1 25 C1	200	1 5	1 5	600	1,00	200	,	,	,	,	,) c	2,033
ilalisco Leidy	OT	10	'n	or c	/7	n	٧	7	7	7	7	707	000
Waddington		0	0	0	∞								∞
TOTAL PURCHASES TO CITY GATE	2,397	3,400	4,255	3,742	3,394	2,144	1,138	755	615	633	992	1,552	24,791
STORAGE WITHDRAWALS													
Columbia FSS	4	35	71	55	34	1			•	٠	٠	٠	200
Dominion GSS	25	283	293	240	171				٠	٠	٠	٠	1,012
Dominion GSSTE	165	170	170	154	170	82					٠	٠	912
Exeter LNG	9	9	22	23	9	9	9	9	9	9	9	9	106
Providence LNG	13	13	96	65	13	13	13	13	13	13	13	13	292
Tennessee FSMA		133	169	172	227				•			٠	700
Tetco SS1	231	319	307	307		1			•	•	•	•	1,164
Tetco FSS1	11	14	14	14					•		•	•	53
TOTAL WITHDRAWALS TO CITY GATE	455	974	1,142	1,029	622	102	19	19	19	19	19	19	4,439
GRAND TOTAL TO CITY GATE	2,852	4,374	5,397	4,771	4,016	2,246	1,157	774	635	652	785	1,571	29,230

The Narragansett Electric Company

The Narrament Electric Company	_													
Gas Cost Recovery														
Delivery Point Volumes (MDth)	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total	
To Storage Injection														
GAS PURCHASES														
AGT Citygate		٠	٠	٠	٠		٠	•	•	٠	•	٠	•	
AIM at Ramapo		٠	•	٠	٠		٠	٠	٠	٠	•	•		
Dawn via IGTS	•	٠	٠	٠	٠	٠	٠		٠	٠	٠	٠		
Dawn via PNGTS		•		•						•		٠		
Dominion SP	•	•	•	•	٠	٠	٠	•	٠	•	•	•		
Dracut Supply	٠	٠	•	٠	٠		٠	•	٠	٠	•	•	•	
Everett Long-Term		٠	٠	٠	٠		٠	•			٠	٠	•	
Everett Swing	1	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	,	
Liquid		_					_	_			_		186	
Millennium		٠	•	٠	٠		٠	٠	٠	٠	•	•		
Niagara	•	٠	٠	٠	٠	٠	٠		٠	٠	٠	٠		
Proposed Liquid	•	٠	٠	٠	٠	43	28	28	51	٠	36	27	213	
TCO Appalachia	•	٠	٠	٠	٠	1	51	m	51	51	32	18	205	
Tetco M2 SCT	1	٠		•						•		٠		
Tetco M2 CDS	1	•	•	•	٠	54	421	256	485	469	440	440	2,565	
Tetco M3	,													
TGP 74 Cnx							33	976	105	144	210	252	•	177
TGP Z4 LH) ,) i '	2 '		256		•	157
Transco Leidy														
Waddington		,												
TOTAL PURCHAS BS JECTIONS	Ŋ	•	•	•	181	131	779	392	730	786	759	740	4,503	
STORAGE WITHDRAWALS														
Columbia FSS	,	,	1	,	,	,	,	1	,	,	1	1	,	
Dominion GSS	,	٠	•	٠	,		,		٠		,	٠		
Dominion GSSTE	٠	٠	•	٠	٠	٠	٠	٠	٠	٠	٠	•		
Exeter LNG	1	٠	•	٠	٠	٠	٠		٠	٠	•	٠	,	
Providence LNG	•	٠	•	٠		•		,	•	•	٠	•		
Tennessee FSMA		•	•	•		•			•	•	•	•	•	
Tetco SS1		•	•	•		•			•	•		•	•	
Tetco FSS1	1			1					1	1	1	1		
TOTAL WITHDRAWALS TO STORAGE INJECTION	•	•	1	•		•		•	•	•	•	•	•	
GRAND TOTAL TO CITY GATE	5	1	1	1	181	131	779	392	730	786	759	740	4,503	

Attachment GSP-2

NYMEX Strip Comparison & Forward Curves



SUPPLY AREA BASIS SUMMARY

November 2021 - October 2022

Oct-22 \$3.320	Oct-22	(\$0.854) (\$0.502) (\$0.191) (\$0.918) (\$0.895) (\$0.240) (\$1.232) (\$1.232) (\$0.655) (\$0.655) (\$0.655) (\$0.655) (\$0.1102) (\$1.192) (\$1.192) (\$1.192)
		(\$0.00) (\$0.00
<u>Sep-22</u> \$3.301	<u>Sep-22</u>	(\$0.839) (\$0.503) (\$0.306) (\$0.306) (\$0.807) (\$0.223) (\$1.193) (\$1.207) (\$0.825) (\$0.825) (\$1.145) (\$1.235) (\$1.185) (\$1.183) (\$1.183)
Aug-22 \$3.315	<u>Aug-22</u>	(\$0.609) (\$0.503) (\$0.189) (\$0.627) (\$0.071) (\$0.277) (\$0.977) (\$0.315) (\$0.343) (\$0.343) (\$0.169) (\$0.169) (\$0.965) (\$0.317)
Jul-22 \$3.308	<u>Jul-22</u>	(\$0.539) (\$0.609) (\$0.502) (\$0.503) (\$0.165) (\$0.189) (\$0.002) (\$0.627) (\$0.129) (\$0.071) (\$0.708) (\$0.705) (\$0.202) (\$0.227) (\$0.892) (\$0.977) (\$0.938) (\$1.005) (\$0.358) (\$0.315) (\$0.438) (\$0.315) (\$0.942) (\$1.011) (\$0.942) (\$0.169) (\$0.942) (\$0.169) (\$0.943) (\$0.967) (\$0.938) (\$0.967) (\$0.938) (\$0.965)
<u>Jun-22</u> \$3.273	<u>Jun-22</u>	(\$0.501) (\$0.503) (\$0.156) (\$0.673) (\$0.683) (\$0.815) (\$0.815) (\$0.805) (\$0.897) (\$0.897) (\$0.892) (\$0.892) (\$0.892) (\$0.892)
May-22 \$3.244	<u>May-22</u>	(\$0.486) (\$0.502) (\$0.262) (\$0.262) (\$0.366) (\$0.075) (\$0.820) (\$0.868) (\$0.618) (\$0.628) (\$0.895) (\$0.895) (\$0.895) (\$0.895) (\$0.895) (\$0.895) (\$0.895) (\$0.896) (\$0
Apr-22 \$3.331	<u>Apr-22</u>	(\$0.329) (\$0.503) (\$0.205) (\$0.489 (\$0.485) (\$0.485) (\$0.633) (\$0.655) \$0.247 \$0.247 (\$0.717) (\$0.647) (\$0.667)
<u>Mar-22</u> \$3.930	<u>Mar-22</u>	(\$0.265) (\$0.185) \$0.142 \$0.200 \$3.341 (\$0.425) \$0.085 (\$0.558) \$3.110 \$3.110 \$0.162 (\$0.744) \$0.162 (\$0.744) \$0.162 (\$0.744) \$0.162 (\$0.610)
<u>Feb-22</u> \$4.175	Feb-22	(\$0.339) (\$0.289) \$1.417 \$2.655 \$9.919 (\$0.410) (\$0.470) (\$0.573) \$9.660 \$9.383 (\$0.573) \$9.660 \$9.383 (\$0.549) (\$0.785) \$1.437 (\$0.435) (\$0.633)
<u>Jan-22</u> \$4.256	<u>Jan-22</u>	(\$0.354) (\$0.379) \$1.432 \$2.835 \$10.316 (\$0.432) (\$0.115) (\$0.512) (\$0.512) (\$0.502) \$10.058 \$9.612 (\$0.594) (\$0.830) \$1.452 (\$0.830) \$1.452 (\$0.662) \$10.055
<u>Dec-21</u> \$4.190	Dec-21	\$0.496) (\$0.385) (\$0.411) (\$0.385) (\$0.075) \$0.528 (\$0.347) \$0.798 \$1.911 \$5.971 (\$0.580) (\$0.515) (\$0.145) (\$0.120) (\$0.735) (\$0.575) (\$0.735) (\$0.605) (\$0.735) (\$0.605) (\$0.744) (\$0.605) (\$0.944) (\$0.840) (\$0.0574) (\$0.840) (\$0.0574) (\$0.840) (\$0.0574) (\$0.840) (\$0.0574) (\$0.840) (\$0.0574) (\$0.840) (\$0.0574) (\$0.840) (\$0.0574) (\$0.840) (\$0.0574) (\$0.840)
Nov-21 \$4.089	Nov-21	(\$0.496) (\$0.411) (\$0.075) (\$0.347) \$1.911 (\$0.580) (\$0.145) (\$0.730) (\$0.735) \$1.660 \$1.510 (\$0.714) (\$0.944) (\$0.944) (\$0.055) (\$0.055) (\$0.697)
08/03/2021 NYMEX	SUPPLY AREA	TENN Z4 NIAGARA IROQUOIS RECEIPTS TETCO M3 DAWN TETCO DAWN TETCO M2 TRANSCO LEIDY ALGONQUIN TENN Z6 EASTERN NP IROQUOIS Z1 LEIDY HUB MILLENNIUM EAST POOL TENN Z6 NORTH

Attachment GSP-3

Rule Curves

Operational Parameters Non-Daily Metered FT-2 Storage and Peaking Resources

The following Operational Parameters are pursuant to RIPUC NG-GAS No. 101, Section 6, Schedule C:

Effective Period: November 1, 2021 through October 31, 2022

<u>Underground Storage:</u>

Maximum Inventory Level at any time is 100% of MSQ-U Injections are not allowed.
Minimum Inventory Levels:

November 1	96%
November 15	92%
December 1	88%
December 15	79%
January 1	67%
January 15	58%
February 1	46%
February 15	36%
March 1	26%
March 15	20%
April 1	12%

Peaking Inventory:

Inventory Level allocated on November 1, 2021 = MSQ-P Injections are not allowed.

Minimum Inventory Levels:

November 1	100%
December 1	92%
January 1	81%
February 1	51%
March 1	33%
April 1	0%

MSQ-U	Maximum Storage Quantity - Underground
MDQ-U	Maximum Daily Quantity - Underground
MSQ-P	Maximum Storage Quantity - Peaking
MDQ-P	Maximum Daily Quantity - Peaking

Attachment GSP-4

RFPs for PXP

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 1 of 17

national**grid**

Request for Proposals ("RFP") for Asset Management Arrangements July 20, 2021

The Narragansett Electric Company d/b/a National Grid ("National Grid" or "Buyer") is seeking proposals ("Proposals") for Asset Management Arrangements ("AMA") to manage all or a portion of its path originating at Dawn, Ontario for delivery at its city-gate on Tennessee Gas Pipeline ("TGP") in Zone 6 via transportation on Enbridge Gas Inc. ("Enbridge"), TransCanada Pipelines Limited ("TCPL") and Portland Natural Gas Transmission System ("PNGTS") as more fully set forth below. The transportation path is able to deliver a total of 29,000 Dth/day into the point of interconnect between TGP and Buyer's city-gate.

Bidders are advised that due to requirements of its State Approved Retail Access Program ("Program"), National Grid is required to allocate a portion of the Assets to its Program participants each month. Volumes assigned under the Program are made available to National Grid five business days before the 1st of each month and may change on a monthly basis and will be conveyed to Seller in the manner set forth below. Based on historical activity National Grid expects approximately 25% of the total subject assets to be reserved each month for the Program and will be allocated to a transaction resulting from responses to Package 2. Bidders must therefore submit their asset management fee for Package No. 2 only on a volumetric basis and must take all necessary actions to allow National Grid to administer the Program. Bidders may bid on packages for both Packages in increments of 10,000 dth and must indicate the maximum volume and AMA fee for which they are willing to accept an award pursuant to this RFP; in order to administer the Program, National Grid does not anticipate being able to award more than 20,000 dth/day pursuant to Package No. 3. Additionally, for Package 3, Bidders should specify whether their offer is dependent on receiving a specific Delivery Point on the TGP FT-A. Buyer's allocation of awards pursuant to Package Nos. 2 and 3 shall take into consideration its ability to administer the Program and its ability to maximize value for its firm gas customers.

The successful bidder ("Seller") shall have the right to optimize the assigned assets ("Assets") subject to satisfying Buyer's Gas Supply Requirements.

I. Provisions

Package No. 2 - AMA - PXP - Canadian Only

Term: November 1, 2021 through October 31, 2022.

Assets: Beginning November 1, 2021, National Grid is seeking an

AMA using the following Assets:

Page 1 of 17

Pipeline	Contract No.	Volume (dth)	Volume (Gj)	Receipt Point	Delivery Point
Enbridge	M12274	29,056	30,656	Dawn	Parkway
TCPL	FT 64273	29,056	30,656	Parkway	East Hereford

Assignment of Assets/
Compliance with Buyer's
State Retail Choice Program:

The Assets summarized above represent Buyer's total contract path contemplated under this Package No. 2 prior to allocation under the Program or any awards that may be made pursuant to Package No. 3. Assets not assigned under Buyer's Program (or Package No. 3) shall be assigned by Buyer for the entire term at no cost to Seller; notwithstanding the foregoing, Seller shall initially pay the demand charges and Buyer shall reimburse Seller for 100% of the demand charges related to the Assets and for all imputed variable charges related to the volumes delivered by Seller on behalf of Buyer; reimbursement for such charges shall be paid to Seller in U.S. dollars and based on Bank of Canada's monthly average exchange rate for the month of business as published on the last business day of the month of production. Seller shall be responsible for all variable charges in connection with the Assets during the Term not related to Buyer's deliveries. Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the assignment of the Assets from Buyer to Seller and to comply with Buyer's Program. Further, all assignments shall be subject to recall in the event that the Seller fails to meet its gas supply obligation to Buyer.

Delivery Point:

The Delivery Point shall be the point of interconnection between TCPL and PNGTS known as East Hereford, on the U.S. side.

Gas Supply Requirements:

On any day during the period of **November 1, 2021 through April 30, 2022 ("Delivery Period")** of the Term, Buyer shall have the right, but not the obligation, to call on Seller to deliver up to the MDQ at East Hereford. The MDQ shall be adjusted upward or downward based upon the deliverability and applicable fuel retention on each of Union and TCPL, as well as the volume assigned pursuant to the Program. Subject to satisfaction of these Gas Supply Requirements and the following criteria, Asset Manager

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 3 of 17

shall have the right to optimize the assigned capacity for its own account:

- (a) Base-Load Election: At least three business days prior to the 1st day of the following month of delivery, Buyer shall have the right, but not the obligation, to request Base-Load delivery of such Gas Supply at East Hereford up to the MDQ made available to Seller during this Delivery Period.
- (b) Daily Call: Further, subject to Buyer having exercised its Base-Load rights, Buyer shall have a right to call on a quantity up to the remaining MDQ at East Hereford.

The commodity price for Gas called on through the exercise of a daily call shall be equal to *Platts Gas Daily*

Daily Price Survey (\$MMBtu) Midpoint for Dawn, Ontario, plus the imputed variables to deliver the Gas Supply to East Hereford.

Supply to East Hereford.

The commodity price for Gas called on through the Base-Load option shall be equal to *Platts Inside FERC* for Dawn, Ontario, plus the imputed variables to deliver the Gas Supply to East Hereford.

Notwithstanding the foregoing, if in *Buyer's sole discretion* operational issues on the Assigned Assets may preclude Seller from delivering Gas to the Delivery Point at the Base-Load or Daily Call Price stated in a Transaction Confirmation resulting from this RFP, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assigned Assets and Buyer may immediately terminate a Transaction Confirmation resulting from the RFP.

Daily Call Nominations:

Buyer shall make all nominations for delivery of Daily Call purchases prior to 10:00 AM, prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nominations shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 4 of 17

weekends (i.e., nominated ratably on the Business Day prior to the Holiday).

Subject to the Gas Supply Requirements, the Program and Buyer's right to elect either Daily Call or Base-Load Gas purchases, Seller shall have the right to optimize the assigned capacity for its own account. Seller shall communicate to Buyer any upstream changes to supply contracts nominated pursuant to this section no later than 1:00 PM prevailing Eastern Standard Time on the Day prior to the Day of Gas flow. Acceptance of changes to upstream supply arrangements communicated by Seller of Buyer after 1:00 PM prevailing Eastern Standard Time on the Day prior to the Day of Gas flow shall be at Buyer's discretion. Consistent with the terms of the Transaction Confirmation and the deliverability of the Assets, Buyer may nominate, and Seller must supply those supplies unaccounted for after the 1:00 PM prevailing Eastern Standard Time on the Day prior to the Day of Gas flow deadline from the Assets assigned to Seller by Buyer.

Asset Management Fee:

Subject to satisfying the Gas Supply Requirements associated with the AMA and compliance with Buyer's right to assign volumes under the Program, Seller shall have the right to utilize and optimize the Assets for its own account. In exchange for such right, Seller shall pay Buyer an Asset Management Fee. As part of their Proposal(s), Bidders should specify the total proposed Asset Management Fee to be paid to Buyer for the AMA for the full MDQ assignable, as well as on a volumetric basis.

Import/Export Reporting:

Any import/export reporting requirement applicable to the quantities of natural gas delivered to Buyer hereunder, whether of the National Energy Board, the U.S. Department of Energy Office of Fossil Energy, the U.S. Customs Service or any other regulatory body having jurisdiction over the volumes, are the responsibility of Asset Manager.

Package No. 3 - AMA - PXP - U.S. and Canadian

Term: November 1, 2021 through October 31, 2022.

Assigned/Released Assets:

Pipeline	Contract No.	Volume (dth)	Volume (Gj)	Receipt Point	Delivery Point
Enbridge	M12274	10,000	10,550	Dawn	Parkway
TCPL	FT 64273	10,000	10,550	Parkway	East Hereford
PNGTS	FT 233317	10,000	N/A	Pittsburg	Dracut
TGP	FT-A 349449	5,000	N/A	Dracut	Cranston Sales
	FT-A 330580	14,000			Lincoln
	FT-A 62930	4000			Cranston Sales/Pawtucket

Assignment and Release of Assets:

The Assets shall be assigned/released by Buyer for the entire Term at no cost to Asset Manager; notwithstanding the foregoing, Asset Manager shall initially pay the demand charges and Buyer shall reimburse Asset Manager for 100% of the demand charges related to Union and TCPL and for all imputed variable charges related to the volumes delivered by Asset Manager on behalf of Buyer; reimbursement for such charges shall be paid to Asset Manager in U.S. dollars and based on Bank of Canada's monthly average exchange rate for the month of business as published on the last business day of the month of production. Asset Manager shall be responsible for all variable charges in connection with the Assets during the Term not related to Buyer's deliveries. Buyer and Asset Manager each agree to take such actions and execute such documents as may be required to effectuate the assignment of the Assets from Buyer to Asset Manager. All assignments shall be subject to recall in the event that the Asset Manager fails to meet its gas supply obligation to Buyer.

Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the release of the Assets from Buyer to Seller. National Grid currently has a negotiated rate with PNGTS which is included herewith. National Grid shall not be responsible for loss of discount resulting from such inaction. National Grid will not advise Bidders or an Asset Manager on potential transactions that may result in a loss of discount.

The parties intend that any transaction entered into pursuant to this RFP shall be structured as an Asset Management Agreement pursuant to FERC Order 712 and any other applicable rules or regulations. All releases shall be subject

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 6 of 17

to recall in the event that the Seller fails to meet its gas supply obligation to Buyer.

Delivery Point:

Unless otherwise specified by Buyer, the Delivery Point for Gas purchased hereunder shall be the point of interconnection between Buyer's facilities and TGP in TGP's Zone 6 at Cranston Sales.

Gas Supply Requirements:

On any day during the period of **November 1, 2021** through April 30, 2022 ("Delivery Period") of the Term, Buyer shall have the right, but not the obligation, to call on Seller to deliver up to the MDQ at the Delivery Point on the U.S. assets of PNGTS and TGP. The MDQ shall be adjusted upward or downward based upon the deliverability and applicable fuel retention on each of Enbridge, TCPL, PNGTS and TGP. Subject to satisfaction of these Gas Supply Requirements, Asset Manager shall have the right to optimize the assigned capacity for its own account. Subject to the following:

- (a) Base-Load Election: At least three business days prior to the 1st day of the following month of delivery, Buyer shall have the right, but not the obligation, to request Base-Load delivery of such Gas Supply at the Delivery Point on TGP up to the MDQ made available to Seller during this delivery period.
- (b) Daily Call: Further, subject to Buyer having exercised its Base-Load rights, Buyer shall have a right to call on a quantity up to the remaining MDQ at TGP Zone 6.
- (c) Additional Call: In addition to the Base-Load Election and the Daily Call, on any Day during the delivery period of November 1, 2021 through and including April 30, 2022, Buyer shall have the right, but not the obligation, to call on a quantity of Gas up to the contract quantity at the primary delivery point released by Buyer to Seller for each of the PNGTS and TGP Asset(s). Seller's delivery obligations under this Additional Call provision and its delivery obligation pursuant to these Gas Supply Requirements shall not be cumulative, and the Additional Call may only be exercised after Buyer has exhausted its rights pursuant to the Base-Load Election and Daily Call (i.e., Buyer's right to request gas at any Delivery Point pursuant to this Additional Call provision shall be reduced by quantities already requested). For avoidance of doubt, this Additional Call provision shall only apply to residual capacity

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 7 of 17

remaining on the transportation path as a result of fuel retention applicable to the Assigned Assets.

Price:

The commodity price for Gas called on through the exercise of a daily call shall be equal to *Platts Gas Daily Daily Price Survey* (\$MMBtu) Midpoint for Dawn, Ontario, plus the imputed variables to deliver the Gas Supply to Buyer's City-Gate in TGP Zone 6.

The commodity price for Gas called on through the Base-Load option shall be equal to *Platts Inside FERC* for Dawn, Ontario, plus the imputed variables to deliver the Gas Supply to Buyer's City-Gate in TGP Zone 6.

The commodity price for Gas called on through the Additional Call shall be equal to TGP Zone 6 South + \$0.10.

Notwithstanding the foregoing, if in *Buyer's sole discretion* operational issues on the Assigned/Released Assets may preclude Seller from delivering Gas to the TGP Delivery Point at the Base-Load or Daily Call Price stated in a Transaction Confirmation resulting from this RFP, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the TGP Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assigned Assets and Buyer may immediately terminate a Transaction Confirmation resulting from the RFP.

Nominations:

For calls at the Delivery Point at Buyer's City-Gate in TGP Zone 6, Buyer shall make all nominations for delivery of Daily Call purchases prior to 10:00 AM, prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nominations shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on the Business Day prior to the Holiday).

Upon execution of a binding Transaction Confirmation, or adequate assurance that the Buyer and Seller intend the

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 8 of 17

Transaction be binding by the first date of the Term, Buyer shall arrange for Seller's use and access of the National Grid Electronic Bulletin Board ("EBB"). Seller shall utilize EBB to schedule the supply to the Delivery Point on TGP, Buyer's city gate, for confirmation by National Grid's Gas Control. Use of the EBB or other means of requests for confirmation of meter bounce transactions at the Delivery Point or other points of interconnection with Buyer's facilities shall be strictly prohibited.

Asset Management Fee:

Subject to satisfying the Gas Supply Requirements associated with the AMA, Seller shall have the right to utilize and optimize the Assets for its own account. In exchange for such right, Seller shall pay Buyer an Asset Management Fee. As part of their Proposal(s), Bidders should specify the total proposed Asset Management Fee to be paid to Buyer for the AMA for the full MDQ assignable, as well as on a volumetric basis.

Import/Export Reporting:

Any import/export reporting requirement applicable to the quantities of natural gas delivered to Buyer hereunder, whether of the National Energy Board, the U.S. Department of Energy Office of Fossil Energy, the U.S. Customs Service or any other regulatory body having jurisdiction over the volumes, are the responsibility of Asset Manager.

II. Instructions to Bidders

National Grid will consider Proposals only from Bidders who have an executed NAESB Base Contract for Sale and Purchase of Natural Gas or an executed ISDA with a Gas Annex with Buyer. Any transaction entered into as a result of this RFP shall be documented as a transaction under an active NAESB Agreement or ISDA Gas Annex. Included in this RFP is the form of Transaction Confirmation that National Grid proposes for execution. As part of their Proposal(s), Bidders *must* clearly identify any required Special Conditions or exceptions to the Transaction Confirmation including, but not limited to, language related to FERC, the CFTC and any other applicable regulatory body.

Any questions in connection with this RFP should be sent via email to the following email address:

GasRFP@nationalgrid.com

All proposals in connection with this RFP should also be sent via email to the email address listed above. Proposals must be submitted by the date specified in the Schedule below. Proposals must include: (a) Seller's proposed Reservation Charge for the Package, (b) any specialized language Seller requires in the Transaction Confirmation, and (c) whether

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 9 of 17

Seller shall require receipt of any additional internal approvals prior to accepting an award pursuant to this RFP.

III. Schedule (all times are Eastern Standard Time)

July 30, 2021

Proposals must be received by National Grid by 5:00 PM. All proposals shall expressly provide that they will remain binding and in effect, without modification, until 5:00 PM on August 6, 2021.

IV. Miscellaneous

National Grid will consider proposals only from bidders who have an executed NAESB Base Contract for Sale and Purchase of Natural Gas or an executed ISDA with a Gas Annex with Buyer. Any transaction entered into as a result of this RFP shall be documented as a transaction under an active NAESB Agreement or ISDA Gas Annex. Please be advised that if the winning Bidder utilizes an ISDA with a Gas Annex, this transaction will be specifically excluded from margining calculation under the Credit Support Annex.

Bidders submitting bids in response to this RFP understand and agree that unless and until a definitive Transaction Confirmation has been executed and delivered, no contract or agreement providing for a transaction between such parties shall be deemed to exist between the parties, and neither party will be under any legal obligation of any kind whatsoever with respect to such transaction by virtue of this or any other written or oral expression of communication. National Grid reserves the right to withdraw or modify this RFP at any time and National Grid shall have the right, in its sole and absolute discretion, to reject any or all Proposals submitted in response to this RFP. The winning bid(s), if any, will be selected based on the proposal(s) that yield(s) the least cost, consistent with concerns for reliability of service and other business factors applied by National Grid in its sole discretion. Potential Sellers shall be subject to satisfactory credit review by National Grid.

V. Compliance with National Grid's Supplier Code of Conduct

At National Grid we are always seeking ways to meet the evolving needs and desires of our customers. We believe that a responsible approach to doing business is fundamental to what we do. In all of our activities we operate within Global Standards of Ethical Conduct. These standards include a commitment to the protection and enhancement of the environment, always seeking ways to minimize the environmental impact of our past, present and future activities and safeguarding our global environment for future generations. Our goal is to comply with regulations, reduce any impact that we may have and proactively seek out opportunities to improve the environment. In furtherance of this goal, National Grid has developed a "Supplier Code of Conduct" which describes our company's values and can be accessed at https://www.nationalgrid.com/document/83526/download

We value the business relationships we have with you and we believe that you are an important and central part of our success. This means that we expect you to carry out your business in line with these values. More specifically, we refer you to Section 3 - "Protecting the Environment".

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This section explains National Grid's expectations with respect to its suppliers. In connection with the purchase of natural gas, we will reject proposals from parties that fail to adhere to these requirements or who knowingly produce or purchase gas that was produced in violation of applicable laws and regulations.

National Grid has worked to establish the Natural Gas Supply Collaborative (NGSC). The NGSC is a voluntary collaborative of natural gas purchasers that are promoting safe and responsible practices for the development of natural gas supply. As a participant in the NGSC, National Grid is committed to encourage our natural gas suppliers and producers to support more robust voluntary reporting and increased transparency on 14 environmental and social performance indicators. The NGSC developed these indicators through a comprehensive stakeholder engagement undertaking including representation from both the environmental and natural gas production community.

As suppliers of natural gas to National Grid, it is our expectation that you will consider reporting on these 14 indicators. Over time, and in consultation with National Grid, we expect reporting on these 14 indicators will be fully embraced and easily identifiable on company web sites and may become a requirement for future business.

Supporting information on the NGSC can be found at the following Web site: http://www.mjbradley.com/NGSC

Liz Arangio Director of Gas Supply Planning Telephone: 617-212-1790

MaryBeth Carroll Manager of Gas Supply Planning Telephone: 516-545-3116

Samara Jaffe Director of Gas Contracting, Compliance & Hedging Telephone: 516-545-5408

Janet Prag Senior Contract Specialist Telephone: 516-545-5463

nationalgrid

Asset Management Arrangement – Package 2 The Narragansett Electric Company ("Narragansett")

	TRANSACTION CONFIRMATION						
					Date: Transa	action Confirmation #:	
("AMA") dated Ju between Seller ar	ily 20, 2021. Thi nd Buyer, dated	is Transaction Confi ("Base	irmation is subje Contract"). Terr	ect to the Base ms not defined	e Contract d in this Tra	s for Asset Manageme for Sale and Purchase ansaction Confirmation I executed by both pa	e of Natural Gas shall be defined
SELLER/ASS	BUYER: The Narragansett Electric Company 100 East Old County Road Hicksville, New York 11801 Attn: Contract Administration Phone: (516) 545-6068 Fax: (516) 545-5466 Transporters: Enbridge Gas Inc. ("Enbridge"), TransCanada Pipelines Limited ("TransCanada") Transporters Contract Number: Trader: Samara Jaffe						
Contract Price:	See Special Co	onditions Section C	below.	1			
Term: Begin: N	ovember 1, 202	 !1	End: Octobe	er 31, 2022			
Periorillance Ob	Ilgation and oo	ontract Quantity: S	ee Special Col	Jailions neion	···		
		Point shall be the s East Hereford, on			etween Tra	ansCanada and Portla	ind Natural Gas
Special Conditions: A. Definitions "Assets" means the Agreements summarized as follows:							
Pipeline	Contract No.	Volume (dth)	Volume (Gj)	Receipt	Point	Delivery Point	
Enbridge	M12274	29,056	30,656	Dawn		Parkway	
TransCanada	FT 64273	29,056	30,656	Parkwa	.y	East Hereford	
"CFTC" shall mea	an the U.S. Com	modities Futures Tra	ading Commissi	on.			
			J -				
"Dekatherm" or "Dth" or "dt" means one (1) MMBtu.							

"Demand Charges" means the applicable demand charges due to Union and TransCanada under the assigned Assets.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 12 of 17

"FERC" means the Federal Energy Regulatory Commission.

"NEB" means the National Energy Board.

"Program" means Buyer's state approved retail access program.

B. Gas Service and Capacity Assignment

1. Assignment of Assets: During the Term, Buyer will assign the Assets to Seller on a Monthly basis after determining Program requirements. Seller shall initially pay the Demand Charges to TransCanada and Enbridge and Buyer shall reimburse Seller for such charges. Buyer shall reimburse Seller for Demand Charges in U.S. dollars using the Bank of Canada's monthly average exchange rate for the Month of business as published on the last Business Day of the Month of production. Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the assignment of the Assets from Buyer to Seller and to comply with Buyer's Program. All assignments shall be subject to recall in the event that the Seller fails to meet its Gas supply obligation to Buyer.

At least five (5) Days prior to the 1st calendar Day of each Month, Buyer shall communicate to Seller, in writing via email, the volume of the Assets that Buyer must assign under the Program and the residual amount that shall be made available to Seller under the transaction for the applicable Month of the Term. Seller agrees to take all necessary actions to allow National Grid to administer the assignments necessary and comply with the Program.

2. Gas Supply Requirements:

- i. November through April: On any Day during the period of November 1, 2021 through April 30, 2022 of the Term, Buyer shall have the right, but not the obligation, to call on Seller to deliver up to the MDQ at the Delivery Point of the Assets in Seller's control. Subject to satisfaction of these "Gas Supply Requirements" and compliance with National Grid's Program, Asset Manager shall have the right to optimize the assigned capacity for its own account subject to the following:
 - a) Base-Load Quantities Option: At least three (3) Business Days prior to the 1st Day of the following Month of delivery, Buyer shall have the right, but not the obligation, to request Base-Load delivery of such Gas Supply Requirements at the Delivery Point up to the MDQ during the period of November 1, 2021 through April 30, 2022.
 - b) Daily-Call Quantities Option: Further, subject to Buyer having exercised its Base-Load Quantities Option pursuant to Special Condition B.2(i)(a), Buyer shall have a right to call on a quantity up to the remaining MDQ for the period of November 1, 2021 through April 30, 2022.

Subject to these Gas Supply Requirements, Seller shall have the right to optimize the assigned capacity for its own account. Seller shall communicate to Buyer any upstream changes to supplies called on pursuant to this Section no later than 1:00 PM prevailing Eastern Standard Time on the Day prior to the Day of Gas flow. Acceptance of changes to firm Base-Load Quantities communicated by Seller of Buyer after 1:00 PM prevailing Eastern Standard Time on the Day prior to the Day of Gas flow shall be at Buyer's discretion. Consistent with the terms of the Transaction Confirmation and the deliverability of the Assets, Buyer may nominate, and Seller must supply those supplies unaccounted for after the 1:00 PM prevailing Eastern Standard Time on the Day prior to the Day of Gas flow deadline from the Assets assigned to Seller by Buyer.

- 3. **Nominations:** Buyer shall make all nominations for delivery of Daily Call Quantities prior to 10:00 AM prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nominations shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on Business Day prior to the Holiday).
- 4. **Termination Option/Recall Rights:** If at any time during the Term, Seller fails to deliver Gas required to be delivered hereunder or compliance with allowing Buyer to administer its Program, unless such failure is excused by the Buyer's non-performance or caused by Force Majeure, Buyer shall have the right to terminate this Transaction Confirmation and recall the Assets under the terms of the Base Contract.

C. Price

- A. Base-Load Quantities: The Contract Price for Gas purchased pursuant to B.2(i)(a) shall be equal to the price posted as the "Index" for Upper Midwest, "Dawn, Ontario," as published in *Platts Inside FERC* for the Month of delivery, plus imputed variable costs (including fuel) to transport Gas from Dawn to the Delivery Point.
- B. Daily Call Quantities: The Price for Gas purchased pursuant to B.2(ii)(b) shall be equal to *Platts Gas Daily Daily Price Survey*, Midpoint for Day of flow, Dawn, Ontario, plus imputed variable costs (including fuel) to transport such quantity from Dawn to the Delivery Point.
- C. Notwithstanding the foregoing, if in Buyer's sole discretion operational issues on the Assigned Assets may preclude Seller

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 13 of 17

from delivering Gas to the East Hereford Delivery Point at the Base-Load or Daily Call Price stated in this Special Condition C, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the East Hereford Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assigned Assets and Buyer may immediately terminate this Transaction Confirmation.

D. Asset Management Fee

Subject to the delivery obligations set forth above, Seller shall have the right to optimize the assigned capacity for its own account. In exchange for such right, during the Term, Seller shall make a payment to Buyer of \$______ per MMBtu of capacity made available by Buyer to Seller calculated on the TransCanada East Hereford Delivery Point for the Month of flow. This payment shall be reflected as a credit to Buyer in Seller's Invoice for the applicable Month.

F. Credit Provisions

Independent Amount. In the event Seller (i) has a Credit Rating at or below BBB- from S&P and/or Baa3 from Moody's, or (ii) is unrated, Seller shall provide Buyer with an Independent Amount in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB- by S&P and/or Baa3 by Moody's, (b) cash, or (c) a Letter of Credit, in either case, in an amount equal to 10% of the potential mark to market exposure for the transactions hereunder calculated as a function of price volatilities as well as the notional volume; provided, however, that the potential mark to market exposure shall be zero (0) when Seller's price is set at the Gas Daily Index.

Collateral Requirement. The "Collateral Requirement' for Seller means the Exposure (as defined below), minus the sum of (i) the amount of cash previously transferred by Seller to Buyer, (ii) the amount of cash held by Buyer as posted collateral as the result of drawing under any Letter of Credit maintained by Seller for the benefit of Buyer, and (iii) the undrawn value of each such Letter of Credit; provided, however, that the Collateral Requirement for Seller will be deemed to be zero (0) if (i) Seller has a Credit Rating of at least BBB- from S&P and/or Baa3 from Moody's, and (ii) no Event of Default with respect to Seller has occurred and is continuing. Seller may provide the Collateral Requirement in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB-by S&P and/or Baa3 by Moody's, (b) cash, or (c) a Letter of Credit. The Collateral Requirement for Buyer means zero (0).

"Exposure" shall be calculated as the sum of:

- (i) all amounts that have been invoiced, but not yet paid for the transactions under this Transaction Confirmation; plus
- (ii) all amounts that have been accrued, but not yet invoiced for the transactions under this Transaction Confirmation; plus
- (iii) the mark to market amount for each Day remaining in the term for each transaction under this Transaction Confirmation; reduced by
- (iv) the Independent Amount, if any, previously provided by the Seller to the Buyer.

G. Import/Export Reporting

Any import/export reporting requirements applicable to the quantities of Gas delivered to Buyer hereunder, whether of the National Energy Board, the U.S. Department of Energy Office of Fossil Energy, the U.S. Customs Service, or any other regulatory body having jurisdiction over the volumes, are the responsibility of Asset Manager.

G. Changes in Law

If the NEB, FERC, CFTC, or other applicable regulatory body shall implement any change in law, rule, regulation, tariff or practice that is binding on Seller or Buyer and materially and adversely affects such party's ability to perform its obligations hereunder, either party shall provide Notice of such event to the other party and the parties shall negotiate in good faith an amendment to this Transaction Confirmation or take other appropriate action the effect of which is to restore each party, as closely as possible, to its same position as prior to such change. If, within sixty (60) Days after the implementation of such change, the parties are unable to agree on such amendment or such other appropriate action, each party will continue to perform its obligations hereunder to the maximum extent possible under the applicable law, rule, regulation, tariff or practice, taking all reasonable steps to mitigate the effect of such change on each other.

Seller:	Buyer: The Narragansett Electric Company
By: Name: Title: Date:	By: Name: James G. Holodak, Jr. Title: Vice President Date:

nationalgrid

Asset Management Arrangement – Package 3 The Narragansett Electric Company ("Narragansett")

	TRANSACTION CONFIRMATION							
						_		
							Date: Transa	action Confirmation #:
This Transaction Confirmation was awarded pursuant to Narragansett's Request for Proposals for Asset Management Arrangements ("AMA") dated July 20, 2021. This Transaction Confirmation is subject to the Base Contract for Sale and Purchase of Natural Gas between Seller and Buyer, dated ("Base Contract"). Terms not defined in this Transaction Confirmation shall be defined as set forth in the Base Contract. <i>This Transaction Confirmation will not become binding until executed by both parties.</i>								
SELLER/ASSET MANAGER: BUYER: The Narragansett Electric Company 100 East Old County Road Hicksville, New York 11801 Attn: Contract Administration Phone: (516) 545-6068 Fax: (516) 545-5466 Transporters: Enbridge Gas Inc. ("Enbridge"), TransCanada Pipelines Limited ("TransCanada"); Portland Natural Gas Transmission System ("PNGTS"); Tennessee Gas Pipeline ("TGP") Transporters Contract Number: Trader: Samara Jaffe								
Con	tract Price: Se	ee Special Conditio	ns Section C bel	ow.				
Tern	n: Begin: Nov	ember 1, 2021	En	d: Octobe	r 31, 2	2022		
Perf	ormance Oblig	gation and Contract	Quantity: See S	pecial Con	dition	s below.		
Delivery Point(s): Unless otherwise specified by Buyer, the Delivery Point for Gas purchased hereunder shall be the point of interconnection between Buyer's Rhode Island facilities and TGP in TGP's Zone 6.								
Special Conditions:								
A. Definitions								
"Assets" means the Agreements summarized as follows:								
	Pipeline	Contract No.	Volume (dth)	Volume (0	Gi)	Receipt I	Point	Delivery Point
	Enbridge	M12274	10,000	10,550		Dawn		Parkway

Pipeline	Contract No.	volume (ath)	volume (Gj)	Receipt Point	Delivery Point
Enbridge	M12274	10,000	10,550	Dawn	Parkway
TCPL	FT 64273	10,000	10,550	Parkway	East Hereford
PNGTS	FT 233317	10,000	N/A	Pittsburg	Dracut
TGP	FT-A 349449	5,000	N/A	Dracut	Cranston Sales
	FT-A 330580	14,000	N/A		Lincoln
	FT-A 62930	4,000	N/A		Cranston Sales/Pawtucket

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 15 of 17

"CFTC" shall mean the U.S. Commodities Futures Trading Commission.
"Credit Support Provider" means
"Dekatherm" or "Dth" or "dt" means one (1) MMBtu.
"Demand Charges" means the applicable demand charges due to Union and TransCanada under the assigned Assets.
"EBB" shall mean Buyer's Electronic Bulletin Board used for confirmation of supplies to its city-gate/Delivery Point.
"FERC" means the Federal Energy Regulatory Commission.
"NEB" means the National Energy Board.
B. Can Samilan and Canacity Assignment

B. Gas Service and Capacity Assignment

1. Assignment of Assets: The Assets shall be assigned/released by Buyer for the entire Term at no cost to Asset Manager; notwithstanding the foregoing, Asset Manager shall initially pay the demand charges and Buyer shall reimburse Asset Manager for 100% of the demand charges related to Enbridge and TCPL and for all imputed variable charges related to the volumes delivered by Asset Manager on behalf of Buyer; reimbursement for such charges shall be paid to Asset Manager in U.S. dollars and based on Bank of Canada's monthly average exchange rate for the month of business as published on the last business day of the month of production. Asset Manager shall be responsible for all variable charges in connection with the Assets during the Term not related to Buyer's deliveries and all losses of discount associated or applicable rate to the Asset. Buyer and Asset Manager each agree to take such actions and execute such documents as may be required to effectuate the assignment of the Assets from Buyer to Asset Manager. All assignments shall be subject to recall in the event that the Asset Manager fails to meet its gas supply obligation to Buyer.

2. Gas Supply Requirements:

- **a. November through April:** On any Day during the period of November 1, 2021 through April 30, 2022 of the Term, Buyer shall have the right, but not the obligation, to call on Seller to deliver up to the MDQ at the TGP Zone 6 Delivery Point. Subject to satisfaction of these "Gas Supply Requirements", Asset Manager shall have the right to optimize the assigned capacity for its own account subject to the following:
- i. Base-Load Quantities Option: At least three (3) Business Days prior to the 1st Day of the following Month of delivery, Buyer shall have the right, but not the obligation, to request Base-Load delivery of such Gas Supply Requirements at the TGO Zone 6Delivery Point up to the MDQ during the period of November 1, 2021 through April 30, 2022.
- ii. Daily-Call Quantities Option: Further, subject to Buyer having exercised its Base-Load Quantities Option pursuant to Special Condition B.2(i)(a), Buyer shall have a right to call on a quantity up to the remaining MDQ for the period of November 1, 2021 through April 30, 2022.
- iii. Additional Call: In addition to the Base-Load Election and the Daily Call, on any Day during the delivery period of November 1, 2021 through and including April 30, 2022, Buyer shall have the right, but not the obligation, to call on a quantity of Gas up to the contract quantity at the primary delivery point released by Buyer to Seller for each of the PNGTS and TGP Asset(s). Seller's delivery obligations under this Additional Call provision and its delivery obligation pursuant to these Gas Supply Requirements shall not be cumulative, and the Additional Call may only be exercised after Buyer has exhausted its rights pursuant to the Base-Load Election and Daily Call (i.e., Buyer's right to request gas at any Delivery Point pursuant to this Additional Call provision shall be reduced by quantities already requested).
- **3. Nominations:** Buyer shall make all nominations for delivery of Daily Call Quantities and the Additional Call prior to 10:00 AM prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nominations shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on Business Day prior to the Holiday). Buyer shall nominate all Gas purchased hereunder into the EBB for confirmation.
- **4. Termination Option/Recall Rights:** If at any time during the Term, Seller fails to deliver Gas required to be delivered hereunder or compliance with allowing Buyer to administer its Program, unless such failure is excused by the Buyer's non-performance or caused by Force Majeure, Buyer shall have the right to terminate this Transaction Confirmation and recall the Assets under the terms of the Base Contract.

C. Price

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 16 of 17

- a. Base-Load Quantities: The Contract Price for Gas purchased pursuant to B.2(a)(i) shall be equal to the price posted as the "Index" for Upper Midwest, "Dawn, Ontario," as published in *Platts Inside FERC* for the Month of delivery, plus imputed variable costs (including fuel) to transport Gas from Dawn to the Delivery Point.
- b. Daily Call Quantities: The Price for Gas purchased pursuant to B.2(b)(ii) shall be equal to *Platts Gas Daily Daily Price Survey*, Midpoint for Day of flow, Dawn, Ontario, plus imputed variable costs (including fuel) to transport such quantity from Dawn to the Delivery Point.
- c. Additional Call Quantities: The Price for Gas purchased pursuant to B.2(b)(iii) shall be equal to *Platts Gas Daily Daily Price Survey*, Midpoint for Day of flow, TGP Zone 6 South + \$0.10.
- d. Notwithstanding the foregoing, if in *Buyer's sole discretion* operational issues on the Assets may preclude Seller from delivering Gas to the TGP Delivery Point pursuant to this Special Condition C, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the TGP Zone 6 Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assigned Assets and Buyer may immediately terminate this Transaction Confirmation.

D. Asset Management Fee

Subject to the delivery obligations set forth above, Seller shall have the right to optimize the assigned capacity for its own account. In exchange for such right, during the Term, Seller shall make a payment to Buyer of \$______ payable in monthly installments of \$______. This payment shall be reflected as a credit to Buyer in Seller's Invoice for the applicable Month.

E. Credit Provisions

Independent Amount. In the event Seller (i) has a Credit Rating at or below BBB- from S&P and/or Baa3 from Moody's, or (ii) is unrated, Seller shall provide Buyer with an Independent Amount in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB- by S&P and/or Baa3 by Moody's, (b) cash, or (c) a Letter of Credit, in either case, in an amount equal to 10% of the potential mark to market exposure for the transactions hereunder calculated as a function of price volatilities as well as the notional volume; provided, however, that the potential mark to market exposure shall be zero (0) when Seller's price is set at the Gas Daily Index.

Collateral Requirement. The "Collateral Requirement' for Seller means the Exposure (as defined below), minus the sum of (i) the amount of cash previously transferred by Seller to Buyer, (ii) the amount of cash held by Buyer as posted collateral as the result of drawing under any Letter of Credit maintained by Seller for the benefit of Buyer, and (iii) the undrawn value of each such Letter of Credit; provided, however, that the Collateral Requirement for Seller will be deemed to be zero (0) if (i) Seller has a Credit Rating of at least BBB- from S&P and/or Baa3 from Moody's, and (ii) no Event of Default with respect to Seller has occurred and is continuing. Seller may provide the Collateral Requirement in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB-by S&P and/or Baa3 by Moody's, (b) cash, or (c) a Letter of Credit. The Collateral Requirement for Buyer means zero (0).

"Exposure" shall be calculated as the sum of:

- (i) all amounts that have been invoiced, but not yet paid for the transactions under this Transaction Confirmation; plus
- (ii) all amounts that have been accrued, but not yet invoiced for the transactions under this Transaction Confirmation; plus
- (iii) the mark to market amount for each Day remaining in the term for each transaction under this Transaction Confirmation; reduced by
- (iv) the Independent Amount, if any, previously provided by the Seller to the Buyer.

F. Asset Management Arrangement ("AMA")

The Parties agree that the transactions hereunder constitute an AMA as defined by FERC in Order No. 712 (as modified and clarified and in accordance with FERC's rules and regulations, and that Seller is acting as Asset Manager as defined in 18 CFR 284.8(h)(3). If it is determined that this transaction does not constitute an AMA, the parties agree to modify the transaction as required while maintaining, to the extent possible, the economics of the transaction.

G. Import/Export Reporting

Any import/export reporting requirements applicable to the quantities of Gas delivered to Buyer hereunder, whether of the National Energy Board, the U.S. Department of Energy Office of Fossil Energy, the U.S. Customs Service, or any other regulatory body having jurisdiction over the volumes, are the responsibility of Asset Manager.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-4 Page 17 of 17

H. Changes in Law

If the NEB, FERC, CFTC, or other applicable regulatory body shall implement any change in law, rule, regulation, tariff or practice that is binding on Seller or Buyer and materially and adversely affects such party's ability to perform its obligations hereunder, either party shall provide Notice of such event to the other party and the parties shall negotiate in good faith an amendment to this Transaction Confirmation or take other appropriate action the effect of which is to restore each party, as closely as possible, to its same position as prior to such change. If, within sixty (60) Days after the implementation of such change, the parties are unable to agree on such amendment or such other appropriate action, each party will continue to perform its obligations hereunder to the maximum extent possible under the applicable law, rule, regulation, tariff or practice, taking all reasonable steps to mitigate the effect of such change on each other.

Seller:	Buyer: The Narragansett Electric Company
By: Name: Title: Date:	By: Name: James G. Holodak, Jr. Title: Vice President Date:

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESSES: GAS SUPPLY PANEL
SEPTEMBER 1, 2021
ATTACHMENTS

Attachment GSP-5

RFP for AMA Dawn Waddington to Zone 6 Lincoln

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-5 Page 1 of 10

nationalgrid

Request for Proposals ("RFP") for Asset Management Arrangement July 20, 2021

The Narragansett Electric Company d/b/a National Grid ("National Grid" or "Buyer") is seeking proposals ("Proposals") for an Asset Management Arrangement ("AMA") as more fully set forth below. The successful bidder ("Seller" or "Asset Manager") shall have the right to optimize the assigned assets ("Assets") subject to satisfying Buyer's Gas Supply Requirements set forth below.

Package No. 1 – AMA (Dawn- TGP Zone 6)

I. Provisions:

Term: November 1, 2021 through October 31, 2022.

Delivery Period: November 1, 2021 through and including March 31, 2022.

Release/Assignment of Assets:

The Assets to be assigned and released are set forth below. The Assets shall be assigned/released by Buyer for the entire Term at no cost to Seller. Buyer shall remain responsible for payment of all demand charges related to the Assets (except any potential loss of discount related to activities of Seller). Notwithstanding the forgoing, Seller shall initially pay the Enbridge and TransCanada demand charges and Buyer shall reimburse Seller for 100% of the demand charges related to the Assets; reimbursement for such charges shall be paid to Seller in U.S. dollars and based on Bank of Canada's monthly average exchange rate for the month of business as published on the last business day of the month of production. Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the assignment of the Assets from Buyer to Seller. All assignments shall be subject to recall in the event that the Seller fails to meet its gas supply obligation to Buyer.

Assigned Assets:

During the Term, Buyer shall assign firm transportation capacity on the following pipelines:

Enbridge Gas Inc. ("Enbridge")

TransCanada Pipelines Limited ("TransCanada") Iroquois Gas Transmission System, L.P. ("Iroquois") Tennessee Gas Pipeline Company, L.L.C. ("Tennessee")

Please see table below for contract details.

Page 1 of 10

Pipeline	Contract	Quantity	Quantity	Receipt	Delivery
		Dt/day	Gj/day	Point	Point
Enbridge	M12164	1,025	1,081	Dawn	Parkway
TransCanada	42386	1,012	1,068	Parkway	Waddington
Iroquois	50001	1,012	NA	Waddington	Wright
Tennessee	95345	1,000	NA	Wright	Lincoln, RI

Delivery Point:

The Delivery Point shall be the primary Delivery Point(s) of the FERC regulated Assets.

Gas Supply Requirements:

On any day during the period of **November 1, 2021 through March 31, 2022 ("Delivery Period")** of the Term, Buyer shall have the right, but not the obligation, to call on Seller to deliver up to the MDQ at the <u>Tennessee Delivery Point</u>. The MDQ shall be adjusted upward or downward based upon the deliverability and applicable fuel retention on each of Enbridge, TransCanada, Iroquois and Tennessee. Subject to satisfaction of these Gas Supply Requirements, Asset Manager shall have the right to optimize the assigned capacity for its own account. Subject to the following:

- (a) At least five business days prior to the 1st day of the following month of delivery, Buyer shall have the right, but not the obligation, to request Base-Load delivery of such Gas Supply at the Delivery Point up to the MDQ during this Delivery Period.
- (b) Further, subject to Buyer having exercised its Base-Load rights, Buyer shall have a right to call on a quantity up to the remaining MDQ.

Additional Call — In addition to the Gas Supply Requirements above, on any Day during the period of November 1, 2021 through March 31, 2022 of the Term, Buyer shall have the right, but not the obligation, to call on a quantity of Gas up to the contract quantity of each of the Iroquois and Tennessee Assets at the primary Delivery Point(s) under each such released Asset. Seller's delivery obligations under this Additional Call provision and its delivery obligation pursuant to all Gas Supply Requirements provisions above shall not be cumulative and may only be exercised after Buyer has exhausted its rights pursuant to firm Base-Load and daily call supplies (*i.e.*, Buyer's right to request gas at the Iroquois or Tennessee Delivery Point pursuant to these Gas Supply Requirements provisions and under this Additional Call provision shall be

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-5 Page 3 of 10

reduced by quantities requested at any upstream Delivery Point). For avoidance of doubt, this Additional Call provision shall only apply to residual capacity remaining on the transportation path as a result of fuel retention applicable to the Assigned Assets.

Nominations:

Buyer shall make all nominations for delivery of Gas hereunder prior to 10:00 AM prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nomination shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on Business Day prior to the Holiday).

Upon execution of a binding Transaction Confirmation, or adequate assurance that the Buyer and Seller intend the Transaction be binding by the first date of the Term, Buyer shall arrange for Seller's use and access of the National Grid Electronic Bulletin Board ("EBB"). Seller shall utilize EBB to schedule the supply to the Delivery Point on Tennessee, Buyer's city gate, for confirmation by National Grid's Gas Control. Use of the EBB or other means of requests for confirmation of meter bounce transactions at the Delivery Point or other points of interconnection with Buyer's facilities shall be strictly prohibited.

The commodity price for Gas called on through the exercise of a Daily Call shall be equal to *Platts Gas Daily Daily Price Survey* (\$MMBtu) Midpoint for Dawn, Ontario, plus the imputed variables to deliver the Gas Supply to the Tennessee Delivery Point.

The commodity price for Gas called on through the Base-Load option shall be equal to *Platts Inside FERC* for Dawn, Ontario, plus the imputed variables to deliver the Gas Supply to the Tennessee Delivery Point.

The commodity price for Gas called on through Additional Call shall be the greater of the Daily Call Price or the *Platts Gas Daily Daily Price Survey* price for Tennessee Zone 6 South Pool plus \$0.10 per dt.

Notwithstanding the foregoing, if in *Buyer's sole discretion* operational issues on the Assigned Assets may preclude Seller from delivering Gas to the Delivery Point at the Base-Load, Daily Call or Additional Call Price stated in a Transaction Confirmation resulting from this RFP, then Buyer may direct Seller at the Daily Call Nominations deadline to deliver a certain percentage of the MDQ at a

Price:

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-5 Page 4 of 10

fair market price for the Tennessee Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assigned Assets and Buyer may immediately terminate a Transaction Confirmation resulting from the RFP.

Asset Management Fee:

Subject to satisfying the Gas Supply Requirements associated with the AMA, Seller shall have the right to utilize and optimize the Assets for its own account. In exchange for such right, Seller shall pay Buyer an Asset Management Fee. As part of their Proposal, Bidders should specify the total proposed Asset Management Fee to be paid to Buyer for the Term.

Form of Agreement:

Any transaction entered into as a result of this RFP shall be documented as a transaction under an active NAESB Contract or ISDA Gas Annex. Included with this RFP is the form of Transaction Confirmation that National Grid proposes for execution. As part of their Proposal, Bidders must clearly identify any required Special Conditions or exceptions to the Transaction Confirmation.

Import/Export Reporting:

Any import/export reporting requirements applicable to the quantities of natural gas delivered to Buyer hereunder, whether of the National Energy Board, the U.S. Department of Energy Office of Fossil Energy, the U.S. Customs Service or any other regulatory body having jurisdiction over the volumes, are the responsibility of Asset Manager.

Submission of Proposals:

Proposals must be submitted by the date specified in the Schedule below. Proposals must include: (a) Seller's proposed Asset Management Payment or Price for the AMA Package, (b) any proposed exceptions to the Transaction Confirmation and (c) whether Seller shall require receipt of any additional internal approvals prior to accepting an award pursuant to this RFP.

II. Instructions to Bidders:

Proposals must be submitted by the date specified in the Schedule below via email to the following email address:

GasRFP@nationalgrid.com.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-5 Page 5 of 10

Any questions in connection with this RFP should be sent via email to the email address provided above.

III. Schedule (all times are Eastern Standard Time):

June 30, 2021

Proposals must be received by National Grid by 5:00PM EST. All proposals shall expressly provide that they will remain binding and in effect, without modification, until 5:00 PM on August 6, 2021.

V. Form of Agreement:

National Grid will consider proposals only from bidders who have an executed NAESB Base Contract for Sale and Purchase of Natural Gas or an executed ISDA with a Gas Annex with Buyer. Any transaction entered into as a result of this RFP shall be documented as a transaction under an active NAESB Contract or ISDA Gas Annex. Please be advised that if the Winning Bidder utilizes an ISDA with a Gas Annex, this transaction will be specifically excluded from margining calculation under the CSA.

Bidders submitting bids in response to this RFP understand and agree that unless and until a definitive Transaction Confirmation has been executed and delivered by National Grid, no contract or agreement providing for a transaction between such parties shall be deemed to exist between the parties, and neither party will be under any legal obligation of any kind whatsoever with respect to such transaction by virtue of this or any other written or oral expression communication. National Grid reserves the right to withdraw or modify this RFP at any time and National Grid shall have the right, in its sole and absolute discretion, to reject any or all Proposals submitted in response to this RFP. Potential Sellers shall be subject to satisfactory credit review by National Grid.

VI. Compliance with National Grid's Supplier Code of Conduct:

At National Grid we are always seeking ways to meet the evolving needs and desires of our customers. We believe that a responsible approach to doing business is fundamental to what we do. In all of our activities we operate within Global Standards of Ethical Conduct. These standards include a commitment to the protection and enhancement of the environment, always seeking ways to minimize the environmental impact of our past, present and future activities and safeguarding our global environment for future generations. Our goal is to comply with regulations, reduce any impact that we may have and proactively seek out opportunities to improve the environment. In furtherance of this goal, National Grid has developed a "Supplier Code of Conduct" which describes our company's values and can be accessed at https://www.nationalgrid.com/document/83526/download

We value the business relationships we have with you and we believe that you are an important and central part of our success. This means that we expect you to carry out your business in line with these values. More specifically, we refer you to Section 3 - "Protecting the Environment". This section explains National Grid's expectations with respect to its suppliers. In connection with the purchase of natural gas, we will reject proposals from parties that fail to adhere to these

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-5 Page 6 of 10

requirements or who knowingly produce or purchase gas that was produced in violation of applicable laws and regulations.

National Grid has worked to establish the Natural Gas Supply Collaborative (NGSC). The NGSC is a voluntary collaborative of natural gas purchasers that are promoting safe and responsible practices for the development of natural gas supply. As a participant in the NGSC, National Grid is committed to encourage our natural gas suppliers and producers to support more robust voluntary reporting and increased transparency on 14 environmental and social performance indicators. The NGSC developed these indicators through a comprehensive stakeholder engagement undertaking including representation from both the environmental and natural gas production community.

As suppliers of natural gas to National Grid, it is our expectation that you will consider reporting on these 14 indicators. Over time, and in consultation with National Grid, we expect reporting on these 14 indicators will be fully embraced and easily identifiable on company web sites and may become a requirement for future business.

Supporting information on the NGSC can be found at the following Web site: http://www.mjbradley.com/NGSC

Liz Arangio Director of Gas Supply Planning Telephone: 617-212-1790

MaryBeth Carroll Manager of Gas Supply Planning Telephone: 516-545-3116

Samara Jaffe Director of Gas Contracting, Compliance & Hedging Telephone: 516-545-5408

Janet Prag Senior Contract Specialist Telephone: 516-545-5463

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-5 Page 7 of 10

nationalgrid

Transaction Confirmation – Package 1 The Narragansett Electric Company ("Narragansett")

TRANSACTION CONFIRMATION				
	Date: Transaction Confirmation #:			
This Transaction Confirmation was awarded pursuant to Narragansett's Request for Proposals for Asset Management Arrangements dated July 20, 2021. This Transaction Confirmation is subject to the Base Contract between Seller and Buyer, dated ("Base Contract"). Terms not defined in this Transaction Confirmation shall have the meaning provided in the Base Contract. <i>This Transaction Confirmation will not become binding until executed by both parties.</i>				
SELLER: BUYER: The Narragansett Electric Company 100 East Old County Road Hicksville, New York 11801 Attn: Contract Administration Phone: (516) 545-6068 Fax: (516) 545-5466 Fax: Transporters: Enbridge Gas Inc. ("Enbridge"), TransCanada Transporters Contract Number: Trader: Transporters Contract Number:				
Contract Price: See Special Conditions Section C below.				
Term: Begin: November 1, 2021 End: October 31, 2022				
Performance Obligation and Contract Quantity: See Special Conditions below.				
Delivery Point(s): Subject to Buyer's right to exercise the Additional Call, the primary Delivery Point shall be the point of interconnection between Tennessee and Buyer's distribution system that is the primary Delivery Point under the Tennessee Asset.				
Special Conditions:				
A. Definitions				
"Assets" means the Agreements summarized as follows:				

Pipeline	Contract	Quantity Dt/day	Quantity Gj/day	Receipt Point	Delivery Point
Enbridge	M12164	1,025	1,081	Dawn	Parkway
TransCanada	42386	1,012	1,068	Parkway	Waddington
Iroquois	50001	1,012	NA	Waddington	Wright
Tennessee	95345	1,000	NA	Wright	Lincoln, RI

"CFTC" shall mean the Commodities	Futures	Trading Commission	n.
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"Credit Support Provider" means______.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-5 Page 8 of 10

"Dekatherm" or "Dth" or "dt" means one (1) MMBtu.

"EBB" means Buyer's Electronic Bulletin Board utilized for confirmation of Gas. "FERC" means the Federal Energy Regulatory Commission.

"Letter of Credit" means an irrevocable, non-transferable, standby letter of credit issued by a major U.S. commercial bank, a U.S. branch office of a foreign bank, or U.S. financial institution, in any case with a credit rating of at least "A" by S&P and "A2" by Moody's in a form reasonable acceptable to the Buyer. All costs related to any Letter of Credit shall be for the account of the Seller.

"Moody's" means Moody's Investors Services, Inc., or its successor.

"S&P" means S&P Global Ratings, or its successor.

B. Gas Service and Capacity Assignment

1. Release and Assignment of Assets: During the Term, Buyer will release/assign, on a pre-arranged, non-biddable basis, at no cost to Seller, the Assets. Buyer shall be responsible for the payment of all demand charges related to the Assets. Notwithstanding the foregoing, Seller shall initially pay the demand charges to TransCanada and Enbridge and Buyer shall reimburse Seller for 100% of the demand charges related to the Assets for the volumes delivered by Seller to Buyer under this Transaction Confirmation. Reimbursement of such charges shall be paid in U.S. dollars and based on the Bank of Canada's monthly average exchange rate for the month of business as published on the last business day of the month of production. Seller shall be responsible for all variable costs in connection with the Assets during the Term unrelated to deliveries for Buyer. Buyer and Seller each agree to take such actions and execute all documents as may be required to effectuate the assignment of the Assets from Buyer to Seller. All assignments shall be subject to recall in the event that the Seller fails to meet its gas supply obligation to Buyer.

2. Gas Supply Requirements:

- A.On any day during the period of November 1, 2021 through March 31, 2022 ("Delivery Period") of the Term, Buyer shall have the right, but not the obligation, to call on Seller to deliver up to the MDQ at the Tennessee Delivery Point. The MDQ shall be adjusted upward or downward based upon the deliverability and applicable fuel retention on each of Enbridge, TransCanada, Iroquois and Tennessee. Subject to satisfaction of these Gas Supply Requirements, Asset Manager shall have the right to optimize the assigned capacity for its own account. Subject to the following:
 - At least five business days prior to the 1st day of the following month of delivery, Buyer shall have the right, but not the obligation, to request Base-Load delivery of such Gas Supply at the Delivery Point up to the MDQ during this Delivery Period.
 - ii. Further, subject to Buyer having exercised its Base-Load rights, Buyer shall have a right to call on a quantity up to the remaining MDQ.
 - iii. Additional Call In addition to the Gas Supply Requirements set forth in Special Condition B(2)(A) of this Transaction Confirmation, on any Day during the period of November 1, 2021 through March 31, 2022 of the Term, Buyer shall have the right, but not the obligation, to call on a quantity of Gas up to the contract quantity of each of the Iroquois and Tennessee Assets at the primary Delivery Point(s) under each such released Asset. Seller's delivery obligations under this Additional Call provision and its delivery obligation pursuant to all Gas Supply Requirements provisions above shall not be cumulative and may only be exercised after Buyer has exhausted its rights pursuant to firm base-load and daily call supplies (i.e., Buyer's right to request gas at the Iroquois or Tennessee Delivery Point(s) pursuant to these Gas Supply Requirements provisions and under this Additional Call provision shall be reduced by quantities requested at any upstream Delivery Point().
- B. Termination Right: If at any time during the Term, Seller fails to deliver Gas required to be delivered hereunder, unless such failure is excused by the Buyer's non-performance or caused by Force Majeure, Buyer shall have the right to terminate this Transaction Confirmation and recall the Assets.

C. Nominations

Buyer shall make all nominations for all delivery of Gas hereunder prior to 10:00 a.m. prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nomination shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (i.e., nominated ratably on Business Day prior to the Holiday).

Buyer shall arrange for Seller's use and access of the EBB. Seller shall utilize the EBB to schedule all Gas purchased pursuant to this AMA to the Delivery Point(s) for confirmation by National Grid's Gas Control. Use of the EBB or other means of requests for confirmation of meter bounce transactions at the Delivery Point or other points of interconnection with Buyer's facilities shall be strictly prohibited. Use of the EBB or other means of requests for confirmation of meter bounce transactions at the Delivery Point or other

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-5 Page 9 of 10

points of interconnection with Buyer's facilities shall be strictly prohibited.

D. Price The commodity price for Gas purchased pursuant to Special Condition 2 shall be as follows:

- The commodity price for Gas called on through the exercise of a Daily Call pursuant to Special Condition B(2)(A)(ii) shall be equal to *Platts Gas Daily Daily Price Survey* (\$MMBtu) Midpoint for Dawn, Ontario, plus the imputed variables to deliver the Gas Supply to the Delivery Point.
- The commodity price for Gas called on through the Base-Load option pursuant to Special Condition B(2)(A)(i) shall be equal to *Platts Inside* FERC for Dawn, Ontario, plus the imputed variables to deliver the Gas Supply to the Delivery Point.
- The commodity price for Gas called on through the Additional Call option pursuant to Special Condition B(2)(B) shall be equal to the greater of the Daily Call Price or the *Platts Gas Daily Daily Price Survey* price for Tennessee Zone 6 South Pool plus \$0.10 per dt.
- 4. Notwithstanding the foregoing, if in Buyer's sole discretion operational issues on the Assigned Assets may preclude Seller from delivering Gas to the Delivery Point at the Base-Load, Daily Call or Additional Call Price stated in this Section D, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the Tennessee Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure to deliver shall not be excused as a result of a failure of the Assigned Assets and Buyer may immediately terminate this Transaction Confirmation.

5.

E. Asset Management Fee

Subject to the delivery obligations set forth above, Seller shall have the right to optimize the assigned capacity for its own account. In exchange for such right, during the Term, Seller shall make a payment to Buyer of \$______, payable in equal monthly installments of \$

F. Credit Provisions

Independent Amount. In the event Seller (i) has a Credit Rating at or below BBB- from S&P and/or Baa3 from Moody's, or (ii) is unrated, Seller shall provide Buyer with an Independent Amount in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB by S&P and/or Baa2 by Moody's, (b) cash, or (c) a Letter of Credit, in either case, in an amount equal to 10% of the potential mark to market exposure for the transactions hereunder calculated as a function of price volatilities as well as the notional volume; provided, however, that the potential mark to market exposure shall be zero (0) when Seller's price is set at the Gas Daily Index.

Collateral Requirement. The "Collateral Requirement' for Seller means the Exposure (as defined below), minus the sum of (i) the amount of cash previously transferred by Seller to Buyer, (ii) the amount of cash held by Buyer as posted collateral as the result of drawing under any Letter of Credit maintained by Seller for the benefit of Buyer, and (iii) the undrawn value of each such Letter of Credit; provided, however, that the Collateral Requirement for Seller will be deemed to be zero (0) if (i) Seller has a Credit Rating of at least BBB from S&P and/or Baa2 from Moody's, and (ii) no Event of Default with respect to Seller has occurred and is continuing. Seller may provide the Collateral Requirement in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB by S&P and/or Baa2 by Moody's, (b) cash, or (c) a Letter of Credit. The "collateral Requirement" for Buyer means zero (0).

"Exposure" shall be calculated as the sum of:

- (i) all amounts that have been invoiced, but not yet paid for the transactions under this Transaction Confirmation; plus
- (ii) all amounts that have been accrued, but not yet invoiced for the transactions under this Transaction Confirmation; plus
- (iii) the mark to market amount for each Day remaining in the term for each transaction under this Transaction Confirmation; reduced by
- (iv) the Independent Amount, if any, previously provided by the Seller to the Buyer.

G. Import/Export Reporting

Any import/export reporting requirements applicable to the quantities of natural gas delivered to Buyer hereunder, whether of the National Energy Board, the U.S. Department of Energy Office of Fossil Energy, the U.S. Customs Service, or any other regulatory

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-5 Page 10 of 10

body having jurisdiction over the volumes, are the responsibility of Asset Manager.

H. Changes in Law

If the FERC, CFTC, or other applicable regulatory body shall implement any change in law, rule, regulation, tariff or practice that is binding on Seller or Buyer and materially and adversely affects such party's ability to perform its obligations hereunder, the parties shall negotiate in good faith an amendment to this Transaction Confirmation or take other appropriate action the effect of which is to restore each party, as closely as possible, to its same position as prior to such change. If, within sixty (60) days after the implementation of such change, the parties are unable to agree on such amendment or such other appropriate action, each party will continue to perform its obligations hereunder to the maximum extent possible under the applicable law, rule, regulation, tariff or practice, taking all reasonable steps to mitigate the effect of such change on each other.

Seller:	Buyer: The Narragansett Electric Company
By: Name: Title: Date:	By: Name: James G. Holodak, Jr. Title: Vice President Date:

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESSES: GAS SUPPLY PANEL
SEPTEMBER 1, 2021
ATTACHMENTS

Attachment GSP-6

RFP for AMA Dracut to Citygate

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-6 Page 1 of 8

nationalgrid

Request for Proposals ("RFP") for The Narragansett Electric Company d/b/a National Grid Asset Management Arrangement ("AMA") and Gas Supply July 20, 2021

The Narragansett Electric Company d/b/a National Grid ("Narragansett" or "Buyer") is seeking proposals ("Proposals") for an AMA as more fully set forth below. The successful bidder(s) ("Seller") shall have the right to optimize the assets ("Assets") subject to satisfying Buyer's Gas Supply Requirements. Bidders may bid in increments of 7,500 dth/day and should indicate the maximum volume they would be willing to receive under an AMA. The maximum delivered quantity of the Assets to be released by Buyer pursuant to an AMA resulting from this RFP is 15,000 dt/day ("MDQ").

Package No. 6 - AMA (Dracut to City Gate)

I. Provisions

Term: November 1, 2021 through October 31, 2022.

Assets: During the Term, Buyer shall release FT-A capacity Contract No. 349449

with Tennessee Gas Pipeline Company L.L.C. ("TGP"), having primary receipts at Dracut, MA (pin number 412538) and primary deliveries in Zone 6 at the point(s) of interconnection between TGP and Buyer's

facilities in Cranston, RI, (pin number 420750).

The Assets shall be released by Buyer for the entire Term at no cost to Seller. Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the release of the Assets from Buyer to Seller. All releases shall be subject to recall in the event that the

Seller fails to meet its gas supply obligation to Buyer.

Delivery Point: The point of interconnection between TGP and Buyer's facilities at

Cranston, RI.

Gas Supply Requirements: On any day during the period of November 1, 2021 through March 31,

2022, Buyer shall have the right, but not the obligation, to call on a quantity of Gas up to the MDQ at the Delivery Point. Subject to satisfaction of these Gas Supply Requirements, Asset Manager shall have

the right to optimize the assigned capacity for its own account.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-6 Page 2 of 8

Price:

For the first 50 days which Buyer exercises the call option pursuant to Gas Supply Requirements, the Price shall be equal to the price for Tennessee, Zone 6, Delivered North - as published in *Platts Gas Daily Daily Price Survey* for the day of flow, plus the variables to transport Gas to the Delivery Point. After 50 days of call, the Price for each additional exercise of the call option pursuant to Gas Supply Requirements shall be equal to TGP, Zone 6, Delivered North as published in *Platts Gas Daily Daily Price Survey* for the day of flow *plus* \$0.10, plus the variables to transport Gas to the Delivery Point, for each dth of Gas delivered.

Notwithstanding the foregoing, if in *Buyer's sole discretion* operational issues on the Assets may preclude Seller from delivering Gas to the Delivery Point at the Price stated in a Transaction Confirmation resulting from this RFP, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assets and Buyer may immediately terminate a Transaction Confirmation resulting from the RFP.

Daily Call Nominations:

Buyer shall make all nominations for delivery of all Gas Supply Requirements prior to 10:00 AM, prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nomination shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on the Business Day prior to the Holiday).

Upon execution of a binding Transaction Confirmation, or adequate assurance that the Buyer and Seller intend the transaction be binding by the first date of the Term, Buyer shall arrange for Seller's use and access of the National Grid Electronic Bulletin Board ("EBB"). Seller shall utilize EBB to schedule the supply to the Delivery Point on Tennessee, Buyer's city gate, for confirmation by National Grid's Gas Control. Use of the EBB for other means of requests for confirmation of meter bounce transactions at the Delivery Point or other points of interconnection with Buyer's facilities shall be strictly prohibited.

Asset Management Fee:

Subject to satisfying the Gas Supply Requirements associated with the AMA, Seller shall have the right to utilize and optimize the Assets for its own account. In exchange for such right, Seller shall pay Buyer an Asset Management Fee. As part of their Proposal, Bidders must specify the Asset Management Fee to be paid to Buyer.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-6 Page 3 of 8

II. Instructions to Bidders

Any questions in connection with this RFP should be sent via email to the following email address:

GasRFP@nationalgrid.com.

All proposals in connection with this RFP should also be sent via email to the email address listed above. Proposals must be submitted by the date specified in the Schedule below. Proposals should include: (a) Seller's proposed Asset Management Fee and/or Reservation Fee (b) any proposed exceptions to the Transaction Confirmation attached hereto for Package No. 5 (c) whether Bidder requires takes be ratable and (d) whether Seller shall require receipt of any additional internal approvals prior to accepting an award pursuant to this RFP.

III. Schedule (all times are Eastern Time)

July 30, 2021

Proposals must be received by National Grid by 5:00 PM EST. All proposals shall expressly provide that they will remain binding and in effect, without modification, until 5:00 PM on August 6, 2021.

IV. Form of Agreement

National Grid will consider proposals only from Bidders who have an executed NAESB Base Contract for Sale and Purchase of Natural Gas or an executed ISDA with a Gas Annex with Buyer. Any transaction entered into as a result of this RFP shall be documented as a transaction under an active NAESB Agreement or ISDA Gas Annex. Please be advised that if the winning Bidder utilizes an ISDA with a Gas Annex, this transaction will be specifically excluded from margining calculation under the Credit Support Annex.

Bidders submitting bids in response to this RFP understand and agree that unless and until a definitive Transaction Confirmation has been executed and delivered, no contract or agreement providing for a transaction between such parties shall be deemed to exist between the parties, and neither party will be under any legal obligation of any kind whatsoever with respect to such transaction by virtue of this or any other written or oral expression of communication. National Grid reserves the right to withdraw or modify this RFP at any time and National Grid shall have the right, in its sole and absolute discretion, to reject any or all Proposals submitted in response to this RFP. The winning bid(s), if any, will be selected based on the proposal(s) that yield(s) the least cost, consistent with concerns for reliability of service and other business factors applied by National Grid in its sole discretion. Potential Sellers shall be subject to satisfactory credit review by National Grid.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-6 Page 4 of 8

V. Compliance with National Grid's Supplier Code of Conduct

At National Grid we are always seeking ways to meet the evolving needs and desires of our customers. We believe that a responsible approach to doing business is fundamental to what we do. In all of our activities we operate within Global Standards of Ethical Conduct. These standards include a commitment to the protection and enhancement of the environment, always seeking ways to minimize the environmental impact of our past, present and future activities and safeguarding our global environment for future generations. Our goal is to comply with regulations, reduce any impact that we may have and proactively seek out opportunities to improve the environment. In furtherance of this goal, National Grid has developed a "Supplier Code of Conduct" which describes our company's values and can be accessed at https://www.nationalgrid.com/document/83526/download

We value the business relationships we have with you and we believe that you are an important and central part of our success. This means that we expect you to carry out your business in line with these values. More specifically, we refer you to Section 3 - "Protecting the Environment". This section explains National Grid's expectations with respect to its suppliers. In connection with the purchase of natural gas, we will reject proposals from parties that fail to adhere to these requirements or who knowingly produce or purchase gas that was produced in violation of applicable laws and regulations.

National Grid has worked to establish the Natural Gas Supply Collaborative (NGSC). The NGSC is a voluntary collaborative of natural gas purchasers that are promoting safe and responsible practices for the development of natural gas supply. As a participant in the NGSC, National Grid is committed to encourage our natural gas suppliers and producers to support more robust voluntary reporting and increased transparency on 14 environmental and social performance indicators. The NGSC developed these indicators through a comprehensive stakeholder engagement undertaking including representation from both the environmental and natural gas production community.

As suppliers of natural gas to National Grid, it is our expectation that you will consider reporting on these 14 indicators. Over time, and in consultation with National Grid, we expect reporting on these 14 indicators will be fully embraced and easily identifiable on company web sites and may become a requirement for future business.

Supporting information on the NGSC can be found at the following Web site: http://www.mjbradley.com/NGSC

Liz Arangio Director of Gas Supply Planning Telephone: 617-212-1790

MaryBeth Carroll Manager of Gas Supply Planning Telephone: 516-545-3116

Samara Jaffe
Director of Gas Contracting, Compliance & Hedging
Telephone: 516-545-5408

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-6 Page 5 of 8

Janet Prag Senior Contract Specialist Telephone: 516-545-5463

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-6 Page 6 of 8

national**grid**

Asset Management Arrangement – Package 6 Transaction Confirmation The Narragansett Electric Company ("Narragansett")

TRANSACTION CONFIRMATION

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	Date: Transaction Confirmation #:	
This Transaction Confirmation was awarded pursuant to Narragansett's Request for Proposal for Asset Management Arrangements dated July 20, 2021. This Transaction Confirmation is subject to the Base Contract for Sale and Purchase of Natural Gas between Seller and Buyer, dated("Base Contract"). Terms not defined in this Transaction Confirmation shall have the meaning provided in the Base Contract. <i>This Transaction Confirmation will not become binding until executed by both parties.</i>		
SELLER: Attn: Phone:_ Fax: Base Contract No Transporters: Transporters Contract Number: Trader: _	BUYER: The Narragansett Electric Company 100 East Old County Road Hicksville, New York 11801 Attn: Contract Administration Phone: (516) 545-6068 Fax: (516) 545-5466 Base Contract No. Transporters: Tennessee Gas Pipeline Company, L.L.C. ("Tennessee") Trader: Samara Jaffe	
Contract Price: See Special Conditions Section C Below		
Term: Begin: November 1, 2021	End: October 31, 2022	
Performance Obligation and Contract Quantity: See Special Conditions Below Delivery Point(s): The primary points of interconnection between Tennessee and Buyer's facilities in Tennessee Zone 6 released by Buyer to Seller as part of the Assets		
Special Conditions:		
A. Definitions		
"Assets" means Buyer's FT-A Contracts with Tennessee having primary receipts at Dracut, MA (pin number 412538) and primary deliveries in Zone 6 the point(s) of interconnection between Tennessee and Buyer's facilities in Cranston, RI. The maximum delivered quantity of the Assets is 15,000 dt/day ("MDQ").		
"Credit Support Provider" means		
"CFTC" means the Commodity Futures Trading Commission.		
"Dekatherm" or "Dth" or "dt" means one (1) MMBtu.		
"EBB" means Buyer's Electronic Bulletin Board utilized for confirmation of Gas.		
"FERC" means the Federal Energy Regulatory Com	mission.	
"Letter of Credit" means an irrevocable, non-transferable, standby letter of credit issued by a major U.S. commercial bank, a U.S. branch office of a foreign bank, or U.S. financial institution, in any case with a credit rating of at least "A-" by S&P and "A3" by Moody's, in a form reasonably acceptable to the Buyer. All costs related to any Letter of Credit shall be for the account of the Seller.		

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-6 Page 7 of 8

"Moody's" means Moody's Investors Service, Inc. or its successor.

"S&P" means S&P Global Ratings, or its successor.

B. Gas Service and Capacity Release

- a. Release of Assets: During the Term, Buyer shall release the Assets on a pre-arranged, non-biddable basis, at no cost to Seller. Buyer shall be responsible for the payment of all demand charges related to the Assets. Seller shall be responsible for all variable costs in connection with the Assets during the Term unrelated to deliveries for Buyer. Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the release of the Assets from Buyer to Seller. All releases shall be subject to recall in the event that the Seller fails to meet its gas supply obligation to Buyer.
- b. Daily Call: On any day during the period of November 1, 2021 through March 31, 2022, Buyer shall have the right, but not the obligation, to call on a quantity of Gas up to the MDQ at the Delivery Point(s).
- c. Termination Option: If at any time during the Term, Seller fails to deliver Gas required to be delivered hereunder, unless such failure is excused by the Buyer's non-performance or caused by Force Majeure, Buyer shall have the right to terminate this Transaction Confirmation and recall the Assets.
- C. Price: For the 50 days which Buyer exercises the call option pursuant to Gas Supply Requirements, the Price shall be equal to the price for Tennessee, Zone 6, Delivered North as published in *Platts Gas Daily Daily Price Survey* for the day of flow, plus the variables to transport Gas to the Delivery Point. After Buyer has exercised 50 days of call, the Price for each additional exercise of the call option pursuant to Gas Supply Requirements shall be equal to Tennessee, Zone 6, Delivered North as published in *Platts Gas Daily Daily Price Survey* for the day of flow *plus* \$0.10, plus the variables to transport Gas to the Delivery Point, for each dth of Gas delivered.

Notwithstanding the foregoing, if in *Buyer's sole discretion* operational issues on the Assets may preclude Seller from delivering Gas to the Delivery Point at the Price stated in this Special Condition C, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assets and Buyer may immediately terminate this Transaction Confirmation.

D. Nominations

Buyer shall make all nominations for delivery of all Gas Supply Requirements prior to 10:00 AM, prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nomination shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on the Business Day prior to the Holiday).

Buyer shall arrange for Seller's use and access of the EBB. Seller shall utilize the EBB to schedule all Gas purchased pursuant to this AMA to the Delivery Point(s) for confirmation by National Grid's Gas Control. Use of the EBB or other means of requests for confirmation of meter bounce transactions at the Delivery Point or other points of interconnection with Buyer's facilities shall be strictly prohibited.

E. Asset Management Fee

Subject to the delivery obligations set forth above, Seller shall have the right to optimize the released capacity for its own account. In exchange for such right, during the Term, Seller shall make a payment to Buyer of \$______, payable in equal monthly installments of \$______, This payment shall be reflected as a credit to Buyer in Seller's invoice for the applicable Month.

F. Credit Provisions

Independent Amount. In the event Seller (i) has a Credit Rating at or below BBB- from S&P and/or Baa3 from Moody's, or (ii) is unrated, Seller shall provide Buyer with an Independent Amount in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB- by S&P and/or Baa3 by Moody's, (b) cash, or (c) a Letter of Credit, in either case, in an amount equal to 10% of the potential mark to market exposure for the transactions hereunder calculated as a function of price volatilities as well as the notional volume; provided, however, that the potential mark to market exposure shall be zero (0) when Seller's price is set at the Gas Daily Index.

Collateral Requirement. The "Collateral Requirement" for Seller means the Exposure (as defined below), minus the sum of (i) the amount of Cash previously transferred by Seller to National Grid, (ii) the amount of Cash held by National Grid as posted collateral as the result of drawing under any Letter of Credit maintained by Seller for the benefit of National Grid ("Letter of Credit"), and (iii) the undrawn value of each Letter of Credit; provided, however, that the Collateral Requirement of Seller will be deemed to be zero

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-6

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(0) if on the relevant Valuation Date, (i) no Event of Default with respect to Seller or its Credit Support Provider has occurred and is continuing, and (ii) the guaranty provided by Seller is in full force and effect. The "Collateral Requirement" for National Grid means zero (0).

Exposure. shall be calculated as the sum of:

- (i) all amounts that have been invoiced, but not yet paid for the transactions under this Transaction Confirmation; plus
- (ii) all amounts that have been accrued, but not yet invoiced for the transactions under this Transaction Confirmation; plus
- (iii) the mark to market amount for each Day remaining in the term for each transaction under this Transaction Confirmation; reduced by
- (iv) the Independent Amount, if any, previously provided by the Seller to the Buyer.

G. Asset Management Arrangement

The Parties agree that the transactions hereunder constitute an Asset Management Arrangement, as defined by FERC in Order No. 712 (as modified and clarified) and in accordance with FERC's rules and regulations, and that Seller is acting as Asset Manager as defined in 18 CFR 284.8(h)(3).

H. Changes in Law

If the FERC, CFTC or other applicable regulatory body shall implement any change in law, rule, regulation, tariff or practice that is binding on Seller or Buyer and materially and adversely affects such party's ability to perform its obligations hereunder, the parties shall negotiate in good faith an amendment to this Agreement or take other appropriate action the effect of which is to restore each party, as closely as possible, to its same position as prior to such change. If, within sixty (60) Days after the implementation of such change, the parties are unable to agree on such amendment or such other appropriate action, each party will continue to perform its obligations hereunder to the maximum extent possible under the applicable law, rule, regulation, tariff or practice, taking all reasonable steps to mitigate the effect of such change on each other.

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Seller:	Buyer: The Narragansett Electric Company
By: Name: Title: Date:	By: Name: James G. Holodak, Jr. Title: Vice President Date:

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESSES: GAS SUPPLY PANEL
SEPTEMBER 1, 2021
ATTACHMENTS

Attachment GSP-7

RFP for AMA Columbia Gas Transmission ("TCo")

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-7 Page 1 of 7

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Request for Proposals ("RFP") for The Narragansett Electric Company d/b/a National Grid **Asset Management Arrangement ("AMA")** July 20, 2021

The Narragansett Electric Company d/b/a National Grid ("Narragansett" or "Buyer") is seeking proposals ("Proposals") for an AMA as more fully set forth below. The successful bidder(s) ("Seller") shall have the right to optimize the assets ("Assets") subject to satisfying Buyer's Gas Supply Requirements.

Package No. 4 - AMA (TCo – Broadrun to Hanover)

Provisions I.

Term: November 1, 2021 through October 31, 2022.

Assets:

During the Term, Buyer shall release FTS contract 31523 with Columbia Gas Transmission L.L.C. ("TCo"), having primary receipts at Broadrun and primary deliveries in at the interconnection between TCo and Algonquin Gas Transmission, LLC ("AGT") at TCo-Hanover and a maximum daily quantity of 10,000 dth/day ("MDO").

The Assets shall be released by Buyer for the entire Term at no cost to Seller. Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the release of the Assets from Buyer to Seller. All releases shall be subject to recall in the event that the Seller fails to meet its gas supply obligation to Buyer.

Delivery Point:

The point of interconnection between TCo and AGT into AGT known as TCo-Hanover.

Gas Supply Requirements: On any day during the period of November 1, 2021 through April 15, 2022 ("Delivery Period"), Buyer shall have the right, but not the obligation, to call on a quantity of Gas up to the MDQ at the Delivery Point. Subject to satisfaction of these Gas Supply Requirements, Asset Manager shall have the right to optimize the assigned capacity for its own account subject to the following.

> (a) At least three business days prior to the 1st day of the following month of delivery, Buyer shall have the right, but not the obligation, to

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-7 Page 2 of 7

request Base-Load delivery of such Gas Supply at the Delivery Point up to the MDQ during this Delivery Period.

(b) Further, subject to Buyer having exercised its Base-Load rights, Buyer shall have the right to call on a quantity up to the remaining MDQ.

Price:

The commodity price for Gas called on through the exercise of a daily call shall be equal to *Platts Gas Daily – Daily Price Survey* (\$MMBtu) Midpoint for TCo Pool, plus the imputed variables to deliver the Gas Supply to the Delivery Point.

The commodity price for Gas Called on through the Base-Load option shall be equal to *Platts Inside FERC* for TCo Pool, plus the imputed variables to deliver the Gas Supply to the Delivery Point.

Notwithstanding the foregoing, if in *Buyer's sole discretion* operational issues on the Assets may preclude Seller from delivering Gas to the Delivery Point at the Base-Load or Daily Call Price stated in a Transaction Confirmation resulting from this RFP, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assets and Buyer may immediately terminate a Transaction Confirmation resulting from the RFP.

Daily Call Nominations:

Buyer shall make all nominations for delivery of all Gas Supply Requirements prior to 10:00 AM, prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nomination shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on the Business Day prior to the Holiday).

Asset Management Fee:

Subject to satisfying the Gas Supply Requirements associated with the AMA, Seller shall have the right to utilize and optimize the Assets for its own account. In exchange for such right, Seller shall pay Buyer an Asset Management Fee. As part of their Proposal, Bidders must specify the Asset Management Fee to be paid to Buyer.

II. Instructions to Bidders

Any questions in connection with this RFP should be sent via email to the following email address:

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GasRFP@nationalgrid.com.

All proposals in connection with this RFP should also be sent via email to the email address listed above. Proposals must be submitted by the date specified in the Schedule below. Proposals should include: (a) Seller's proposed Asset Management Fee and/or Reservation Fee (b) any proposed exceptions to the Transaction Confirmation attached hereto and (c) whether Seller shall require receipt of any additional internal approvals prior to accepting an award pursuant to this RFP.

III. Schedule (all times are Eastern Time)

July 30, 2021

Proposals must be received by National Grid by 5:00 PM EST. All proposals shall expressly provide that they will remain binding and in effect, without modification, until 5:00 PM on August 6, 2021.

IV. Form of Agreement

National Grid will consider proposals only from Bidders who have an executed NAESB Base Contract for Sale and Purchase of Natural Gas or an executed ISDA with a Gas Annex with Buyer. Any transaction entered into as a result of this RFP shall be documented as a transaction under an active NAESB Agreement or ISDA Gas Annex. Please be advised that if the winning Bidder utilizes an ISDA with a Gas Annex, this transaction will be specifically excluded from margining calculation under the Credit Support Annex.

Bidders submitting bids in response to this RFP understand and agree that unless and until a definitive Transaction Confirmation has been executed and delivered, no contract or agreement providing for a transaction between such parties shall be deemed to exist between the parties, and neither party will be under any legal obligation of any kind whatsoever with respect to such transaction by virtue of this or any other written or oral expression of communication. National Grid reserves the right to withdraw or modify this RFP at any time and National Grid shall have the right, in its sole and absolute discretion, to reject any or all Proposals submitted in response to this RFP. The winning bid(s), if any, will be selected based on the proposal(s) that yield(s) the least cost, consistent with concerns for reliability of service and other business factors applied by National Grid in its sole discretion. Potential Sellers shall be subject to satisfactory credit review by National Grid.

V. Compliance with National Grid's Supplier Code of Conduct

At National Grid we are always seeking ways to meet the evolving needs and desires of our customers. We believe that a responsible approach to doing business is fundamental to what we do. In all of our activities we operate within Global Standards of Ethical Conduct. These standards include a commitment to the protection and enhancement of the environment, always seeking ways to minimize the environmental impact of our past, present and future activities and safeguarding our global

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-7 Page 4 of 7

environment for future generations. Our goal is to comply with regulations, reduce any impact that we may have and proactively seek out opportunities to improve the environment. In furtherance of this goal, National Grid has developed a "Supplier Code of Conduct" which describes our company's values and can be accessed at https://www.nationalgrid.com/document/83526/download

We value the business relationships we have with you and we believe that you are an important and central part of our success. This means that we expect you to carry out your business in line with these values. More specifically, we refer you to Section 3 - "Protecting the Environment". This section explains National Grid's expectations with respect to its suppliers. In connection with the purchase of natural gas, we will reject proposals from parties that fail to adhere to these requirements or who knowingly produce or purchase gas that was produced in violation of applicable laws and regulations.

National Grid has worked to establish the Natural Gas Supply Collaborative (NGSC). The NGSC is a voluntary collaborative of natural gas purchasers that are promoting safe and responsible practices for the development of natural gas supply. As a participant in the NGSC, National Grid is committed to encourage our natural gas suppliers and producers to support more robust voluntary reporting and increased transparency on 14 environmental and social performance indicators. The NGSC developed these indicators through a comprehensive stakeholder engagement undertaking including representation from both the environmental and natural gas production community.

As suppliers of natural gas to National Grid, it is our expectation that you will consider reporting on these 14 indicators. Over time, and in consultation with National Grid, we expect reporting on these 14 indicators will be fully embraced and easily identifiable on company web sites and may become a requirement for future business.

Supporting information on the NGSC can be found at the following Web site: http://www.mjbradley.com/NGSC

Liz Arangio Director of Gas Supply Planning Telephone: 617-212-1790

MaryBeth Carroll Manager of Gas Supply Planning Telephone: 516-545-3116

Samara Jaffe Director of Gas Contracting, Compliance & Hedging Telephone: 516-545-5408

Janet Prag Senior Contract Specialist Telephone: 516-545-5463

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nationalgrid

Asset Management Arrangement – Package 4 Transaction Confirmation The Narragansett Electric Company ("Narragansett")

TRANSACTION CONFIRMATION

			
	Date: Transaction Confirmation #:		
This Transaction Confirmation was awarded pursuant to Narragansett's Request for Proposal for Asset Management Arrangements dated July 20, 2021. This Transaction Confirmation is subject to the Base Contract for Sale and Purchase of Natural Gas between Seller and Buyer, dated ("Base Contract"). Terms not defined in this Transaction Confirmation shall have the meaning provided in the Base Contract. <i>This Transaction Confirmation will not become binding until executed by both parties.</i>			
SELLER: Attn: Phone:_ Fax: Base Contract No Transporters: Transporters Contract Number: Trader: _ Contract Price: See Special Conditions Section C	BUYER: The Narragansett Electric Company 100 East Old County Road Hicksville, New York 11801 Attn: Contract Administration Phone: (516) 545-6068 Fax: (516) 545-5466 Base Contract No. Transporters: Columbia Gas Transmission L.L.C. ("TCo") Trader: Samara Jaffe		
Term: Begin: November 1, 2021	End: October 31, 2022		
Performance Obligation and Contract Quantity:			
Delivery Point(s): The point of interconnection between TCo and Algonquin Gas Transmission LLC ("AGT") into AGT known as TCo-Hanover.			
Special Conditions: A. Definitions			
"Assets" means Buyer's FTS contract 31523 with TCo, having primary receipts at Broadrun and primary deliveries in at the interconnection between TCo and AGT at TCo-Hanover and a maximum daily quantity of 10,000 dth/day ("MDQ").			
"Credit Support Provider" means			
"CFTC" means the Commodity Futures Trading Commission.			
"Dekatherm" or "Dth" or "dt" means one (1) MMBtu.			
"FERC" means the Federal Energy Regulatory Commission.			
"Letter of Credit" means an irrevocable, non-transferable, standby letter of credit issued by a major U.S. commercial bank, a U.S. branch office of a foreign bank, or U.S. financial institution, in any case with a credit rating of at least "A-" by S&P and "A3" by Moody's, in a form reasonably acceptable to the Buyer. All costs related to any Letter of Credit shall be for the account of the Seller.			
"Moody's" means Moody's Investors Service, Inc. or	ita augenagar		
	its successor.		
"S&P" means S&P Global Ratings, or its successor.	its successor.		

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-7 Page 6 of 7

B. Gas Service and Capacity Release

- a. Release of Assets: During the Term, Buyer shall release the Assets on a pre-arranged, non-biddable basis, at no cost to Seller. Buyer shall be responsible for the payment of all demand charges related to the Assets. Seller shall be responsible for all variable costs in connection with the Assets during the Term unrelated to deliveries for Buyer. Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the release of the Assets from Buyer to Seller. All releases shall be subject to recall in the event that the Seller fails to meet its gas supply obligation to Buyer.
- b. Gas Supply Requirements: On any day during the period of November 1, 2021 through April 15, 2022 ("Delivery Period"), Buyer shall have the right, but not the obligation, to call on a quantity of Gas up to the MDQ at the Delivery Point subject to the following
 - (i) At least three business days prior to the 1st day of the following month of delivery, Buyer shall have the right, but not the obligation, to request Base-Load delivery of such Gas Supply at the Delivery Point up to the MDQ during this Delivery Period.
 - (ii) Further, subject to Buyer having exercised its Base-Load rights, Buyer shall have a right to call on a quantity up to the remaining MDQ.
- c. Termination Option: If at any time during the Term, Seller fails to deliver Gas required to be delivered hereunder, unless such failure is excused by the Buyer's non-performance or caused by Force Majeure, Buyer shall have the right to terminate this Transaction Confirmation and recall the Assets.

C. Price:

The commodity price for Gas called on through the exercise of a daily call shall be equal to *Platts Gas Daily Daily Price Survey* (\$MMBtu) Midpoint for TCo Pool, plus the imputed variables to deliver the Gas Supply to the Delivery Point.

The commodity price for Gas called on through the exercise of a Base-Load option shall be equal to *Platts Inside FERC* for TCo Pool.

Notwithstanding the foregoing, if in *Buyer's sole discretion* operational issues on the Assets may preclude Seller from delivering Gas to the Delivery Point at the Base-Load or Daily Call Price stated in this Special Condition C, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assets and Buyer may immediately terminate this Transaction Confirmation.

D. Nominations

Buyer shall make all nominations for delivery of all Gas Supply Requirements prior to 10:00 AM, prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nomination shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on the Business Day prior to the Holiday).

E. Asset Management Fee

Subject to the delivery obligations set forth above, Seller shall have the right to optimize the released capacity for its own account. In exchange for such right, during the Term, Seller shall make a payment to Buyer of \$______, payable in equal monthly installments of \$______, This payment shall be reflected as a credit to Buyer in Seller's invoice for the applicable Month.

F. Credit Provisions

Independent Amount. In the event Seller (i) has a Credit Rating at or below BBB- by S&P and/or Baa3 by Moody's, or (ii) is unrated, Seller shall provide Buyer with an Independent Amount in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB- by S&P and/or Baa3 by Moody's, (b) cash, or (c) a Letter of Credit, in either case, in an amount equal to 10% of the potential mark to market exposure for the transactions hereunder calculated as a function of price volatilities as well as the notional volume; provided, however, that the potential mark to market exposure shall be zero (0) when Seller's price is set at the Gas Daily Index.

Collateral Requirement. The "Collateral Requirement" for Seller means the Exposure (as defined below), minus the sum of (i) the amount of Cash previously transferred by Seller to Buyer, (ii) the amount of Cash held by Buyer as posted collateral as the result of drawing under any Letter of Credit maintained by Buyer for the benefit of Buyer, and (iii) the undrawn value of each Letter of Credit;

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-7

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provided, however, that the Collateral Requirement for Seller will be deemed to be zero (0) if (i) Seller has a Credit Rating of at least BBB- by S&P and/or Baa3 by Moody's, and (ii) no Event of Default with respect to Seller has occurred and is continuing. Seller may provide the Collateral Requirement in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB- by S&P and/or Baa3 by Moody's, (b) cash, or (c) a Letter of Credit. The "Collateral Requirement" for Buyer means zero (0).

Exposure. shall be calculated as the sum of:

- (i) all amounts that have been invoiced, but not yet paid for the transactions under this Transaction Confirmation; plus
- (ii) all amounts that have been accrued, but not yet invoiced for the transactions under this Transaction Confirmation; plus
- (iii) the mark to market amount for each Day remaining in the term for each transaction under this Transaction Confirmation; reduced by
- (iv) the Independent Amount, if any, previously provided by the Seller to the Buyer.

G. Asset Management Arrangement

The Parties agree that the transactions hereunder constitute an Asset Management Arrangement, as defined by FERC in Order No. 712 (as modified and clarified) and in accordance with FERC's rules and regulations, and that Seller is acting as Asset Manager as defined in 18 CFR 284.8(h)(3).

H. Changes in Law

If the FERC, CFTC or other applicable regulatory body shall implement any change in law, rule, regulation, tariff or practice that is binding on Seller or Buyer and materially and adversely affects such party's ability to perform its obligations hereunder, the parties shall negotiate in good faith an amendment to this Agreement or take other appropriate action the effect of which is to restore each party, as closely as possible, to its same position as prior to such change. If, within sixty (60) Days after the implementation of such change, the parties are unable to agree on such amendment or such other appropriate action, each party will continue to perform its obligations hereunder to the maximum extent possible under the applicable law, rule, regulation, tariff or practice, taking all reasonable steps to mitigate the effect of such change on each other.

Seller:	Buyer: The Narragansett Electric Company
By:	By:
Name:	Name: James G. Holodak, Jr.
Title:	Title: Vice President
Date:	Date:

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESSES: GAS SUPPLY PANEL
SEPTEMBER 1, 2021
ATTACHMENTS

Attachment GSP-8

RFP for AMA Millennium Pipeline to Ramapo

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-8 Page 1 of 9

nationalgrid

Request for Proposals ("RFP") for Asset Management Arrangement July 20, 2021

The Narragansett Electric Company d/b/a National Grid ("National Grid" or "Buyer") is seeking proposals ("Proposals") for an Asset Management Arrangement ("AMA") as more fully set forth below. The successful bidder ("Seller") shall have the right to optimize the released assets ("Assets") subject to satisfying Buyer's Gas Supply Requirements.

Package No. 5 - AMA - Millennium Eastern System Upgrade - Corning-to Ramapo AGT

I. Provisions:

Term: November 1, 2021 through October 31, 2022.

Assets and the Release of Assets:

During the Term, Buyer shall release at no cost to Seller, 5,000 dth/day (the "MDQ") of its Firm Transportation Contract No. 210165 with Millennium Pipeline Company, L.L.C. ("Millennium") having a primary point of receipt of Corning-Empire PL and primary firm delivery entitlements to Ramapo-AGT.

Buyer shall remain responsible for payment of all demand charges related to the Assets (except any potential loss of discount related to activities of Seller). A copy of Buyer's Contract No. 210165 and the negotiated rate agreement with Millennium are included with this RFP. National Grid will not advise Bidders or an Asset Manager on potential transactions that may result in a loss of discount.

Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the release of the Assets from Buyer to Seller. The parties intend that any transaction entered into pursuant to this RFP shall be structured as an AMA pursuant to FERC Order 712 and any other applicable rules or regulations. All releases shall be subject to recall in the event

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The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-8 Page 2 of 9

that the Seller fails to meet its gas supply obligation to Buyer.

Delivery Point (s):

The Delivery Point shall be the point of interconnect between Millennium and Algonquin Gas Transmission Pipeline ("AGT") at Ramapo-AGT, into Buyer's AGT capacity.

Gas Supply Requirements:

On any day during the period of **November 1**, **2021 through April 30**, **2022** ("Delivery Period") of the Term, Buyer shall have the right, but not the obligation, to call on Seller to deliver up to the MDQ at the Delivery Point. Subject to satisfaction of these Gas Supply Requirements, Asset Manager shall have the right to optimize the assigned capacity for its own account. Subject to the following:

- (a) At least three business days prior to the 1st day of the following month of delivery, Buyer shall have the right, but not the obligation, to request Base-Load delivery of such Gas Supply at the Delivery Point up to the MDQ during this Delivery Period.
- (b) Further, subject to Buyer having exercised its Base-Load rights, Buyer shall have a right to call on a quantity up to the remaining MDQ.

Price:

The commodity price for Gas called on through the exercise of a daily call shall be based on *Platts Gas Daily* – Daily Price Survey (\$MMBtu) Midpoint for Millennium East Pool, plus the imputed variables to deliver the Gas Supply to the Delivery Point.

The commodity price for Gas called on through the Base-Load option shall be based on *Platts Inside FERC* for Millennium East Pool, plus the imputed variables to deliver the Gas Supply to the Delivery Point.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-8 Page 3 of 9

Notwithstanding the foregoing, if in **Buyer's sole** discretion operational issues on the Assets may preclude Seller from delivering Gas to the Delivery Point at the Base-Load or Daily Call Price stated in a Transaction Confirmation resulting from this RFP, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assets and Buyer may immediately terminate a Transaction Confirmation resulting from the RFP.

Daily Call Nominations:

For Daily Calls at the Delivery Point(s), Buyer shall make all nominations for delivery of Daily Call purchases prior to 10:00 AM, prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nominations shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on the Business Day prior to the Holiday).

Asset Management Fee:

Subject to satisfying the Gas Supply Requirements associated with each AMA, Seller shall have the right to utilize and optimize the Assets for its own account. In exchange for such right, Seller shall pay Buyer an Asset Management Fee. As part of their Proposal(s), Bidders should specify the total proposed Asset Management Fee to be paid to Buyer for the AMA.

Form of Agreement:

National Grid will consider Proposals only from Bidders who have an executed NAESB Base

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-8 Page 4 of 9

Contract for Sale and Purchase of Natural Gas or an executed ISDA with a Gas Annex with Buyer. Any transaction entered into as a result of this RFP shall be documented as a transaction under an active NAESB Agreement or ISDA Gas Annex. Included in this RFP is the form of Transaction Confirmation that National Grid proposes for execution. As part of their Proposal(s), Bidders *must* clearly identify any required Special Conditions or exceptions to the Transaction Confirmation including, but not limited to, language related to FERC, the CFTC and any other applicable regulatory body.

II. Instructions to Bidders

Any questions in connection with this RFP should be sent via email to the following email address:

GasRFP@nationalgrid.com

All proposals in connection with this RFP should also be sent via email to the email address listed above. Proposals must be submitted by the date specified in the Schedule below. Proposals must include: (a) Seller's proposed Reservation Charge for the Package, (b) any specialized language Seller requires in the Transaction Confirmation, and (c) whether Seller shall require receipt of any additional internal approvals prior to accepting an award pursuant to this RFP.

III. Schedule (all times are Eastern Standard Time)

July 30, 2021

Proposals must be received by National Grid by 5:00 PM. All proposals shall expressly provide that they will remain binding and in effect, without modification, until 5:00 PM on August 6, 2021.

IV. Form of Agreement

National Grid will consider proposals only from bidders who have an executed NAESB Base Contract for Sale and Purchase of Natural Gas or an executed ISDA

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-8 Page 5 of 9

with a Gas Annex with Buyer. Any transaction entered into as a result of this RFP shall be documented as a transaction under an active NAESB Agreement or ISDA Gas Annex. Please be advised that if the winning Bidder utilizes an ISDA with a Gas Annex, this transaction will be specifically excluded from margining calculation under the Credit Support Annex.

Bidders submitting bids in response to this RFP understand and agree that unless and until a definitive Transaction Confirmation has been executed and delivered, no contract or agreement providing for a transaction between such parties shall be deemed to exist between the parties, and neither party will be under any legal obligation of any kind whatsoever with respect to such transaction by virtue of this or any other written or oral expression of communication. National Grid reserves the right to withdraw or modify this RFP at any time and National Grid shall have the right, in its sole and absolute discretion, to reject any or all Proposals submitted in response to this RFP. The winning bid(s), if any, will be selected based on the proposal(s) that yield(s) the least cost, consistent with concerns for reliability of service and other business factors applied by National Grid in its sole discretion. Potential Sellers shall be subject to satisfactory credit review by National Grid.

V. Compliance with National Grid's Supplier Code of Conduct

At National Grid we are always seeking ways to meet the evolving needs and desires of our customers. We believe that a responsible approach to doing business is fundamental to what we do. In all of our activities we operate within Global Standards of Ethical Conduct. These standards include a commitment to the protection and enhancement of the environment, always seeking ways to minimize the environmental impact of our past, present and future activities and safeguarding our global environment for future generations. Our goal is to comply with regulations, reduce any impact that we may have and proactively seek out opportunities to improve the environment. In furtherance of this goal, National Grid has developed a "Supplier Code of Conduct" which describes our company's values accessed be can at https://www.nationalgrid.com/document/83526/download

We value the business relationships we have with you and we believe that you are an important and central part of our success. This means that we expect you to carry out your business in line with these values. More specifically, we refer you to Section 3 - "Protecting the Environment". This section explains National Grid's expectations with respect to its suppliers. In connection with the purchase of natural gas, we will reject proposals from parties that fail to adhere to these requirements or who knowingly produce or purchase gas that was produced in violation of applicable laws and regulations.

The Narragansett Electric Company
d/b/a National Grid
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National Grid has worked to establish the Natural Gas Supply Collaborative (NGSC). The NGSC is a voluntary collaborative of natural gas purchasers that are promoting safe and responsible practices for the development of natural gas supply. As a participant in the NGSC, National Grid is committed to encourage our natural gas suppliers and producers to support more robust voluntary reporting and increased transparency on 14 environmental and social performance indicators. The NGSC developed these indicators through a comprehensive stakeholder engagement undertaking including representation from both the environmental and natural gas production community.

As suppliers of natural gas to National Grid, it is our expectation that you will consider reporting on these 14 indicators. Over time, and in consultation with National Grid, we expect reporting on these 14 indicators will be fully embraced and easily identifiable on company web sites and may become a requirement for future business.

Supporting information on the NGSC can be found at the following Web site: http://www.mjbradley.com/NGSC

Liz Arangio Director of Gas Supply Planning Telephone: 617-212-1790

MaryBeth Carroll Manager of Gas Supply Planning Telephone: 516-545-3116

Samara Jaffe
Director of Gas Contracting, Compliance & Hedging
Telephone: 516-545-5408

Janet Prag Senior Contract Specialist of FERC Compliance & Contracting Telephone: 516-545-5463

nationalgrid

Form of Transaction Confirmation – Package 5 The Narragansett Electric Company ("Narragansett")

TRANSACTION CO	ONFIRMATION		
	Date:		
	Transaction Confirmation #:		
This Transaction Confirmation was awarded pursuant to Narragan: Arrangements dated July 20, 2021. This Transaction Confirmation Natural Gas between Seller and Buyer dated ("Base Corshall have the meaning provided in the Base Contract. <i>The terms</i> execution hereof by both parties.	is subject to the Base Contract for Sale and Purchase of ntract"). Terms not defined in this Transaction Confirmation		
Seller:	Buyer:		
Attn:Phone:Fax:	The Narragansett Electric Company 100 East Old Country Road Hicksville, New York 11801 Attn: Contract Administration Phone: (516) 545-6068 Base Contract No. Transporter: Millennium Pipeline Company, L.LC. ("Millennium") Transporter Contract Number: 210165 Trader: Samara Jaffe		
Contract Price: See Special Conditions below.			
Term: Begin: November 1, 2021 End: Octobe	er 31, 2022		
Performance Obligation and Contract Quantity: See Special C	onditions Below.		
Delivery Point(s): The Delivery Point(s) shall be the point of interconnect between Millennium and Algonquin Gas Transmission Pipeline ("AGT") at Ramapo-AGT, into Buyer's capacity on AGT.,			
Special Conditions:			
A. Definitions "Assets" means the released portion of Buyer's Millennium Contract No. 210165, having primary points of receipt at Corning-Empire PL and primary firm delivery entitlements to Ramapo-AGT.			
"CFTC" shall mean the U.S. Commodity Futures Trading Commission.			
"Credit Support Provider" shall mean			
"Dekatherm" or "Dth" or "dt" means one (1) MMBtu.			
"EBB" means Buyer's Electronic Bulletin Board utilized for confirmation of Gas.			
"FERC" means the Federal Energy Regulatory Commission.			
"Letter of Credit" means an irrevocable, non-transferable, standby letter of credit issued by a major U.S. commercial bank, a U.S. branch office of a foreign bank, or U.S. financial institution, in any case with a credit rating of at least "A-" by S&P and "A3" by Moody's, in a form reasonably acceptable to the Buyer. All costs related to any Letter of Credit shall be for the account of the Seller.			
"Moody's" means Moody's Investors Services, Inc. or its successor	r.		

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-8

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"S&P" means S&P Global Ratings, or its successor.

B. Gas Service and Release of Assets

 Release of Assets: During the Term, Buyer shall release at no cost to Seller, 5,000 dth/day (the "MDQ") of its Firm Transportation Contract No. 210165 with Millennium having a primary point of receipt of Corning-Empire PL and primary firm delivery entitlements to Ramapo AGT.

Buyer shall remain responsible for payment of all demand charges related to the Assets (except any potential loss of discount related to activities of Seller). Seller shall be responsible for all variable costs in connection with the Assets during the Term. Buyer and Seller each agree to take such actions and execute such documents as may be required to effectuate the release of the Assets from Buyer to Seller. All releases shall be subject to recall in the event that the Seller fails to meet its gas supply obligation to Buyer.

- 2. **Gas Supply Requirements:** On any day during the period of November 1, 2021 through April 30, 2022 ("Delivery Period") of the Term, Buyer shall have the right, but not the obligation, to call on Seller to deliver up to the MDQ at the Delivery Points. Subject to satisfaction of these Gas Supply Requirements, Asset Manager shall have the right to optimize the assigned capacity for its own account. Subject to the following:
 - (a) At least three business days prior to the 1st day of the following month of delivery, Buyer shall have the right, but not the obligation, to request Base-Load delivery of such Gas Supply at the Delivery Point up to the MDQ during this Delivery Period.
 - (b) Further, subject to Buyer having exercised its Base-Load rights, Buyer shall have a right to call on a quantity up to the remaining MDQ.
- 3. **Termination Option:** If at any time during the Term, Seller fails to deliver Gas required to be delivered hereunder, unless such failure is excused by the Buyer's non-performance or caused by Force Majeure, Buyer shall have the right to terminate this Transaction Confirmation and recall the Assets.
- C. Price: The commodity price for Gas purchased pursuant to Special Condition 2 shall be as follows:
 - (a) For Gas purchased pursuant to Special Condition 2 or 2(b) (i.e., called on through the exercise of a daily call) the price shall be equal to *Platts Gas Daily – Daily Price Survey* (\$MMBtu) Midpoint for Millennium East Pool, plus the imputed variables to deliver the Gas Supply to the Delivery Point(s).
 - (b) For Gas purchased through the Base-Load option pursuant to Special Condition 2(a), the price shall be equal to *Platts Inside FERC* for Millennium East Pool, plus the imputed variables to deliver the Gas Supply to the Delivery Point(s).
 - (c) Notwithstanding the foregoing, if in Buyer's sole discretion operational issues on the Assets may preclude Seller from delivering Gas to the Delivery Point at the Base-Load or Daily Call Price stated in this Special Condition C, then Buyer may direct Seller at the Nominations deadline to deliver a certain percentage of the MDQ at a fair market price for the Delivery Point. If Buyer makes such request for alternative pricing and Seller fails to deliver gas at the alternative pricing requested by Buyer or Buyer and Seller are unable to agree to a fair market price for such deliveries, Seller's failure shall not be excused as a result of a failure of the Assets and Buyer may immediately terminate this Transaction Confirmation.

B. Nominations

For Daily Calls at the Delivery Point(s) purchase pursuant to Special Condition 2, Buyer shall make all nominations for delivery of Daily Call purchases prior to 10:00 AM, prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Friday nominations shall be for Saturday through Monday (ratably). Holidays are as determined by ICE and shall be treated the same as weekends (*i.e.*, nominated ratably on the Business Day prior to the Holiday).

C. Asset Management Fee

Subject to the delivery obligations set forth above, Seller shall have the right to optimize the Assets f	or its own account. In
exchange for such right, during the Term, Seller shall make a payment to Buyer of \$, payable in equal monthly
installments of \$ This payment shall be reflected as a credit to Buyer in Seller's invoice for	the applicable Month.

D. Credit Provisions

Independent Amount. In the event Seller (i) has a credit rating at or below BBB- from S&P and/or Baa3 from Moody's, or (ii) is

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-8

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unrated, Seller shall provide Buyer with an Independent Amount in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB- by S&P and/or Baa3 by Moody's, (b) cash, or (c) a Letter of Credit, in either case, in an amount equal to 10% of the potential mark to market exposure for the transactions hereunder calculated as a function of price volatilities as well as the notional volume; provided, however, that the potential mark to market exposure shall be zero (0) when Seller's price is set at the Gas Daily Index.

Collateral Requirement. The "Collateral Requirement" for Seller means the Exposure (as defined below), minus the sum of (i) the amount of Cash previously transferred by Seller to National Grid, (ii) the amount of Cash held by National Grid as posted collateral as the result of drawing under any Letter of Credit maintained by Seller for the benefit of National Grid ("Letter of Credit"), and (iii) the undrawn value of each Letter of Credit; provided, however, that the Collateral Requirement for Seller will be deemed to be zero (0) if (i) Seller has a Credit rating of at least BBB- from S&P and/or Baa3 from Moody's, and (ii) no Event of Default with respect to Seller has occurred and is continuing. Seller may provide the Collateral Requirement in the form of either (a) a guaranty from a Credit Support Provider rated at least BBB- from S&P and/or Baa3 from Moody's, (b) cash, or (c) a Letter of Credit. The "Collateral Requirement" for National Grid means zero (0).

Exposure. shall be calculated as the sum of:

- (i) all amounts that have been invoiced, but not yet paid for the transactions under this Transaction Confirmation; plus
- (ii) all amounts that have been accrued, but not yet invoiced for the transactions under this Transaction Confirmation; plus
- (iii) the mark to market amount for each Day remaining in the term for each transaction under this Transaction Confirmation; reduced by
- (iv) the Independent Amount, if any, previously provided by the Seller to the Buyer.

E. Asset Management Arrangement ("AMA")

It is the intention of the parties to structure this transaction as an AMA as defined by the FERC in Order 712 (as modified and clarified) and in accordance with FERC's rules and regulations. Seller is acting as an Asset Manager as defined in 18 CFR 284.8(h)(3). If it is determined that this transaction does not constitute an AMA, the parties agree to modify the transaction as required while maintaining, to the extent possible, the economics of the transaction.

F. Changes in Law

If the FERC, the CFTC, or other applicable regulatory body shall implement any change in law, rule, regulation, tariff or practice that is binding on Seller or Buyer and materially and adversely affects such party's ability to perform its obligations hereunder, the parties shall negotiate in good faith an amendment to this Transaction Confirmation or take other appropriate action the effect of which is to restore each party, as closely as possible, to its same position as prior to such change. If the parties are unable to agree on such amendment or such other appropriate action, each party will continue to perform its obligations hereunder to the maximum extent possible under the applicable law, rule, regulation, tariff or practice, taking all reasonable steps to mitigate the effect of such change on each other or either party may terminate this Transaction Confirmation upon Notice to the other party.

Seller:	Buyer: The Narragansett Electric Company
By: Name: Title: Date:	By: Name: James G. Holodak, Jr. Title: Vice President Date:

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESSES: GAS SUPPLY PANEL
SEPTEMBER 1, 2021
ATTACHMENTS

Attachment GSP-9

RFP for Everett Supply

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-9 Page 1 of 4

nationalgrid

Request for Proposals ("RFP") for Gas Supply July 20, 2021

The Narragansett Electric Company ("Narragansett") is seeking proposals ("Proposals") for Gas Supplies into its firm transportation capacity on Tennessee Gas Pipeline ("TGP") in Zone 6. The winning bidder(s) ("Seller(s)") shall deliver the required gas supply to Narragansett at the Delivery Point.

Package No. 7 – Gas Supply - Everett

I. Gas Supply Requirements

Term: December 1, 2021 through March 31, 2022.

Delivery Point: The Delivery Point shall be the interconnection

between the facilities of Constellation LNG, LLC at Everett, MA and Narragansett's firm transportation

agreement with TGP.

Bidders wishing to deliver to alternative delivery points must indicate so with their offer; an awarded bidder will not be allowed to deliver to alternative delivery points without prior permission from

Narragansett.

<u>Quantity:</u> <u>Daily Call:</u> The maximum daily quantity shall be up

to 5,000 dt/day ("MDQ") and the maximum seasonal

quantity ("MSQ") shall be 100,000 dt.

Bidders wishing to submit offers less than the MDQ may adjust the MSQ of both proportionately.

<u>Price:</u> <u>Commodity Charge:</u>

Pricing for the Daily Call quantities shall be based on *Platts Gas Daily* – Daily Price Survey (\$MMBtu) Midpoint index for TGP Zone 6 North Point for the applicable Day.

applicable Day.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-9 Page 2 of 4

NOTE: Bidders may propose alternative index-based pricing with their bids but are advised that Buyer is unable to consider proposals which may be regarded as a fixed price contract, including those proposals containing a price floor.

Reservation Charge:

To be proposed by Seller.

Nominations:

Buyer shall make all nominations for delivery of Gas prior to 10:00 AM prevailing Eastern Standard Time on the Business Day prior to the Gas Day on which delivery of Gas is requested. Nominations need not be ratable.

II. Instructions to Bidders

Any questions in connection with this RFP should be sent via email to the following email address:

GasRFP@nationalgrid.com

All proposals in connection with this RFP should also be sent via email to the email address listed above. Proposals must be submitted by the date specified in the Schedule below. Proposals must include: (a) Seller's proposed Price (including Reservation Charge), (b) any specialized language Seller requires in the Transaction Confirmation pertaining to the FERC or to the CFTC, and (c) whether Seller shall require receipt of any additional internal approvals prior to accepting an award pursuant to this RFP.

III. Schedule (all times are Eastern Standard Time)

July 30, 2021 Proposals must be received by National Grid by 5:00 PM. All proposals shall expressly provide that they will remain binding and in effect, without modification, until 5:00 PM on August 6, 2021.

IV. Miscellaneous

d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-9 Page 3 of 4

The Narragansett Electric Company

National Grid will consider proposals only from bidders who have an executed NAESB Base Contract for Sale and Purchase of Natural Gas or an executed ISDA with a Gas Annex with Buyer. Any transaction entered into as a result of this RFP shall be documented as a transaction under an active NAESB Agreement or ISDA Gas Annex. Please be advised that if the winning Bidder utilizes an ISDA with a Gas Annex, this transaction will be specifically excluded from margining calculation under the Credit Support Annex.

Bidders submitting bids in response to this RFP understand and agree that unless and until a definitive Transaction Confirmation has been executed and delivered, no contract or agreement providing for a transaction between such parties shall be deemed to exist between the parties, and neither party will be under any legal obligation of any kind whatsoever with respect to such transaction by virtue of this or any other written or oral expression of communication. National Grid reserves the right to withdraw or modify this RFP at any time and National Grid shall have the right, in its sole and absolute discretion, to reject any or all Proposals submitted in response to this RFP. The winning bid(s), if any, will be selected based on the proposal(s) that yield(s) the least cost, consistent with concerns for reliability of service and other business factors applied by National Grid in its sole discretion. Potential Sellers shall be subject to satisfactory credit review by National Grid.

V. Compliance with National Grid's Supplier Code of Conduct

At National Grid we are always seeking ways to meet the evolving needs and desires of our customers. We believe that a responsible approach to doing business is fundamental to what we do. In all of our activities we operate within Global Standards of Ethical Conduct. These standards include a commitment to the protection and enhancement of the environment, always seeking ways to minimize the environmental impact of our past, present and future activities and safeguarding our global environment for future generations. Our goal is to comply with regulations, reduce any impact that we may have and proactively seek out opportunities to improve the environment. In furtherance of this goal, National Grid has developed a "Supplier Code of Conduct" which describes our company's values and can be accessed at https://www.nationalgrid.com/document/83526/download

We value the business relationships we have with you and we believe that you are an important and central part of our success. This means that we expect you to carry out your business in line with these values. More specifically, we refer you to Section 3 - "Protecting the Environment". This section explains National Grid's expectations with respect to its suppliers. In connection with the purchase of natural gas, we will reject proposals from parties that fail to adhere to these requirements or who knowingly produce or purchase gas that was produced in violation of applicable laws and regulations.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GSP-9 Page 4 of 4

National Grid has worked to establish the Natural Gas Supply Collaborative (NGSC). The NGSC is a voluntary collaborative of natural gas purchasers that are promoting safe and responsible practices for the development of natural gas supply. As a participant in the NGSC, National Grid is committed to encourage our natural gas suppliers and producers to support more robust voluntary reporting and increased transparency on 14 environmental and social performance indicators. The NGSC developed these indicators through a comprehensive stakeholder engagement undertaking including representation from both the environmental and natural gas production community.

As suppliers of natural gas to National Grid, it is our expectation that you will consider reporting on these 14 indicators. Over time, and in consultation with National Grid, we expect reporting on these 14 indicators will be fully embraced and easily identifiable on company web sites and may become a requirement for future business.

Supporting information on the NGSC can be found at the following Web site: http://www.mjbradley.com/NGSC

Liz Arangio Director of Gas Supply Planning Telephone: 617-212-1790

MaryBeth Carroll Manager of Gas Supply Planning Telephone: 516=545-3116

Samara Jaffe
Director of Gas Contracting, Compliance & Hedging
Telephone: 516-545-5408

Janet Prag Senior Contract Specialist Telephone: 516-545-5463

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID R.I.P.U.C. DOCKET NO. 5180 2021 GAS COST RECOVERY FILING WITNESS: RYAN M. SCHEIB SEPTEMBER 1, 2021

DIRECT TESTIMONY

OF

RYAN M. SCHEIB

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
R.I.P.U.C. DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESS: RYAN M. SCHEIB
SEPTEMBER 1, 2021

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THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID R.I.P.U.C. DOCKET NO. 5180 2021 GAS COST RECOVERY FILING WITNESS: RYAN M. SCHEIB SEPTEMBER 1, 2021 PAGE 1 OF 15

1	I.	<u>Introduction</u>
2	Q.	Please state your name and business address.
3	A.	My name is Ryan M. Scheib and my business address is 40 Sylvan Road, Waltham,
4		Massachusetts 02451.
5		
6	Q.	By whom are you employed and in what capacity?
7	A.	I am a Senior Analyst in the New England Pricing group of the New England Regulation
8		department of National Grid USA Service Company, Inc. ("Service Company"). In this
9		position, I am responsible for preparing various regulatory filings for submission to the
10		Rhode Island Public Utilities Commission ("PUC") on behalf of The Narragansett
11		Electric Company d/b/a National Grid (the "Company") and the Massachusetts
12		Department of Public Utilities on behalf of Massachusetts Electric Company and
13		Nantucket Electric Company (together, "Mass. Electric").
14		
15	Q.	Please provide your educational background.
16	A.	I received a Bachelor of Science in Finance from University of Delaware in 2016.
17		
18	Q.	Please provide your professional background.
19	A.	In 2016, I joined National Grid as an Associate Analyst in the New England Gas Pricing
20		group and, in 2018, I was promoted to Analyst supporting the gas division of the
21		

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID R.I.P.U.C. DOCKET NO. 5180 2021 GAS COST RECOVERY FILING WITNESS: RYAN M. SCHEIB SEPTEMBER 1, 2021 PAGE 2 OF 15

1		Company. In June 2021, I was promoted to Senior Analyst supporting the Company and
2		Mass. Electric.
3		
4	Q.	Have you previously testified before the PUC or any other regulatory commissions?
5	A.	Yes. I have testified before the PUC in support of the Company's Distribution
6		Adjustment Charge ("DAC") filing in Docket Nos. 4955 and 5040, the 2020 Gas Cost
7		Recovery filing in Docket No. 5066 and the Company's FY 2021 Gas Infrastructure,
8		Safety, and Reliability Plan filing in Docket No. 4996.
9		
10	Q.	What is the purpose of your testimony?
11	A.	The purpose of my testimony is to calculate the Gas Cost Recovery ("GCR") factors
12		proposed for effect on November 1, 2021 for the following services: (1) firm sales
13		service to customers in the Residential Non-Heating and Heating rate classes and firm
14		sales customers in the Small, Medium, Large, and Extra-Large Commercial and
15		Industrial ("C&I") rate classes; and (2) transportation services provided to Gas Marketers
16		and the associated Gas Marketer Fixed Charges and factors.
17		
18	Q.	How is your testimony organized?
19	A.	My testimony includes the following three general sections: I. Introduction; II. GCR
20		Factor Development; and III. Bill Impacts.

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID R.I.P.U.C. DOCKET NO. 5180 2021 GAS COST RECOVERY FILING WITNESS: RYAN M. SCHEIB SEPTEMBER 1, 2021 PAGE 3 OF 15

1	Q.	Are you including any attachments with your testimony?		
2	A.	Yes. I am sponsoring the following attachments to my testimony:		
3		Attachment RMS-1 Prop	posed Gas Cost Recovery Factors	
4		Attachment RMS-2 Ann	nual GCR Reconciliation Filing	
5		Attachment RMS-3 Proj	jected Gas Cost Deferral Balances	
6		Attachment RMS-4 Bill	I Impact Analysis	
7		Attachment RMS-5 FT-	-2 Demand Rate	
8		Attachment RMS-6 FT-	-2 Capacity Allocator Percentages	
9		Attachment RMS-7 CO	VID Deferral	
10				
11	II.	GCR Factor Development		
11 12	II. Q.		he development of the proposed GCR factors.	
		Please provide an overview of the	he development of the proposed GCR factors. t the load specific (High Load and Low Load) factors	
12	Q.	Please provide an overview of the The proposed GCR factors reflect		
12 13	Q.	Please provide an overview of the The proposed GCR factors reflect necessary for the Company to reco	t the load specific (High Load and Low Load) factors	
12 13 14	Q.	Please provide an overview of the The proposed GCR factors reflect necessary for the Company to reconstruction of the Company to reconstruction of the period November 1.	t the load specific (High Load and Low Load) factors over the projected gas costs allocated to firm sales	
12 13 14 15	Q.	Please provide an overview of the The proposed GCR factors reflect necessary for the Company to reconstruction of the period November joint pre-filed direct testimony of	t the load specific (High Load and Low Load) factors over the projected gas costs allocated to firm sales oer 1, 2021 through October 31, 2022. As shown in the	
12 13 14 15 16	Q.	Please provide an overview of the The proposed GCR factors reflect necessary for the Company to reconcustomers for the period November joint pre-filed direct testimony of ("GSP") on Attachment GSP-1, file	t the load specific (High Load and Low Load) factors over the projected gas costs allocated to firm sales oer 1, 2021 through October 31, 2022. As shown in the the Company's witnesses for the Gas Supply Panel	
12 13 14 15 16 17	Q.	Please provide an overview of the The proposed GCR factors reflect necessary for the Company to reconstruction of the period November joint pre-filed direct testimony of ("GSP") on Attachment GSP-1, filending October 31, 2022 are projection.	t the load specific (High Load and Low Load) factors over the projected gas costs allocated to firm sales oer 1, 2021 through October 31, 2022. As shown in the the Company's witnesses for the Gas Supply Panel firm sales customers' gross gas costs for the 12 months	

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
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costs, inventory financing costs, prior period reconciliations, impacts of hedging activities, liquefied natural gas ("LNG") operation and maintenance ("O&M") costs, and credits for FT-2 Market Storage Demand and costs allocated to the DAC factors. The table below summarizes the costs and credits included in the proposed 2021-22 GCR factors:

GCR Component	Amount (millions)	Attachment
Firm Gas Costs	\$175.5	GSP-1
Hedging Impact	(\$20.7)	JMP-5
Working Capital Costs	\$1.2	RMS-1, Page 2, Line (9) + Page 3, Line (6)
Inventory Financing Costs	\$0.7	RMS-1, Page 3, Lines (9) + (10)
Prior Period Deferred Balance (Excludes the COVID Deferral)	\$10.7	RMS-1, Page 2, Line (10) + Page 3, Line (7)
LNG O&M Costs	\$1.1	RMS-1, Page 2, Line (8) + Page 3, Line (8)
FT-2 Marketer Storage Demand Costs	(\$2.9)	RMS-1, Page 2, Line (4)
Subtotal	\$165.6	RMS-1, Page 2, Line (12) + RMS-1, Page 3, Line (12)
COVID Deferral Recovery	\$4.9	RMS-1, Page 7, Line (43) and RMS-7, Page 1, Line (3)
Total	\$170.5	

The proposed GCR factors are intended to recover approximately \$170.5 million in net costs over the period November 1, 2021 through October 31, 2022.

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Q. Please explain how the proposed GCR factors were developed.

A. The proposed GCR factors were developed based on the fixed and variable cost

components as defined in the GCR clause of the Company's tariff, R.I.P.U.C. NG-GAS

No. 101, Section 2, Gas Charge, Schedule A. Attachment RMS-1 provides a summary of

the GCR fixed and variable gas cost components used to develop the rates for which the

Company requests approval in this filing.

A.

Q. How was the fixed cost component of the proposed GCR factors developed?

The fixed cost component includes all fixed costs related to the purchase, storage, and delivery of firm gas for High Load Factor and Low Load Factor customers. As shown in Attachment RMS-1, Page 2, the fixed cost component is developed by taking the total fixed costs, which are already reduced by capacity release credits, less any credits such as customers' share of credits earned through the operation of the Natural Gas Portfolio Management Plan ("NGPMP"), demand costs allocated to the DAC mechanism, if any, and storage demand costs billed to FT-2 Marketers. The FT-2 storage demand costs are calculated by multiplying the FT-2 Demand Charge rate by the forecast of storage and peaking maximum daily quantity ("MDQ") to be billed to FT-2 Marketers. Adjustments are also made for supply-related LNG costs, working capital costs, and prior period deferred fixed gas costs under/over-recovery balances. This results in total fixed gas costs of \$78.3 million to be recovered over the period November 2021 through October 2022.

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Finally, because the Company's gas supply resources are planned so that there is sufficient capacity to meet the needs of firm customers (excluding firm customers with capacity exempt status) under design winter conditions, the total fixed gas cost to be recovered from customers is allocated between High Load Factor and Low Load Factor customers. The allocation is based on the proportion of design winter use of these two groups of customers. The High Load and Low Load Factors for each group are developed using the allocated fixed gas cost to each group and dividing each amount by each group's projected throughput for the upcoming year. Accordingly, the proposed GCR fixed Low Load Factor is \$2.8591 per dekatherm, while the proposed GCR fixed High Load Factor is \$2.1261 per dekatherm, excluding the adjustment for uncollectible expense. Q. In the calculation of the fixed cost, you mentioned that the total fixed cost excludes "demand costs allocated to the DAC mechanism, if any." Is the Company proposing any demand costs to be allocated to the DAC? A. Yes. As indicated in the direct testimony of the GSP, the Company has proposed to recover the costs of peaking assets needed for design hour reliability from all customers directly via the DAC. Therefore, the Company is proposing to allocate approximately \$6.7 million associated with hourly peaking demand costs to the DAC mechanism to be

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1		recovered through the DAC factors proposed for effect November 1, 2021. These costs
2		would include third-party portable LNG equipment and services at the former
3		Cumberland LNG tank location and Old Mill Lane on Aquidneck Island, citygate
4		deliveries on the Algonquin pipeline, LNG trucking, and a portion of the Company's
5		Everett transportation and Everett Supply deal. These costs are reflected on Schedule
6		GSP-1 in this filing.
7		
8	Q.	How did the Company develop the 2021-22 throughput forecast used to calculate the
9		High Load and Low Load GCR Factors?
10	A.	The pre-filed joint direct testimony of Company witnesses Theodore E. Poe, Jr. and Shira
11		Horowitz supports the 2021-22 throughput forecast used to develop the proposed GCR
12		factors.
13		
14	Q.	Has the Company included a reconciliation of Marketer fixed costs in this year's
15		GCR filing?
16	A.	No. As described in the pre-filed testimony of Elizabeth D. Arangio and MaryBeth M.
17		Carroll in Docket No. 5067, the Company implemented changes to its Customer Choice
18		program effective November 1, 2020, which eliminated the pipeline capacity release path
19		marketer preference methodology. Therefore, the Company is no longer including a
20		reconciliation of Marketer fixed costs in its GCR filings.
21		

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Q. Please describe the calculation of the design sales forecast.

As done last year in Docket No. 5066, the Company calculated the monthly design sales forecast by applying a monthly heat factor to the monthly design degree days. The monthly heat factor was computed by dividing the heating component of the normal sales (normal sales less monthly base use) by normal degree days for each month during the period November 2021 through March 2022. To compute the monthly design sales, the Company summed the monthly base use and the product of the monthly heat factor multiplied by the monthly design degree days. In Attachment RMS-1, Pages 14 through 16, the Company has provided detailed calculations showing the derivation of the monthly design sales.

A.

A.

Q. How did the Company develop the variable cost component of the proposed GCR

factors?

The variable cost component includes all variable costs of gas such as commodity costs, supply-related LNG O&M, working capital, inventory finance costs, pipeline refunds, and deferred cost balances, and excludes variable costs allocated to the DAC mechanism, if any. As shown in Attachment RMS-1, Page 3, Line (12), the total estimated variable cost for the period November 2021 through October 2022 is \$87.4 million. The variable costs are divided by the projected throughput to obtain a variable cost factor of \$3.1703 per dekatherm.

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1	Q.	With respect to the calculation of the variable cost, you mentioned that the total
2		variable cost excludes "variable costs allocated to the DAC mechanism, if any." Is
3		the Company proposing any change to the variable costs allocated to the DAC?
4	A.	No. The Company has conducted an engineering study and has determined that it is not
5		necessary to allocate any variable costs to the DAC mechanism for effect November 1,
6		2021.
7		
8	Q.	Has the Company included any incremental variable costs associated with peaking
9		assets needed for design hour reliability to be allocated to the DAC?
10	A.	No. In Docket No. 5040, the Division recommended the Company include incremental
11		variable cost associated with peak hour resources in the DAC if those costs are
12		significant, and to report those costs in the next year's DAC and GCR filing, if found to
13		be significant. ¹ The Company has found that the incremental variable costs associated
14		with peaking assets needed for design hour reliability were not significant; therefore, the
15		Company is not including any incremental variable costs in this filing.
16		
17	Q.	What is the Company's estimate of the deferred gas cost balance at the end of the
18		current GCR period?
19	A.	Based on actual data through July 2021 and forecasted data for the months of August
20		through October 2021, the total estimated deferred balance at October 31, 2021 is an

¹ R.I.P.U.C. Docket No. 5040/5066, Public Utilities Commission Order (01/05/2021), Page 5.

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under-recovery of approximately \$10.7 million, consisting of a fixed cost deferral of \$3.6 million and a variable cost deferral of \$7.1 million, as shown in Attachment RMS-1, Page 7, column (n), Lines (17) and (35). The Company also deferred a portion of its GCR increase from Docket No. 5066, which it implemented in the form of a per-therm reduction to the GCR factors it had proposed, resulting in an estimated COVID Deferral of \$4.9 million, as shown in Attachment RMS-1, Page 7, column (n), Line (43). The total amount deferred for recovery beginning November 1 of \$15.6 million is incorporated into the development of the proposed GCR factors for the period November 1, 2021 to October 31, 2022. In addition, the Company shows the projected monthly deferred gas cost balances for November 2021 through October 2022 in Attachment RMS-3.

A.

Q. What is the COVID Deferral and the Company's recovery proposal?

In Docket No. 5066, the PUC ordered the Company to defer 50 percent of its proposed revenue increase associated with the GCR to mitigate the bill impact on customers as a form of relief in light of the economic hardship that many had faced as a result of the global pandemic. The Company is proposing COVID Deferral Recovery factors in this filing that are designed to recover the estimated deferral at October 31, 2021 associated with the 50 percent of the 2020-21 GCR increase that it did not recover from sales customers.

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1	Q.	Please describe the Company's calculation of COVID Deferral amount to be
2		recovered from customers.
3	A.	In last year's GCR filing in Docket No. 5066, the Company proposed an increase in
4		recovery of \$10.6 million compared to the prior year. However, in accordance with the
5		PUC ruling in that proceeding, the Company reduced its proposed GCR factors and
6		deferred the recovery of 50 percent of this increase, or \$5.3 million. Specifically, the
7		\$5.3 million COVID Deferral was allocated to the High Load and Low Load rate classes
8		to calculate the per-therm reduction to the High Load and Low Load GCR factors the
9		Company was proposing effective November 1, 2020 (see Docket No. 5066, Compliance
10		GCR Filing, Compliance Schedule RMS/MJP-8, Page 2, Lines (12) and (13), Column
11		(g)). The Company then billed sales customers the lower GCR factors after the reduction
12		for the COVID Deferral.
13		
14		As seen on Schedule RMS-7, Page 2, the Company tracked the accumulation of the
15		COVID Deferral (reduction to revenue) for Low Load and High Load each rate classes
16		based on nine months of actual billing data (November 2020 through July 2021) and
17		three months of forecasted data (August 2021 through October 2021), plus interest, to
18		calculate the ending deferral balance for the period ending October 31, 2021 to be
19		recovered for each rate class grouping. The total COVID Deferral the Company is
20		proposing to be recovered is \$4.9 million, and the COVID Deferral amounts to be

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1		recovered for High Load and Low Load customers are summarized on Schedule RMS-7,
2		Page 1.
3		
4	Q.	How did the Company develop the COVID Deferral factors that it is proposing as a
5		component of the proposed GCR factors?
6	A.	As seen on Schedule RMS-7, Page 1, the Company divided the COVID Deferral ending
7		under-recovery balance for the High Load and Low Load customer classes by the
8		forecasted throughput for each rate class grouping. Schedule RMS-7 shows the proposed
9		COVID Deferral Recovery factors per rate class.
10		
11	Q.	Attachment RMS-2 provides the fiscal year 2021 Annual GCR Reconciliation
12		balances. Does the monthly information shown in Attachment RMS-2 correspond
13		with the monthly deferred balance reports filed in Docket Nos. 4963 and 5066?
14	A.	Yes. The March 31, 2021 reconciliation balance of \$5,789,241 shown in Attachment
15		RMS-2 reflects the balance that was submitted on July 1, 2021 in the Company's annual
16		GCR reconciliation report and is the same balance reflected in the July 2021 monthly
17		deferred balance report filed in Docket No. 5066 on August 20, 2021.
18		
19	Q.	Is the Company proposing any other rates in this filing?
20	A.	Yes. Consistent with the modifications in Docket No. 4270, the Company is submitting
21		for approval its FT-2 Marketer Demand rate of \$12.2364 per MDQ in dekatherms per

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month, as shown in Attachment RMS-5, as well as the storage and peaking charge of \$0.9605 per therm for FT-1 firm transportation customers returning to Transitional Sale Service ("TSS"). The Company is also requesting approval of the capacity assignment percentages for the High Load and Low Load Factors to be used in the determination of pipeline, underground storage, and peaking capacity for Marketers. These percentages are set forth in Attachment RMS-6. The Company has also provided the detail calculations of the capacity assignment percentages in an Excel file contained in the USB flash drive provided to the Division with this filing. How was the proposed FT-2 Marketer Demand rate calculated? The FT-2 rate design approved in Docket No. 4270 separates storage costs into the following two components: (1) the FT-2 Demand rate designed to recover the fixed costs associated with storage and peaking, which the Company is submitting for approval in this filing; and (2) the FT-2 Variable rate that is designed to recover variable underground storage costs, as well as the associated commodity costs and loss factors associated with pipeline contracts to bring the gas from storage to the citygate. In addition, Marketers

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A.

The FT-2 Demand rate is derived by first totaling the fixed storage costs, associated inventory finance, working capital charges, and supply-related LNG O&M costs, less any demand credits assigned to the DAC factors and any refunds, if applicable. That total is

may purchase peaking inventory at the Company's cost of LNG inventory.

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1		then divided by the total storage and peaking MDQ for the year to derive a monthly per
2		dekatherm rate to be charged to Marketers. As shown in Attachment RMS-5, the
3		proposed FT-2 Marketer Demand rate is \$12.2364 per dekatherm and will be applied to
4		the Marketers' storage and peaking MDQ.
5		
6	III.	Bill Impacts
7	Q.	Is the Company presenting the impacts of its proposed rates for November 1, 2021
8		on customer bills in this filing?
9	A.	Yes. The Company is presenting the bill impacts associated with its proposed GCR
10		factors in this filing as well as its proposed DAC factors submitted in Docket No. 5165.
11		The bill impacts are presented in Attachment RMS-4 and reflect current annual bills in
12		Column (c) assuming that the rates in effect during September 2021 are effective for
13		12 months.
14		
15	Q.	What is the combined bill impact of the proposed GCR and DAC factors on
16		customer bills as compared to bills over the past year?
17	A.	An average Residential Heating customer using 845 therms per year will see a total
18		annual bill of \$1,478.21 based on the proposed GCR and DAC factors, which is an
19		increase of \$109.85, or 8.0 percent, from last year's bills. This overall increase is
20		comprised of an increase of \$64.30 as a result of the proposed GCR factors; an increase

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of \$42.25 as a result of the proposed DAC factors as revised in a supplemental filing on

2 September 1, 2021 in Docket No. 5165; and an increase of \$3.30 in Gross Earnings Tax.

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4 Q. What are the main drivers causing the increase presented in the bill impact

5 analysis?

6 A. The annual residential heating bill increase is attributable to the following drivers:

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	\$ Inc (Dec)	<u>%</u>
Annual Bill at Current Rates	\$1,368.36	
Recovery of DAC COVID Deferral	\$48.67	3.6%
Net Decrease in DAC	(\$6.42)	(0.5%)
Recovery of GCR COVID Deferral	\$31.43	2.3%
Increase re: Texas Eastern Transmission, LP Rate Case	\$12.66	0.9%
Net Increase in Remaining GCR Components	\$20.21	1.5%
Increase in Gross Earnings Tax	\$ <u>3.30</u>	0.2%

\$1,478.21

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Overall, the increase in an average residential heating customer's bill of \$109.85, or 8.0 percent, is driven mostly by an increase of \$80.10, or 5.9%, due to the recovery COVID deferral amounts that were not recovered through the 2020-2021 DAC and

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14 Q. Does this conclude your testimony?

GCR factors.

15 A. Yes.

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Attachments of Ryan M. Scheib

Attachment RMS-1	Gas Cost Recovery Factors
Attachment RMS-2	Annual GCR Reconciliation Filing
Attachment RMS-3	Projected Gas Cost Balances
Attachment RMS-4	Bill Impact Analysis
Attachment RMS-5	FT-2 Demand Rate
Attachment RMS-6	FT-2 Capacity Allocator Percentages
Attachment RMS-7	COVID Deferral

Attachment RMS-1 Redacted

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Attachment RMS-1 Gas Cost Recovery Factors

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Page 1 of 16 Attachment RMS-1 The Narragansett Electric Company Docket No. 5180 d/b/a National Grid

Gas Cost Recovery (GCR) Filing Factors Effective November 1, 2021 National Grid - RI Gas

¹Includes: Residential Non Heating, Large High Load and Extra Large High Load

² Includes: Residential Heating, Small C&I, Medium C&I, Large Low Load, Extra Large Low Load ³ See RMS-5 for calculation of FT-2 rate

^{(6):} Truncated to 4 decimals.

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National Grid - RI Gas Gas Cost Recovery (GCR) Filing Fixed Cost Calculation (\$ per Dth)

	Source	ırce		High Load	Low Load
<u>Description</u> (a)	Reference (b)	$\frac{\overline{\text{Line }\#}}{\text{(c)}}$	$\frac{\underline{\text{Amount}}}{\text{(d)}}$	Factor Total (e)	Factor Total (f)
(1) Fixed Costs (net of Cap Rel to marketers)	RMS-1, pg 5	Line (41)	\$90,887,120		
Less: (2) NGPMP Customer Benefit (3) Intermitible Costs	GSP-1		(\$8,039,179)		
	RMS-5, pg 2 GSP-1, pg 12	Line (25)	(\$2,880,020) (\$6,685,226)		
	Sum[(2):(6)]		(\$17,604,425)		
Plus: (8) Supply Related LNG O&M Costs (9) Working Capital Requirement (10) Deferred Fixed Cost Under-recovered (11) Total Additions	Dkt 4770 RMS-1, pg 9 RMS-1, pg 7 Sum[(8):(10)]	Compliance Attachment 2 Schedule 32 Pg 5 Line (16) Line (17)	\$829,823 \$620,254 \$3,569,594 \$5,019,671		
(12) Total Fixed Costs	(1) + (7) + (11)		\$78,302,365		
(13) Design Winter Sales Percentage	RMS-1, pg 13	Lines $(10) & (11)$		1.78%	98.22%
(14) Allocated Supply Fixed Costs	$(12) \times (13)$			\$1,393,782	\$76,908,583
(15) Sales (Dth) Nov 2020 - Oct 2021	RMS-1, pg 12	Line (9)	27,554,528	655,553	26,898,975
(16) Fixed Factor	$(14) \div (15)$			\$2.1261	\$2.8591
(15) Col (e): RMS-1 page 12, Sum[Lines (1), (6), (8)] Col (f): RMS-1 page 12, Sum[Lines (2)-(5), (7)]					

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National Grid - RI Gas	Gas Cost Recovery (GCR) Filing	Variable Cost Calculation (\$ per Dth
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	S	Source	
Description	Reference	Line #	Amount
(a)	(b)	(c)	(p)
(1) Variable Costs, excluding Refunds	RMS-1, pg 6	Line (77) - Line (74)	\$78,612,614
Less:			
(2) System Pressure to DAC			80
(3) Non-Firm Sales			80
	RMS-1, pg 6	Line (74)	80
(5) Total Credits	Sum [(2):(4)]		80
Plus:			
(6) Working Capital	RMS-1, pg 9	Line (32)	\$579,082
(7) Deferred Variable Cost Under-recovered	RMS-1, pg 7	Line (35)	\$7,128,552
(8) Supply Related LNG O&M	Docket 4770	Compliance Attachment 2	\$302,244
		Schedule 32 Pg 5 Ln 15 - Ln 12	
	RMS-1, pg 11	Line (22)	\$267,879
	RMS-1, pg 11	Line (12)	\$468,035
(11) Total Additions	Sum [(6):(10)]		\$8,745,793
(12) Total Variable Supply Costs	(1) + (5) + (11)		\$87,358,407
(13) Sales (Dth) Nov 2020 - Oct 2021	RMS-1, pg 12	Line (9)	27,554,528
(14) Variable Cost Factor	$(12) \div (13)$		\$3.1703

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	Nov-Oct (0)		\$13,345,099	\$306,138	\$90,725	\$1,018,900	\$1,254,540	\$2,515,522	\$9,122,812	\$80,610	\$8,436,708	\$1,521,482	\$287,402	\$16,103,620	\$113,074	\$523,538	\$5,418,632	\$2,591,749	(\$1,501,864)	80	\$61,228,685		\$278,385	\$436,941	\$561,478	\$3,486,240	\$507,760	\$53,002	\$2,116,736	\$7,440,542
	Oct-22 (n)		\$1,112,092	\$25,511	\$7,708	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$25,971	\$1,455,931	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$5,217,970		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$4,722	\$191,183	\$635,139
	Sep-22 (m)		\$1,112,092	\$25,511	\$7,708	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$25,971	\$1,455,931	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$5,217,970		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$4,722	\$191,183	\$635,139
	Aug-22 (1)		\$1,112,092	\$25,511	87,708	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$25,971	\$1,455,931	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$5,217,970		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$4,722	\$191,183	\$635,139
	$\frac{Jul-22}{(k)}$		\$1,112,092	\$25,511	\$7,708	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$25,971	\$1,455,931	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$5,217,970		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$4,722	\$191,183	\$635,139
	Jun-22 (j)		\$1,112,092	\$25,511	87,708	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$25,971	\$1,455,931	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$5,217,970		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$4,722	\$191,183	\$635,139
	May-22 (i)		\$1,112,092	\$25,511	\$7,708	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$25,971	\$1,455,931	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$5,217,970		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$4,722	\$191,183	\$635,139
	<u>Apr-22</u> (h)		\$1,112,092	\$25,511	87,708	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$25,971	\$1,455,931	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$5,217,970		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$4,722	\$191,183	\$635,139
31 13 11 11 11	Mar-22 (g)		\$1,112,092	\$25,511	87,708	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$25,971	\$1,455,931	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$5,217,970		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$4,722	\$191,183	\$635,139
	Feb-22 (f)		\$1,112,092	\$25,511	87,708	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$25,971	\$1,455,931	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$5,217,970		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$4,722	\$191,183	\$635,139
	<u>Jan-22</u> (e)		\$1,112,092	\$25,511	\$7,119	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$17,889	\$1,000,079	\$9,423	\$42,961	\$451,553	\$215,979	(\$125,155)	80	\$4,753,447		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$3,502	\$131,995	\$574,730
	Dec-21 (d)		\$1,112,092	\$25,511	\$7,119	\$85,024	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$17,889	\$1,000,079	\$9,423	\$46,961	\$451,553	\$215,979	(\$125,155)	80	\$4,757,447		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$3,502	\$131,995	\$574,730
	Nov-21 (c)		\$1,112,092	\$25,511	\$7,119	\$83,636	\$104,545	\$209,627	\$760,234	\$6,718	\$703,059	\$126,790	\$17,889	\$1,000,079	\$9,423	\$46,961	\$451,553	\$215,979	(\$125,155)	80	\$4,756,059		\$23,199	\$36,412	\$46,790	\$290,520	\$42,313	\$3,502	\$132,098	\$574,834
	Reference (b)		GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	Sum[(1):(18)]		GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	Sum[(20):(26)]
	$\frac{\overline{\mathrm{Description}}}{(a)}$	Supply Fixed Costs - Pipeline Delivery	(1) Dawn to E Here	(2) Dawn to WADDY	(3) Dominion SP	(4) Dracut	(5) Everett	(6) Manchester Lateral	(7) Millennium/AIM	(8) Niagara	(9) TCO (Pool)	(10) AGT M3	(11) TETCO SCT Long Haul	(12) TETCO CDS Long Haul	(13) Transco Leidy	(14) Yankee Interconnect	(15) TGP Long Haul	(16) TGP ConneXion	(17) AMA Credits	(18) Less Credits from Mkter Releases*	(19) Total Supply Fixed Costs - Pipeline	Storaged Fixed Costs - Facilities	(20) Columbia FSS	(21) Dominion GSS	(22) Dominion GSSTE	(23) Providence LNG	(24) Tennessee FSMA	(25) Tetco FSS1	(26) Tetco SS1	(27) Total Fixed Storage Costs

^{*} Capacity release credits included in forecasted supply costs

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tt Electric Company d/b/a National Grid Docket No 5180 Attachment RMS-1 Page 5 of 16	Nov-Oct (0)	\$5,537,709	S	S	\$90,887,120
The Narragansett Electric Company db/a National Grid Docket No 5180 Attachment RMS-1 Page 5 of 16	Oct-22 (n)	\$454,466	80	S	
The	Sep-22 (m)	\$454,466	80	S	
	Aug-22 (1)	\$454,466	8		
	$\frac{Jul-22}{(k)}$	\$454,466	80	80 S	
	Jun-22 (j)	\$454,466	80	S	
	May-22 (i)	\$454,466	80	S S	
gui	Apr-22 (h)	\$454,466	8	8	
National Grid - RI Gas Gas Cost Recovery (GCR) Filing Gas Cost Estimate	Mar-22 (g)	\$485,292	80	08	
National C Gas Cost Recov Gas Cos	Feb-22 (f)	\$485,292	80	8	
J	Jan-22 (e)	\$461,954	80	8	
	Dec-21 (d)	\$461,954	80	8	
	Nov-21 (c)	\$461,954	80	<u> </u>	
	Reference (b)	GSP-1	GSP-1 GSP-1	GSP-1 GSP-1 GSP-1 GSP-1 GSP-1 GSP-1	Sum[(28):(38)] (27) + (39) (19)+(27)+(39)
	<u>Description</u> (a)	Storage Fixed Costs - Delivery (28) Storage Delivery	(29) LNG (30) Proposed CNG/LNG	 (31) Everett Supply Deal (32) Dracut Supply Deal (33) Everett Supply Deal2 (34) Summer Liquid Refill (35) Summer Trucking (36) AGT Citygate (37) Winter Trucking (38) Proposed Summer Liquid 	(39) Storage Delivery Fixed Cost(40) Total Storage Fixed(41) Total Fixed Costs

Attachment RMS-1
Redacted
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The Narragansett Electric Company
d/b/a National Grid
Docket No 5180
Attachment RMS-1
Page 6 of 16

National Grid - RI Gas Gas Cost Recovery (GCR) Filing

	Nov-Oct (o)		\$374.688	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$161,240	\$5,934,888	\$487,883	\$952.100	80	\$7,282,959	\$455,253	\$10,477,754	\$514,501	\$34 417	670 075 073	\$255.765	\$9.249,144	\$10 413 889			-	\$9,636,182	\$1,824,641	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		\$1,876,669	\$551 841		(\$551,841)	SS	(\$20,680,555)	\$78,612,614	\$169,499,735		\$7.440.542	achi
	No				_				I		5			c=			S	S								\$						878	\$169		_	
	Oct-22 (n)		\$0	610	80	80	\$36,588	Ã	80	\$493,522	\$0 771 CS3	\$970,722	\$42,564	S(LOT 025 C2	\$2,509,70	\$731.526	\$519172				80	\$90,750			\$134,715	\$65 534		(\$65,534)	80	(\$806,750)				\$635.139	
	Sep-22 (m)		80		80	80	\$35,424	\$18/,43/	80	\$477,824	878 210	\$13,696	\$4,589	80	E1 853 307	\$1,623,302	8706.780	80				80	\$87,913			\$74,942	\$66 945		(\$66,945)	80	(\$732,258)				\$635.139	
	Aug-22 (1)		80		80	80	80)A	80	\$548,485	\$000	\$00,000	\$5,231	80	21 807 707	.07,769,16	\$802.721	\$151,408				80	\$90,946	2		859,070 80	\$46 420		(\$46,420)	80	(\$574,487)				\$635.139	
	$\frac{Jul-22}{(k)}$		80		80	80	\$41,732	OA A	80	\$562,913	\$130,604	\$00,001	\$5,367	80	E1 020 435	\$1,727,14	\$627.983	80				80	\$91,049			\$55,547	\$70 133		(\$70,133)	80	(\$676,698)				\$635,139	
	Jun-22 (j)		80		80	80	\$40,550	3281,382	80	\$546,971	0S 285 93	\$1,090,382	\$5,251	80	151 8893	\$036,137	\$293.409	80				80	\$88,256			\$29,649	\$36 160		(\$36,160)	80	(\$872,167)				\$635.139	
	May-22 (i)		08 9		80	80	\$41,460	345 / , 287	80	\$559,249	\$00			S	61 036 071	80	\$773.946	80				80	\$91,391			\$42,640	855 859		(\$55,859)	20	(\$1,115,646)	Ī			\$635.139	
n S	<u>Apr-22</u> (h)		\$0	, i	80	\$11,576	80	8	80	\$153,552	\$91,310			S	6148 341	_	\$538.589	\$630 637				\$192,438	\$88,559	1		\$86,185	\$52,020		(\$52,020)	80	(\$1,240,010) (Ī			\$635.139	
Gas Cost Estimate	Mar-22 (g)		\$0	,1,0	80	\$984,087	\$58,031	OA	80	\$782,765	\$32,245	\$744,288	\$90,721	\$32,859	63 077 602	\$3,77,002	\$918,643	\$1,386,688				\$1,481,955	\$90,365			\$285,542	\$132,167		(\$132,167)	80	(\$2,512,023)				\$635.139	
Gas Cost	Feb-22 (f)		\$03		\$68,224	\$1,891,700	\$55,605	90	80	\$750,039	\$80,202	\$306,358	\$108,798	\$285	E3 875 613	\$98.875	\$1.027.059	\$2,286,491				\$2,245,611	\$398,408			\$315,220	80		S 0	2	(\$3,018,095)				\$635.139	
)	Jan-22 (e)		\$0	,	\$72,157	\$2,089,085	\$62,174	80	80	\$838,644	\$126,251	\$623,151	\$136,893	\$871	84 717 486	\$113.280	\$1,156,665	\$2,549,703				\$2,441,573	\$534,395			\$324,500	\$20.50		08	9	(\$3,521,325)	Ī			\$574.730	
	Dec-21 (d)		80 67 980		\$20,859	\$860,230	\$60,866	9	80	\$821,010	\$113,371	\$143,487	867,008	\$401	£4 138 008	\$31.752	\$966,245	\$1,596,670				\$2,268,603	\$87,768			\$260,883	80		08	9	(\$3,116,104)	Ī			\$574,730	
	Nov-21 (c)		\$0	,,	80	\$98,210	\$55,453	Ã	80	\$747,985	\$11,875		\$34,897	80	63 756 607		\$705.579					\$1,006,002	\$84,843			\$207,776	\$26 603		(\$26,603)	80	(\$2,494,992)	Ī			\$574.834	
	Reference (b)		GSP-1	GSP-1 GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1	GSP-1		GSP-1	GSP-1	GSP-1		GSP-1			Sum[(42)(63)]		GSP-1	GSP-1 (65) + (66)			GSP-1	GSP-1 GSP-1 Sum[(68):(70)]	[(o/)·(oo)]mnc	GSP-1 GSP-1	GSP-1 Sum[(72):(74)]	JMP-5	(64)+(67)+(71)+(75)+(76	(41) + (77)		(27)	(79) + (80)
	Description (a)	Variable Commodity Costs	(42) AGT Citygate (43) ATM at Ramano	(44) Const Summer Refill	(45) Const winter Kellin (46) Dawn via IGTS	(47) Dawn via PNGTS	(48) Dominion SP	(49) Dracut Supply (50) Everett Long-Term	(51) Everett Swing	(52) Millennium	(53) Niagara (54) TCO Annalachia	(55) Tetco M3	(56) Transco Leidy	(57) Waddington	(58) Tetro M7 CDS	(60) Tetco M2 SCT	(61) TGP Z4 Cnx	(62) TGP Z4 LH	(63) Proposed Summer Refill	(64) Total Variable Commodity Costs	Variable Storage Costs	(65) Underground Storage	(66) LNG Withdrawals and Trucking (67) Total Variable Storage Costs		Variable Transportation Costs	(68) Variable Costs for Purchases to City Ga	(71) Total Variable Transportation Costs	Tailouis valiable manapolianon costs	Injections (72) Cost of Injections (73) Variable Cost for Storage Injection	(74) Refunds (75) Total Injections	Hedging Impact (76) Hedging Impact	(77) Total Variable Costs	(78) Total Supply Costs	Storage Costs for FT-2 Calculation	(79) Storage Fixed Costs - Facilities(80) Storage Fixed Costs - Deliveries	(81) Total Storage Costs

rd - Nt Case April	
May-2 actual	\$120,088 \$48,974 \$15,561,686
May-2 actual	\$13,658,369 1 25% \$14,500 \$0 \$15,561,686
May-21 Jun-21 Jul-21 actual 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 32.545.613 \$5.548.613 \$5.548.613 \$5.548.8330 \$5.548.8330 \$5.465.745 \$5.948.8330 \$5.488.139 \$5.248.8330 \$5.488.139 \$5.248.8330 \$5.473.88 \$5.473.88 \$5.473.88 \$5.473.78 \$5.466.75 \$5.587.457 \$5.488.139 \$5.248.8330 \$5.473.78 \$5.448.8330 \$5.473.78 \$5.448.8330 \$5.473.78 \$5.448.8330 \$5.473.78 \$5.449.829 \$5.248.8330 \$5.473.78 \$5.449.829 \$5.248.8330 \$5.473.78 \$5.449.829 \$5.258.8372 \$5.248.8330 \$5.248.8320 \$5.248.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.8320 \$5.259.832	\$10,471,422 1 25% \$10,758 \$0 \$11,769,553
May-21 Jun-21 actual a	\$7,801,170 1 25% \$8,282 \$0,184,049
May-2 Jun- actual 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 5,45,613 5,545,613 5,545,613 5,548 5,448,139 5,248 5,448,139 5,248 5,448,139 5,248 5,448,139 5,248 1,25% 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,249,196 5,249 5,248,196 5,248 5,248,196 5,2	\$4,454,104 1 25% \$4,729 \$6,426,573
May-21 31 (h) 31 (h) 31 (h) 31 (h) 32,044,154) 56,152 (5437,588) 56,162 (5437,588) 56,108 (51,109,428) 57,108 (51,109,428) 58,180,000 (52,080) (52,080) (53,080,680) (53,080,680) (53,080,680) (53,080,680) (54,080) (54,080) (54,080) (55,080,680) (56,080) (5	\$1,338,572 1 25% \$1,375 \$0 \$2,486,364
Carid - RI Gas	\$729,770 1 25% \$775 \$0 \$192,156
46.75 (10.10) 1. Gridente derre der	\$3,526,887 1 25% \$3,624 \$0 \$1,268,158
National Gri Stock Deferred GCR Deferred GCR Deferred GCR Deferred GCR Deferred [31] (55.082.948) (85.082.948) (85.082.948) (85.082.948) (85.082.948) (85.082.948) (85.082.948) (85.082.942.81) (86.344.706) (81.657.652) (86.344.706) (81.657.652) (81.657.	\$9,968,228 1 25% \$10,583 \$0 \$5,789,241
Ga Eeb-21 actual 28 (e)	\$15,267,904 1 25% \$14,640 \$0 \$14,157,799
	\$17,696,153 1 25% \$18,787 \$0 \$16,392,649
Dec.20 actual 31 (c) 31 (c) 31 (c) 32,685,937 88,866,638 (S1,305,540) 86,912 87,128,094 87,128,094 87,145,288 811,965,664 82,306	\$16,992,800 125% \$18,040 \$0 \$19,018,444
Nov-20 30 (b) (c)	\$13,527,574 1 25% \$13,995 \$48,974 \$14,985,196
Description (1) # of Days in Month (2) 1 Fixed Cost Deferred (3) Regining Under(Over) Recovery (4) Supply Fixed Costs (net of cap rel) (5) Supply Pixed Costs (net of cap rel) (6) Supply Related System Pressure to DAC (8) Supply Related LNG O&M (9) Total Supply Fixed Costs (10) NoTMP Credits (10) Monthly Under(Over) Recovery (11) Monthly Under(Over) Recovery (12) Monthly Under(Over) Recovery (13) Monthly Under(Over) Recovery (14) Interest Applied (16) Marketer Reconcilation (17) Fixed Ending Under(Over) Recovery (18) Interest Applied (19) Regiming Under(Over) Recovery (20) Variable Cost Supply Related LNG O&M (24) Inventory Firancing - UG (25) Supply Related LNG O&M (24) Inventory Firancing - UG (25) Supply Variable Costs (26) Working Capital (27) Inventory Firancing - Under(Over) Recovery (28) Supply Variable - Revenue (29) Monthly Under(Over) Recovery (30) Interest Applied (34) Monthly Saverage Balance (35) Interest Applied (36) Interest Rate (BOA Prime minus 200 bps) (37) Interest Rate (BOA Prime minus 200 bps) (42) Interest Rate (BOA Prime minus 200 bps) (43) Prelim Ending Balance (44) GCR Deferred Summary (45) Beginning Under(Over) Recovery (46) Gas Costs (47) Interest Applied (49) NORMP Credits (40) NORMP Credits (50) Working Capital (41) NORMP Credits (51) Monthly Under(Over) Recovery (52) Reginning Under(Over) Recovery (53) Prelim Ending Under(Over) Recovery (54) Reginning Under(Over) Recovery (55) Prelim Ending Under(Over) Recovery (56) Total Costs (57) Relim Ending Under(Over) Recovery (58) Prelim Ending Under(Over) Recovery (59) Prelim Ending Under(Over) Recovery (50) Total Costs (51) Revenue	(54) Month's Average Balance (55) Interest Rate (BOA Prime minus 200 bps) (56) Interest Applied (57) Gas Purchase Plan Incentives/(Penalties) (58) Ending Under/(Over) Recovery W/ Interest Source: Docket No 5066 filed on August 20, 2021

The Narragansett Electric Company d/b/a National Grid Docket No 5180 Attachment RMS-1 Page 8 of 16

> National Grid - RI Gas Gas Cost Recovery (GCR) Filing GCR - Gas Cost Revenue

189 191 29 152	\$2,3	3,073,666 1,327,512 \$2,8591 \$2,8591 \$8,787,920 \$3,795,489 \$2, 63,479 44,779 \$2,1261 \$2,1261 \$134,962 \$95,205 3,137,145 1,372,291	1,327,512 \$2,8591 \$3,795,489 \$2,8591 \$4,779 \$2,1261 \$95,205 1,372,291 \$4,130,696 \$4,130,696 \$4,130,574 \$2,350,574 \$2,84,350,574 \$2,84,350,574	3,812,545 \$1,828.591 \$2,8591 \$10,900,446 \$8,787,920 \$3,795,489 \$2,1261 \$2,1261 \$1,24,962 \$2,84,799 \$2,1261 \$13,71,45 \$2,1261 \$1,372,291 \$2,40,002
79 40,352	7 44	63,479 \$2 1261 \$134,962 \$3,137,145	71,399 63,479 \$2,1261 \$1,1261 \$ \$1,1801 \$1,34,962 \$ 3,883,944 3,137,145 1,3 \$11,292,249 \$9,162,884 \$4,1 3,883,944 3,137,145 1,3 \$1,313,266 \$9,945,692 \$4,3 \$12,313,266 \$9,945,692 \$4,3	80,698 81,548 71,399 63,479 \$2 1261 \$2 1261 \$2 1261 \$134,962 \$171,572 \$173,379 \$151,801 \$134,962 \$4,648,427 \$.045,244 3,883,944 3,137,145 1,3 \$240,002 \$240,002 \$240,002 \$240,002 \$2 \$13,471,168 \$14,605,086 \$11,292,249 \$9,162,884 \$4,1 \$3,173 \$3,83,944 3,137,145 1,3 \$3,173 \$3,173 \$3,173 \$3,83,73 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4,3 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4,3
95 95	\$2.1 \$95,	3,137,145	3,883,944 3,137,145 1 \$240,002 \$240,002 8 \$11,292,249 \$9,162,884 \$4 3,883,944 3,137,145 1 \$3,1703 \$3,1703 \$12,313,266 \$9,945,692 \$4 \$12,313,266 \$9,945,692 \$4	4,648,427 5,045,244 3,883,944 3,137,145 1 \$240,002 \$240,002 \$240,002 \$240,002 \$240,002 \$13,471,168 \$14,605,086 \$11,292,249 \$9,162,884 \$4 \$4,648,427 \$0,45,244 3,883,944 3,137,145 1 \$3,1703 \$3,1703 \$3,1703 \$3,1703 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4
,291 851,841	1,372		\$240,002 \$240,002 \$ \$11,292,249 \$9,162,884 \$4 3,883,944 3,137,145 1 \$3,1703 \$3,1703 \$12,313,266 \$9,945,692 \$4 \$12,313,266 \$9,945,692 \$4	\$13,471,168 \$14,605,086 \$11,292,249 \$9,162,884 \$4 \$13,471,168 \$14,605,086 \$11,292,249 \$9,162,884 \$4 4,648,427 \$5,045,244 3,883,944 3,137,145 1 \$3,1703 \$3,1703 \$3,1703 \$3,1703 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4
002 \$240,002	\$240,	\$240,002	3,883,944 3,137,145 1 83,103,313,266 89,945,692 84	\$13,471,168 \$14,605,086 \$11,292,249 \$9,162,884 \$4 4,648,427 \$5,045,244 \$3,883,944 \$3,137,145 \$1 83,1703 \$3,1703 \$3,1703 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4
596 \$2,645,923	\$4,130,0	\$9,162,884	3,883,944 3,137,145 1 \$3 1703 \$3 1703 \$12,313,266 \$9,945,692 \$4 \$12,313,266 \$9,945,692 \$4	4,648,427 5,045,244 3,883,944 3,137,145 1 83 1703 83 1703 83 1703 83 1703 83 1703 83 1703 814,736,908 815,994,938 812,313,266 89,945,692 84 814,736,908 815,994,938 812,313,266 89,945,692 84
			3,883,944 3,137,145 1 \$3,1703 \$3,1703 \$12,313,266 \$9,945,692 \$4 \$12,313,266 \$9,945,692 \$4	4,648,427 5,045,244 3,883,944 3,137,145 1 \$3 1703 \$3 1703 \$3 1703 \$3 1703 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4 \$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692 \$4
2,291 851,841 1703 \$3 1703 0,574 \$2,700,592	1,372 \$3 \$4,35(3,137,145 1 \$3,1703 \$9,945,692 \$4	\$12,313,266 \$9,945,692	\$14,736,908 \$15,994,938 \$12,313,266 \$9,945,692
3,574 \$2,700,592	\$4,35(\$9,945,692		
\$327,512 \\ \$11,489 \\ \$0.1770 \\ \$0.1770 \\ \$0.34.970 \\ \$1.43.634	7, 3, 5	3,073,666 1 \$0.1770 \$544.039		3,812,545 3,073,666 1 \$0 1770 \$0 1770 \$674.820 \$544.039
	i			
44,779 40,352 \$0 1535 \$0 1535	95	63,479 \$0 1535		71,399 63,479 \$0 1535 \$0 1535
\$6,874 \$6,194		\$9,744		\$12,518 \$10,960 \$9,744
\$241,844 \$149,828	\$241	\$553,783		\$685,780 \$553,783
[4 \$5,496,343	\$8,723,114	\$19,662,359		\$24,291,295 \$19,662,359
(20) RMS-1, pg 12, Sum [Lines (1), (6), (8)] (21) RMS-7, pg 1, Line 1, col (d) (22) Line (20) x Line (21) (23) Line (19) + Line (22) (24) Line (10) + Line (15)	RMS-1, pg RMS-7, pg Line (20) > Line (10) - Line (10) -	(20) RMS-1, pg 12, Sum [(21) RMS-7, pg 1, Line 1, (22) Line (20) x Line (21) (23) Line (19) + Line (22) (24) Line (10) + Line (15)	Lines (2)-(5), (7)] [9] col (d)	(14) Line (12) x Line (13) (15) Line (14) (15) Line (14) (17) RMS-1, pg 12, Sum [Lines (2)-(5), (7)] (18) Sum[Lines (4), (7), (9)] (19) Line (8) (19) Line (8) (19) Line (10) (19) Line (10) (19) Line (10) (19) RMS-1, pg 1, Line (2) (19) Line (10) (19) RMS-1, pg 1, Line (2) (19) Line (10) (19) Line (10)

National Grid - RI Gas Gas Cost Recovery (GCR) Filing Working Capital Estimate

The Narragansett Electric Company db/a National Grid Docket No 5180 Attachment RMS-1 Page 9 of 16

			REDACTED		RIPUC
Total (n)	\$90,887,120 \$0 (\$6,685,226) \$0 \$0 \$84,201,894		\$620,254 \$78,612,614 \$0 \$0 \$0 \$78,612,614	\$579,082	At
Oct-22 (m)	\$6,420,090 \$0 (\$20,909) \$0 \$6,399,181	32.92 \$577,154 6.91% \$39,881 2.18% \$12,582 \$27,299 0.7900 \$34,556	\$47,138 \$3,007,443 \$0 \$0 \$0 \$0 \$30 \$3,007,443	\$271,247 6 91% \$18,743 2 18% \$5,913 \$12,830 0 7900 \$16,240	
Sep-22 (1)	\$6,420,090 \$0 (\$20,909) \$0 \$6,399,181	32.92 \$577,154 6.91% \$39,881 2.18% \$12,582 \$27,299 0.7900 \$34,556	\$47,138 \$1,142,249 \$0 \$0 \$0 \$1,142,249 \$1,142,249	\$103,022 6 91% \$7,119 2 18% \$2,246 \$4,873 0 7900 \$6,168	
Aug-22 (k)	\$6,420,090 \$0 (\$20,909) \$0 \$6,399,181	32.92 \$577,154 6.91% \$3.9,881 2.18% \$12,582 \$27,299 0.7900 834,556	\$47,138 \$1,140,875 \$0 \$0 \$0 \$0 \$1,140,875 32 92	\$102,898 6 91% 57,110 2 18% \$2,243 \$4,867 0 7900 \$6,161 \$8,404	
<u>Jul-22</u> (j)	\$6,420,090 \$0 (\$20,909) \$0 \$6,399,181	32.92 \$577,154 6.91% \$39,881 2.18% \$12,582 \$27,299 0.7900 \$34,556	\$47,138 \$1,037,896 \$0 \$0 \$0 \$0 \$1,037,896	\$93,610 6 91% \$6,468 2 18% \$2,041 \$4,428 0 7900 \$5,605	
<u>Jun-22</u> (i)	\$6,420,090 \$0 (\$20,909) \$0 \$6,399,181	32.92 \$577,154 \$39,881 2.18% \$12,582 \$27,299 0.7900 \$34,556	\$47,138 \$1,216,273 \$0 \$0 \$0 \$0 \$1,216,273 32,92	\$109,698 6 91% \$7,580 2 18% \$2,391 \$5,189 0 7900 \$6,568 \$8,568	, 2018
<u>May-22</u> (h)	\$6,420,090 \$0 (\$20,909) \$0 \$6,399,181	32.92 \$577,154 6.91% \$3.9,881 2.18% \$12,582 \$27,299 0.7900 834,556	\$47,138 \$1,949,045 \$0 \$0 \$0 \$0 \$1,949,045	\$175,788 6 91% \$12,147 2 18% \$3,832 \$8,315 0 7900 \$10,525 \$14,357	(25) Dkt 5165 (26) Line (24) x Line (25) (27) Dkt 4955 (28) Line (24) x Line (27) (29) Line (26) - Line (28) (30) Tax Law effective Jan 1, 2018 (31) Line (29) + Line (30) (32) Line (28) + Line (31)
<u>Apr-22</u> (g)	\$6,420,090 \$0 (\$20,909) \$0 \$6,399,181	32.92 \$577,154 6.91% \$39,881 2.18% \$12,582 \$27,299 0.7900 \$34,556	\$47,138 \$5,244,070 \$0 \$0 \$0 \$0 \$5,244,070 32 92	\$472,972 6 91% \$32,682 2 18% \$10,311 \$22,372 0 7900 \$28,318 \$38,629	(25) Dkt 5165 (26) Line (24) x Line (25) (27) Dkt 4955 (28) Line (24) x Line (27) (39) Line (26) - Line (28) (30) Tax Law effective Jar (31) Line (29) + Line (31) (32) Line (28) + Line (31)
<u>Mar-22</u> (f)	\$10,285,725 \$0 (\$1,629,488) \$0 \$8 \$8,656,236	32.92 \$780,721 6.91% \$53,948 2.18% \$17,020 \$36,928 0.7900 \$46,744	\$63,764 \$11,758,848 \$0 \$0 \$0 \$10 \$11,758,848	\$1,060,551 6 91% \$73,284 2 18% \$23,120 \$50,164 0 7900 \$63,499	
Feb-22 (e)	\$10,285,725 \$0 (\$1,629,488) \$0 \$0 \$8,656,236	32 92 \$780,721 6 91% \$53,948 2 18% \$17,020 \$36,928 0 7900 \$46,744	\$63,764 \$14,953,292 \$0 \$0 \$0 \$0 \$14,953,292 32,92	\$1,348,664 6 91% \$93,193 2 18% \$29,401 \$63,792 0 7900 \$80,749 \$110,150	
Jan-22 (d)	\$9,737,455 \$0 (\$1,629,488) \$0 \$8 \$8,107,966	32 92 8731,272 6 91% \$50,531 2 18% \$15,942 \$34,589 0 7900 843,784	\$59,725 \$17,201,504 \$0 \$0 \$0 \$0 \$17,201,504 32,92	\$1,551,434 6 91% \$107,204 2 18% \$33,821 \$73,383 0 7900 \$92,890	2) lan 1, 2018 4) 5) (1) (2) + 12 1)] + 365
<u>Dec-21</u> (c)	\$9,741,455 \$0 (\$1,629,488) \$0 \$0 \$8 \$8 \$8	32.92 \$731,633 6.91% \$50,556 2.18% \$15,950 0.7900 \$43,805	\$12,624,035 \$0 \$0 \$0 \$0 \$12,624,035 \$12,624,035	\$1,138,584 6 91% \$78,676 2 18% \$24,821 \$53,855 0 7900 \$68,171 \$92,992	(13) Line (10) - Line (12) (14) Tax Law effective Jan 1, 201 (15) Line (13) + Line (14) (16) Line (12) + Line (15) (17) RMS-1, Pg 3, Line (1) (20) RMS-1, Pg 3, Line (2) + 12 (22) Sum[Lines (17)(21)] (23) Dkt 4770 (24) [Line (22) x Line (23)] + 365
Nov-21 (b)	\$5,896,129 \$0 (\$20,909) \$0 \$0 \$5,875,220	32 92 \$529,897 6 91% \$36,616 2 18% \$11,552 \$25,064 0 7900 \$31,727	\$43,278 \$7,337,085 \$0 \$0 \$0 \$7,337,085 32,92	\$661,745 6 91% \$45,727 2 18% \$14,426 \$31,301 0 7900 \$39,621	(13) Li (14) Ti (15) Li (16) Li (16) Li (20) R (22) S (23) D (23) D
Description (a)	(1) Fixed Costs (2) Capacity Release Revenue (3) Less System Pressure to DAC (4) Less: Credits (5) Plus: Supply Related LNG O&M Costs (6) Allowable Working Capital Costs		 (16) Fixed Working Capital Requirement (17) Variable Costs (18) Less: Non-firm Sales (19) Less: Supply Refunds (20) Less: Bal Related Syst Pressure Commodity to DAC (21) Plus: Supply Related LNG O&M Costs (22) Allowable Working Capital Costs (23) Number of Days Lag 	(24) Working Capital Requirement (25) Weighted Average Cost of Capital (26) Return on Working Capital Requirement (27) Cost of Debt (Long Term Debt + Short Term Debt) (28) Interest Expense (29) Taxable Income (30) 1 - Combined Tax Rate (31) Return and Tax Requirement (32) Variable Working Capital Requirement	(1) RMS-1, Pg 2, Line (1) (3) GSP-1 (6) Sum[Lines (1)-(5)] (7) Dkt 4770 (8) [Line (6) x Line (7)] + 365 (9) Dkt 5165 (10 Line (8) x Line (9) (11) Dkt 5165 (12) Line (8) x Line (11)

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Storage Fixed Cost Working Capital Calculation for FT-2 Demand Rate (see RMS-5, pg 2)

					REDA		
Total (n)						\$169,227	
Oct-22 (m)		32 92	6 91%	2 18%	0 7900		
Sep-22 (1)		32 92	691%	2 18%	0 7900		
Aug-22 (k)	П	32 92	6 91%	2 18%	0 7900		
Jul-22 (j)	П	32 92	6 91%	2 18%	0 7900		
Jun-22 (i)	Ħ	3292	6 91%	2 18%	0 7900		
May-22 (h)	П	32 92	%169	2 18%	0 7900		
Apr-22 (g)	П	32 92	%169	2 18%	0 7900		
Mar-22 (f)	П	32.92	691%	2 18%	0 7900		
Feb-22 (e)	П	32 92	6 91%	2 18%	0 4 7 9 0 0		
<u>Jan-22</u> (d)	n	32 92	691%	2 18%	0 4 7 9 0 0		
Dec-21 (c)	Ħ	32 92	691%	2 18%	0 7900		
Nov-21 (b)	П	32 92	6 91%	2 18%	0 7900		
<u>Description</u> (a)	 (33) <u>Storage Fixed Costs</u> (34) Less: System Pressure to DAC (35) Less: Credits (36) Plus: Supply Related LNG O&M Costs (37) Allowable Working Capital Costs 	(38) Number of Days Lag	(39) Working Capital Requirement(40) Weighted Average Cost of Capital(41) Return on Working Capital Requirement	(42) Cost of Debt (Long Term Debt + Short Term Debt)(43) Interest Expense	(44) Taxable Income (45) 1 - Combined Tax Rate (46) Return and Tax Requirement	(47) Storage Fixed Working Capital Requirement	(33) RMS-1, pg 5, Line (40) (34) Line (37) Sum[Lines (33) - (36)] (38) Dkt 4770 (39) [Line (37) x Line (38)] + 365 (40) Dkt 5165 (41) Line (39) x Line (40) (42) Dkt 5165 (43) Line (39) x Line (42) (44) Line (41) - Line (43) (45) Tax Law effective Jan 1, 2018 (46) Line (44) + Line (45) (47) Line (43) + Line (46)

The Narragansett Electric Company d/b/a National Grid Docket No 5180 Attachment RMS-1 Page 11 of 16

> National Grid - RI Gas Gas Cost Recovery (GCR) Filing Inventory Finance Estimate

	ı	;	;	Inven	Inventory Finance Estimate	Estimate	;	;	;	;	;	;	:	
<u>Description</u> (a)	Source (b)	Nov-21 (c)	(d)	Jan-22 (e)	Feb-22 (f)	Mar-22 (g)	<u>Apr-22</u> (h)	May-22 (i)	<u>Jun-22</u> (j)	<u>Jul-22</u> (k)	Aug-22 (1)	Sep-22 (m)	(n)	Total (o)
 Storage Inventory Balance Hedging Subtotal Weighted Average Cost of Capital Return on Working Capital Requirement 	GSP-1 (1) + (2) Dkt 5165 (3) x (4)	\$9,572,864 \$0,572,864 \$9,572,864 6,91% \$661,485	\$7,304,261 \$0 \$7,304,261 6 91% \$504,724	\$4,861,492 \$0 \$4,861,492 6,91% \$335,929	\$2,617,341 \$2,617,341 6 91% \$180,858	\$1,135,121 \$0 \$1,135,121 6 91% \$78,437	\$1,197,526 \$0 \$1,197,526 6 91% \$82,749	\$3,182,649 \$3,182,649 6 91% \$219,921	\$4,146,261 \$4,146,261 6 91% \$286,507	\$5,911,109 \$0 \$5,911,109 6,91% \$408,458	\$7,927,310 \$0 \$7,927,310 6 91% \$547,777	\$9,613,997 \$9,613,997 6 91% \$664,327	\$11,296,878 \$0 \$11,296,878 6 91% \$780,614	\$4,751,787
(6) Cost of Debt (LTD + STD)*(7) Interest Charges Financed	Dkt 5165 (3) x (6)	2 18% \$208,688	2 18% \$159,233	2 18% \$105,981	2 18% \$57,058	2 18% \$24,746	2 18% \$26,106	2 18% \$69,382	2 18% \$90,388	2 18% \$128,862	2 18% \$172,815	2 18% \$209,585	2 18% \$246,272	\$1,499,116
(8) Taxable Income(9) 1 - Combined Tax Rate(10) Return and Tax Requirement	(5) - (7) (8) ÷ (9)	\$452,796 0 7900 \$573,160	\$345,492 0 7900 \$437,331	\$229,949 0 7900 \$291,074	\$123,800 0 7900 \$156,709	\$53,691 0 7900 \$67,964	\$56,643 0 7900 \$71,700	\$150,539 0 7900 \$190,556	\$196,118 0 7900 \$248,251	\$279,595 0 7900 \$353,918	\$374,962 0 7900 \$474,635	\$454,742 0 7900 \$575,623	\$534,342 0 7900 \$676,383	\$4,117,304
(11) Working Capital Requirement	(7) + (10)	\$781,849	\$596,564	\$397,055	\$213,767	\$92,709	\$97,806	\$259,938	\$338,639	\$482,780	\$647,450	\$785,208	\$922,655	\$5,616,420
(12) Storage-Related Inventory Costs	(11) ÷ 12	\$65,154	\$49,714	\$33,088	\$17,814	\$7,726	\$8,151	\$21,661	\$28,220	\$40,232	\$53,954	\$65,434	\$76,888	\$468,035
(13) LNG Inventory Balance(14) Weighted Average Cost of Capital(15) Return on Working Capital Requirement	GSP-1 Dkt 5165 (13) x (14)	%169	%169	6 91%	%169	6 91%	%169	%169	%169	%169	%169	6 91%	6 91%	\$2,719,680
(16) Cost of Debt (LTD + STD)* (17) Interest Charges Financed	Dkt 5165 (13) x (16)	2 18%	2 18%	2 18%	2 18%	2 18%	2 18%	2 18%	2 18%	2 18%	2 18%	2 18%	2 18%	\$858,018
(18) Taxable Income (19) 1 - Combined Tax Rate (20) Return and Tax Requirement	$(15) - (17)$ $(18) \div (19)$	0 7900	0 7900	0 7900	0 7900	0 7900	0 7900	0 7900	0 7900	0 7900	0 7900	0 7900	0 7900	\$2,356,534
(21) Working Capital Requirement	(17) + (20)													\$3,214,552
(23) Total Inventory Financing Costs	(12) + (22)													\$735,914

*LTD: Long Term Debt *STD: Short Term Debt The Narragansett Electric Company d/b/a National Grid Docket No. 5180 Attachment RMS-1 Page 12 of 16

> National Grid - RI Gas Gas Cost Recovery (GCR) Filing Forecasted Throughput (Dth)

	ct		,785	,541	,302	,319	.867	,567	,947	,201	,528		,729	,516 ×	39 es,	,058	,853 п	,775	,770		,785	,541	,031	,834	,706	,625	,800	926	,298
	Nov-Oct	,	300,	20,203,	2,248,	3,657,	691,	242,	97,	112,	27,554,528		172,	2,673,	2,096,	916,	872,	5,986,775	12,718,77		300,	20,203,	2,421,	6,330,	2,788,	1,158,	970.	6,098,	40,273,298
	Oct-22 (m)	`	12,706	644,498	81,581	135,356	25,105	19,309	3,554	8,931	931,040		6,268	97,010	76,085	74,253	31,672	476,560	761,846		12,706	644,498	87,848	232,366	101,189	93,561	35,226	485,491	1,692,886
	$\frac{\text{Sep-}22}{(1)}$	ò	7,967	477,646	55,621	94,001	17,116	18,928	2,423	8,756	682,458		4,273	66,140	51,874	73,213	21,594	467,172	684,266		7,967	477,646	59,894	160,142	68,990	92,141	24,017	475,928	1,366,725
	$\frac{\text{Aug-22}}{\text{(k)}}$	`	6,392	453,942	50,946	86,514	15,678	19,543	2,219	9,040	644,274		3,914	60,581	47,514	75,376	19,779	482,339	689,503		6,392	453,942	54,860	147,095	63,192	94,919	21,998	491,379	1,333,777
	$\frac{\text{Jul-22}}{\text{(i)}}$	•	8,013	477,322	54,679	92,492	16,826	19,078	2,382	8,825	679,617		4,201	65,020	50,995	73,741	21,228	470,874	886,058		8,013	477,322	58,880	157,512	67,821	92,819	23,610	479,699	1,365,675
	$\frac{\text{Jun-22}}{\text{(i)}}$)	12,854	597,144	70,922	118,508	21,825	18,801	3,090	8,697	851,841		5,449	84,336	66,144	72,765	27,534	464,036	720,264		12,854	597,144	76,371	202,844	87,969	91,567	30,624	472,732	1,572,105
ì	May-22 (h)	·	17,716	955,323	124,451	204,019	38,297	18,504	5,422	8,559	1,372,291		9,561	147,988	116,067	71,421	48,315	456,705	850,056		17,716	955,323	134,012	352,007	154,364	89,925	53,737	465,264	2,222,347
1-0	$\frac{\text{Apr-}22}{\text{(g)}}$)	33,894	2,339,944	246,807	400,214	75,950	20,228	10,752	9,357	3,137,145		18,961	293,485	230,180	75,148	95,817	499,250	1,212,842		33,894	2,339,944	265,768	663,669	306,130	95,376	106,569	508,607	4,349,987
	$\frac{\text{Mar-22}}{\text{(f)}}$	·	40,433	2,887,874	311,395	503,885	95,825	21,173	13,566	9,794	3,883,944		23,923	370,288	290,417	78,653	120,892	522,566	1,406,739		40,433	2,887,874	335,318	874,173	386,242	99,826	134,458	532,360	5,290,682
	<u>Feb-22</u> (e)	ò	50,236	3,811,850	388,554	626,797	119,569	21,409	16,927	9,903	5,045,244		29,851	462,040	362,378	78,948	150,847	528,399	1,612,463		50,236	3,811,850	418,405	1,088,836	481,947	100,357	167,775	538,302	6,657,707
	$\frac{\text{Jan-22}}{\text{(d)}}$	`	47,084	3,439,229	380,743	614,005	117,165	22,983	16,587	10,631	4,648,427		29,251	452,751	355,093	84,666	147,815	567,237	1,636,814		47,084	3,439,229	409,994	1,066,756	472,258	107,649	164,402	577,868	6,285,240
	Dec-21 (c)	·	37,414	2,589,854	298,399	482,518	91,826	22,091	13,000	10,218	3,545,319		22,925	354,834	278,296	81,884	115,847	545,221	1,399,007		37,414	2,589,854	321,323	837,351	370,122	103,975	128,846	555,440	4,944,326
	Nov-21 (b)		26,077	1,528,915	184,206	299,010	56,685	20,518	8,025	9,491	2,132,927		14,152	219,044	171,796	75,991	71,514	506,416	1,058,913		26,077	1,528,915	198,358	518,054	228,481	96,510	79,539	515,907	3,191,840
	Rate Class (a)	SALES	(1) Residential Non-Heating	(2) Residential Heating	(3) Small C&I	(4) Medium C&I	(5) Large LLF	(6) Large HLF	(7) Extra Large LLF	(8) Extra Large HLF	(9) Total Sales	TRANSPORTATION	(10) FT- Small	(11) FT- Medium	(12) FT- Large LLF	(13) FT- Large HLF	(14) FT- Extra Large LLF	(15) FT- Extra Large HLF	(16) Total FT Transportation	Total THROUGHPUT	(17) Residential Non-Heating	(18) Residential Heating	(19) Small C&I	(20) Medium C&I	(21) Large LLF	(22) Large HLF	(23) Extra Large LLF	(24) Extra Large HLF	(25) Total Throughput

REDACTED

Source: Attachement TEP-1

The Narragansett Electric Company
d/b/a National Grid
Docket No. 5180
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National Grid - RI Gas Gas Cost Recovery (GCR) Filing Design Winter Period and Design Day Throughput (Dth)

	% % % % % % % % % % % % % % % % % % %	REDACTED
%(h) %(h)	1.04% 74.14% 8.12% 8.12% 13.11% 0.51% 0.35% 0.33%	98.22% 1.78%
Total (g)	226,935 16,131,578 1,766,626 2,851,600 543,641 110,325 76,963 51,032	21,370,407 388,292
<u>Mar-22</u> (f)	45,278 3,243,341 349,262 564,559 107,478 21,435 15,216 9,915 4,356,483	4,279,855 76,628
<u>Feb-22</u> (e)	57,300 4,362,159 443,776 715,240 136,562 22,043 19,333 10,196 5,766,609	5,677,070 89,538
<u>Jan-22</u> (d)	53,539 3,923,047 434,014 699,200 133,559 23,569 18,908 10,902 5,296,737	5,208,728 88,009
<u>Dec-21</u> (c)	42,249 2,932,169 337,899 545,721 103,981 22,528 14,721 4,009,687	3,934,490 75,197
$\frac{\text{Nov-21}}{\text{(b)}}$	28,570 1,670,861 201,675 326,880 62,061 20,751 8,786 9,599 2,329,183	2,270,264 58,919
Line #	Line (70) Line (71) Line (72) Line (74) Line (74) Line (76) Line (78) Line (80) Line (80)	
Reference	RMS-1, pg 16 RMS-1, pg 16	Sum[(2)-(5),(7)] Sum[(1),(6),(8)]
Rate Class (a) SALES (dth)	 (1) Residential Non-Heating (2) Residential Heating (3) Small C&I (4) Medium C&I (5) Large LLF (6) Large HLF (7) Extra Large LLF (8) Extra Large HLF (9) Total Sales 	(10) Low Load Factor(11) High Load Factor2021/2022 Design Day Send Out

212,782 Dktherm
42,761 Dktherm
Dktherm

(12) Pipeline
(13) Underground Storage
(14) LNG
(15) Total Projected 2021/2022 Design Day

(1) Column (h): [Line (1), Col (g)]+[Line (9), Col (g)]
(2) Column (h): [Line (2), Col (g)]+[Line (9), Col (g)]
(3) Column (h): [Line (3), Col (g)]+[Line (9), Col (g)]
(4) Column (h): [Line (4), Col (g)]+[Line (9), Col (g)]
(5) Column (h): [Line (5), Col (g)]+[Line (9), Col (g)]
(6) Column (h): [Line (6), Col (g)]+[Line (9), Col (g)]
(7) Column (h): [Line (7), Col (g)]+[Line (9), Col (g)]
(8) Column (h): [Line (8), Col (g)]+[Line (9), Col (g)]
(10) Column (h): [Line (10), Col (g)]+[Line (9), Col (g)]
(11) Column (h): [Line (11), Col (g)]+[Line (9), Col (g)]

The Narragansett Electric Company d/b/a National Grid Docket No 5180 Attachment RMS-1 Page 14 of 16

Derivation of Monthly Design Sales Normal Volumes (Dth)	Sales											Апас	Auachment KMS-1 Page 14 of 16
(a)	$\frac{\text{Nov-21}}{\text{(b)}}$	$\frac{\overline{\text{Dec-21}}}{\text{(c)}}$	<u>Jan-22</u> (d)	Feb-22 (e)	Mar-22 (f)	$\frac{\text{Apr-}22}{\text{(g)}}$	<u>May-22</u> (h)	$\frac{\text{Jun-22}}{\text{(i)}}$	$\frac{\text{Jul-22}}{\text{(j)}}$	$\frac{\text{Aug-22}}{\text{(k)}}$	Sep-22 (1)	Oct-22 (m)	Nov-Oct (n)
(1) Decidential Man Heating	770 30	27.414	77 004	50.03	40.422	32 004	21771	13 054	0.013	200	L 20 L	307.01	300.000
(1) residential Ivon-Hearing (2) Residential Heating	1 528 915	7 589 854	3 439 229	3 811 850	2 887 874 478 788 C	2 339 944	955 323	597 144	6,013	453 942	477 646	644 498	20 203 541
	184,206	298,399	380,743	388,554	311,395	246,807	124,451	70,922	54,679	50,946	55,621	81,581	2,248,302
	14,152	22,925	29,251	29,851	23,923	18,961	9,561	5,449	4,201	3,914	4,273	6,268	172,729
(5) Medium C&I	299,010	482,518	614,005	626,797	503,885	400,214	204,019	118,508	92,492	86,514	94,001	135,356	3,657,319
(6) Med Transport	219,044	354,834	452,751	462,040	370,288	293,485	147,988	84,336	65,020	60,581	66,140	97,010	2,673,516
	56,685	91,826	117,165	119,569	95,825	75,950	38,297	21,825	16,826	15,678	17,116	25,105	691,867
	171,796	278,296	355,093	362,378	290,417	230,180	116,067	66,144	50,995	47,514	51,874	76,085	2,096,839
(9) Large High Load	20,518	22,091	22,983	21,409	21,173	20,228	18,504	18,801	19,078	19,543	18,928	19,309	242,567
(10) Large High Load- Transport	75,991	81,884	84,666	78,948	78,653	75,148	71,421	72,765	73,741	75,376	73,213	74,253	916,058
	8,025	13,000	16,587	16,927	13,566	10,752	5,422	3,090	2,382	2,219	2,423	3,554	97,947
(12) XL Low Load-Transport	71,514	115,847	147,815	150,847	120,892	95,817	48,315	27,534	21,228	19,779	21,594	31,672	872,853
(13) XL High Load	9,491	10,218	10,631	9,903	9,794	9,357	8,559	8,697	8,825	9,040	8,756	8,931	112,201
(14) XL High Load-Transport (15) Total	$\frac{506,416}{3,191,840}$	<u>545,221</u> 4,944,326	$\frac{567,237}{6,285,240}$	$\frac{528,399}{6,657,707}$	<u>522,566</u> 5,290,682	$\frac{499,250}{4,349,987}$	$\frac{456,705}{2,222,347}$	$\frac{464,036}{1,572,105}$	$\frac{470,874}{1,365,675}$	482,339 1,333,777	$\frac{467,172}{1,366,725}$	$\frac{476,560}{1,692,886}$	<u>5,986,775</u> 40,273,298
(16) HLF	638,493	636,839	732,602	688,894	672,618	637,877	572,905	577,153	580,531	592,690	576,036	591,759	7,558,386
(17) LLF	2,553,347	4,247,497	5,552,639	5,968,813	4,618,065	3,712,110	1,649,443	994,952	785,145	741,087	790,689	1,101,127	32,714,912
Baseload													
	Nov-21 30	Dec-21 31	<u>Jan-22</u> 31	Feb-22 28	Mar-22 31	$\frac{\text{Apr-}22}{30}$	<u>May-22</u> 31	Jun-22 30	$\frac{\text{Jul-22}}{31}$	<u>Aug-22</u> 31	Sep-22 30	Oct-22 31	Nov-Oct
(18) Residential Non-Heating	7,295	7,538	7,538	6,809	7,538	7,295	7,538	7,295	7,538	6,392	7,295	7,538	87,612
(19) Residential Heating	459,427	474,741	474,741	428,799	474,741	459,427	474,741	459,427	474,741	453,942	459,427	474,741	5,568,898
	52,580	54,333	54,333	49,075	54,333	52,580	54,333	52,580	54,333	50,946	52,580	54,333	636,339
(21) Small Transport	4,040	4,174	4,174	3,770	4,174	4,040	4,174	4,040	4,174	3,914	4,040	4,174	48,888
	89,024	91,991	91,991	83,089	91,991	89,024	91,991	89,024	91,991	86,514	89,024	91,991	1,077,646
(23) Med Transport	62,524	64,609	64,609	58,356	64,609	62,524	64,609	62,524	64,609	60,581	62,524	64,609	756,687
(24) Large Low Load	16,180	16,720	16,720	15,102	16,720	16,180	16,720	16,180	16,720	15,678	16,180	16,720	195,820
(25) Large Low Load- Transport	49,038	50,673	50,673	45,769	50,673	49,038	50,673	49,038	50,673	47,514	49,038	50,673	593,470
(26) Large High Load	18,766	19,392	19,392	17,515	19,392	18,766	18,504	18,766	19,078	19,392	18,766	19,309	227,039
(27) Large High Load- Transport	72,499	74,915	74,915	999'.	74,915	72,499	71,421	72,499	73,741	74,915	72,499	74,253	876,737
(28) XL Low Load	2,291	2,367	2,367	2,138	2,367	2,291	2,367	2,291	2,367	2,219	2,291	2,367	27,722
(29) XL Low Load-Transport	20,413	21,094	21,094	19,052	21,094	20,413	21,094	20,413	21,094	19,779	20,413	21,094	247,044
(30) XL High Load	8,681	8,970	8,970	8,102	8,970	8,681	8,559	8,681	8,825	8,970	8,681	8,931	105,019
(31) XL High Load-Transport	463,169	478,608	478,608	432,291	478,608	463,169	456,705	463,169	470,874	478,608	463,169	476,560	5,603,537
(32) Total	1,325,927	1,370,125	1,370,125	1,237,532	1,370,125	1,325,927	1,343,429	1,325,927	1,360,758	1,329,364	1,325,927	1,367,292	16,052,458
(33) HLF	570,410	589,423	589,423	532,382	589,423	570,410	562,727	570,410	580,056	588,278	570,410	586,591	6,899,944
(34) LLF	755,517	780,701	780,701	705,150	780,701	755,517	780,701	755,517	780,701	741,087	755,517	780,701	9,152,514

The Narragansett Electric Company d/b/a National Grid Docket No 5180 Attachment RMS-1 Page 15 of 16

Derivation of Monthly Design Sales	Sales											BILL.	Page 15 of 16
Heat Volumes	Nov-21	Dec-21	[an-22	Feh-22	Mar-22	Anr-22	Mav-22	72-uil	In1-22	A110-22	Sen-22	Oct-22	Nov-Oct
(a)	(p)	(c)	(p)	(c)	(f)	(g)	(h)	(i)	(j)	(k)	(1)	(m)	(n)
(35) Residential Non-Heating	18,782	29,876	39,546	43,427	32,894	26,599	10,177	5,558	475	0	671	5,168	213,173
(36) Residential Heating	1,069,488	2,115,113	2,964,487	3,383,051	2,413,132	1,880,516	480,581	137,717	2,580	0	18,219	169,756	14,634,642
	131,626	244,066	326,410	339,479	257,062	194,227	70,118	18,342	346	0	3,041	27,248	1,611,964
(38) Small Transport	10,112	18,751	25,077	26,081	19,749	14,922	5,387	1,409	27	0	234	2,093	123,841
(39) Medium C&I	209,986	390,526	522,014	543,708	411,894	311,190	112,028	29,484	501	0	4,977	43,365	2,579,672
(40) Med Transport	156,519	290,225	388,143	403,684	305,679	230,960	83,379	21,811	411	0	3,616	32,401	1,916,829
(41) Large Low Load	40,505	75,106	100,446	104,467	79,105	59,769	21,577	5,644	106	0	936	8,385	496,047
(42) Large Low Load- Transport	122,758	227,624	304,420	316,609	239,744	181,142	65,394	17,106	323	0	2,836	25,412	1,503,369
(43) Large High Load	1,752	2,699	3,591	3,894	1,781	1,462	0	35	0	151	162	0	15,528
(44) Large High Load- Transport	3,492	696'9	9,751	11,282	3,737	2,649	0	267	0	461	714	0	39,322
(45) XL Low Load	5,734	10,633	14,220	14,789	11,199	8,461	3,055	799	15	0	132	1,187	70,225
(46) XL Low Load-Transport	51,101	94,753	126,721	131,795	66,766	75,404	27,222	7,121	134	0	1,181	10,578	625,809
(47) XL High Load	811	1,248	1,661	1,801	824	929	0	16	0	70	75	0	7,182
(48) XL High Load-Transport	43,247	66,613	88,629	96,108	43,958	36,081	0	867	0	3,731	4,003	0	383,237
(49) Total	1,865,913	3,574,201	4,915,116	5,420,175	3,920,558	3,024,060	878,919	246,177	4,918	4,413	40,797	325,594	24,220,840
(50) HLF	68,083	107,405	143,178	156,512	83,194	67,468	10,177	6,743	475	4,413	5,626	5,168	658,442
(51) LLF	1,797,829	3,466,796	4,771,937	5,263,663	3,837,363	2,956,592	868,741	239,435	4,443	0	35,172	320,426	23,562,398
TO COS	EC7	020	1011	2011	200	527	676	***	40	•	ć;	744	207
(52) Normal Billing DD Heat Factors	43/	09/	1101	\$711	658	6/3	797	151	PI I	0	13	130	2477
	Nov-21	Dec-21	Jan-22	Feh-22	Mar-22	Apr-22	Mav-22	.Jun-22	Jul-22	A119-22	Sen-22	Oct-22	Nov-Oct
(a)	(p)	(c)	(p)	(e)	(f)	(g)	(h)	(<u>E</u>)	(j)	(k)	€	(m)	
(53) Residential Non-Heating	43	39	39	39	39	40	39	42	25	0	52	33	39
(54) Residential Heating	2 447	2 783	2 932	3 007	2 890	2 794	1 834	1 051	136	· C	1 401	1 088	669 6
(55) Small C&I	301	321	323	302	308	289	268	140	18	0	234	175	297
(56) Small Transport	23	25	25	23	24	22	21	11	1	0	18	13	23
(57) Medium C&I	481	514	516	483	493	462	428	225	26	0	383	278	476
(58) Med Transport	358	382	384	359	366	343	318	166	22	0	278	208	354
(59) Large Low Load	93	66	66	93	95	68	82	43	9	0	72	54	91
(60) Large Low Load- Transport	281	300	301	281	287	569	250	131	17	0	218	163	277
(61) Large High Load	4	4	4	3	2	2	0	0	0	0	12	0	3
(62) Large High Load- Transport	∞	6	10	10	4	4	0	2	0	0	55	0	7
(63) XL Low Load	13	14	14	13	13	13	12	9	1	0	10	∞	13
(64) XL Low Load-Transport	117	125	125	117	120	112	104	54	7	0	91	89	115
(65) XL High Load	2	2	2	2	-	_	0	0	0	0	9	0	_
(66) XL High Load-Transport	66	88	88	82	53	54	0	7	0	0	308	0	71
(67) Total	4,270	4,703	4,862	4,818	4,695	4,493	3,355	1,879	259	0	3,138	2,087	4,467
(68) NormalBilling DD	437	092	1011	1125	835	673	262	131	19	0	13	156	5422
(69) DesignBilling DD	495	883	1176	1308	826	177	292	154	27	0	6	177	6250

The Narragansett Electric Company d/b/a National Grid Docket No 5180 Attachment RMS-1 Page 16 of 16

Derivation of Monthly Design Sales

Design Sales													
(a)	$\frac{\text{Nov-21}}{\text{(b)}}$	Dec-21 (c)	<u>Jan-22</u> (d)	$\frac{\text{Feb-22}}{\text{(e)}} \qquad \frac{\text{Mar-22}}{\text{(f)}}$		$\frac{Apr-22}{(g)}$	May-22 Jun-22 (h) (i)		Jul-22 (j)	$\frac{\text{Aug-}22}{\text{(k)}}$	Sep-22 (1)	Oct-22 (m)	Nov-Oct
(70) Residential Non-Heating	28,570	42,249	53,539	57,300			18,881					13,402	332,505
(71) Residential Heating	1,670,861	2,932,169	3,923,047	4,362,159			1,010,351					667,350	22,445,104
(72) Small C&I	201,675	337,899	434,014	443,776			132,480					85,249	2,493,551
(73) Small Transport	15,494	25,960	33,344	34,094			10,178					6,549	191,571
(74) Medium C&I	326,880	545,721	699,200	715,240			216,847					141,194	4,049,829
(75) Med Transport	239,818	401,804	516,098	527,706			157,535					101,371	2,965,147
(76) Large Low Load	62,061	103,981	133,559	136,562			40,768					26,233	767,337
(77) Large Low Load- Transport	188,089	315,135	404,776	413,880			123,555					79,506	2,325,565
(78) Large High Load	20,751	22,528	23,569	22,043			18,504					19,309	244,736
(79) Large High Load- Transport	76,455	83,012	86,258	80,783			71,421					74,253	921,379
(80) XL Low Load	8,786	14,721	18,908	19,333			5,771					3,714	108,631
(81) XL Low Load-Transport	78,296	131,182	168,496	172,286			51,432					33,096	968,065
(82) XL High Load	6,599	10,420	10,902	10,196			8,559					8,931	113,205
(83) XL High Load-Transport	512,156	556,002	581,702	544,033			456,705					476,560	6,040,313
(84) Total	3,439,490	5,522,782	7,087,411	7,539,389			2,322,987					1,736,716	43,966,937
(85) HLF	647,529	714,211	755,969	714,354	684,873	647,702	574,070	578,337	580,056	588,278	574,305	592,455	7,652,137
(86) LLF	2,791,960	4,808,571	6,331,442	6,825,035	5,183,329	4,142,639	1,748,917	1,036,990	780,701	741,087	779,867	1,144,261	36,314,800

Source: Attachement TEP-1

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESS: RYAN M. SCHEIB
SEPTEMBER 1, 2021

Attachment RMS-2 Annual GCR Reconciliation Filing

Schedule 1 Page 1 of 1	<u>Apr-Mar</u> 365 (m)	(\$8,461,383) \$78,579,640 (\$4,967,984) \$876,610 (\$8,091,179) \$556,880 \$67,005,935 \$69,960,298 \$69,960,298 \$69,960,298 \$69,960,298 \$61,415,745 \$1,818,74		\$3,323,607 \$6,796 \$3,330,403 \$827,573 \$1,01,422 \$1	ne (41) ne (56)
	Mar-21 Actual 31 (1)	(\$5,082,948) \$9,050,245 (\$1,147,240) \$1,147,240) \$1,167,524, \$2,917,204 \$1,155,910 (\$6,544,706) (\$1,675,910) (\$8,570) (\$8,870) (\$8,870) (\$8,870) (\$8,870) (\$8,870) (\$8,870) (\$8,870) (\$8,870)	\$9,216,169 \$0,25,187 \$25,187 \$22,830 \$69,717 \$12,009,601 \$15,300 \$15,300,601 \$	\$2,528.850 \$798,445 \$3,37.295 \$2,938,072 \$1,25% \$3,109 \$3,30,403 \$1,157,799 \$17,260,300 \$6,549 \$17,260,300 \$6,549 \$17,260,300 \$6,549 \$17,260,300 \$81,4157,799 \$17,260,300 \$82,667,1067 \$82,667,1067 \$82,678,218 \$10,583 \$10,58	Line (32) + Lin Line (55) + Lin
	Feb-21 Actual 28 (k)	\$1,076,203 \$9,180,189 \$6,152,572 \$6,152 \$1,52,572 \$2,162 \$2,162 \$1,176,38 \$1,376,38 \$1,576,38 \$2,002,102 \$1,002 \$2,002,102 \$1,00	\$13,753,077 \$17,212,370 \$0 \$25,187 \$22,275 \$49,740 \$13,607,297 \$15,525,187 \$1,459,779 \$15,525,187 \$1,459,779 \$15,225,187 \$1,459,779	\$863,520 \$798,445 \$3.5 \$863,520 \$798,445 \$3.5 \$1, \$2,045,129 \$2,928,445 \$3.3 \$1, \$2,045,129 \$2,928,729 \$3.37,729 \$3.109 \$	55) Line (15) + 56) Line (33) 57) Line (52) +
	Jan-21 <u>Actual</u> 31 (j)	\$7,128,094 \$8,836,970 (\$1,242,638) \$26,152 \$6,382,779 \$12,439,023 \$1,071,850	\$11,196,560 \$15,388,563 \$0,560 \$25,187 \$22,894 \$116,410 \$15,611,223 \$15,611,223 \$13,6410 \$13,739,840 \$13,739,840 \$13,739,840 \$13,739,840 \$13,739,840 \$13,739,840 \$13,739,840 \$13,739,840 \$13,739,840 \$13,739,840		
	Dec-20 Actual 31 (i)	\$7,685,937 \$8,866,638 \$60,152 \$63,152 \$7,249,839 \$7,249,839 \$7,103,038 \$7,103,038 \$7,103,038 \$7,103,038 \$7,103,038 \$7,103,038 \$7,103,038 \$7,103,038 \$7,103,038 \$7,103,038	\$7,145,28 \$11,965,664 \$0.55,187 \$23,030 \$88,025 \$172,442 \$1,172,44	\$154,001 \$539,339 \$693,340 \$450 \$450 \$693,790 \$14,985,196 \$10,74 \$14,714 \$14,714 \$14,714 \$14,714 \$15,407,093 \$15,4	4) (6), (16), (20) Line (24) ine (25)
RELEASE	Nov-20 Actual 30 (h)	\$6,235,963 \$6,172,559 \$20,574 \$20,518 \$45,188 \$5,830,086 \$4,198,905 \$1,631,181 \$7,867,144 \$7,051,554 \$1,558	\$5,896,957 \$5,716,480 \$25,187 \$23,751 \$74,899 \$43,243 \$5,883,560 \$1,92,655 \$7,089,612 \$6,432,285 \$7,089,612 \$6,671 \$48,974 \$7,145,258	\$153,922 \$539,339 \$868,33 \$155,922 \$539,339 \$868,33 \$15,52,13 \$75,961 \$75,969 \$1,1279, \$1,1279, \$1,279	(45) Sum[Lines (4) (6), (16), (20) (22)] (46) Line (23) + Line (24) (47) Line (8) + Line (25)
CONTAINS CONFIDENTIAL INFORMATION - DO NOT RELEASE	Oct-20 Actual 31 (g)	\$2,150,791 \$6,365,529 \$6,152 \$6,152 \$6,077,834 \$1,277,112 \$4,080,722 \$6,231,513 \$6,231,5	\$4,746,721 \$3,227,386 \$25,187 \$23,408 \$76,506 \$2,3414 \$3,376,922 \$1,346,589 \$1,144,589 \$5,891,310 \$5,891,310 \$5,891,310 \$5,891,310 \$5,891,310 \$5,891,310 \$5,697	80 80 80 80 80 80 80 80,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,512 89,897,897,897,897,897,897,897,897,897,8	
L INFORMAT	Sep-20 Actual 30 (f)	(\$2,600,025) \$5,431,471 \$0 \$0,152 \$6,2,152 \$6,115,57 \$6,171,557 \$1,420,511 \$4,751,047 \$2,151,042 \$2,151,022 \$2,151,022 \$2,151,022 \$2,151,022 \$2,151,022 \$2,151,022 \$2,151,022 \$2,151,022 \$2,150,791 \$2,150,791	\$4,327,618 \$1,848,549 \$25,187 \$23,401 \$72,709 \$1,883,911 \$1,569,467 \$4,742,062 \$4,742,062 \$4,534,840 \$4,742,062 \$4,534,840 \$4,742,062 \$4,534,840 \$4,742,062 \$4,534,840 \$4,742,062 \$4,742,062 \$4,742,062 \$4,742,062 \$4,742,062 \$4,742,062 \$4,742,062 \$4,742,062 \$4,742,062 \$4,742,062 \$4,742,062	80 80 80 80 80 80 80 81,727,593 87,374,339 88,135,408 82,138,977 82,165,491 86,893,084 94,318 84,428 86,893,084 94,218 96,893,084 96,893,084 97,318 96,893,084 97,318 98,318,408 97,318 98,318,408 98,	[Line (19) + Line (29)] + 2 ([Line (30) x Line (31)] + 365) x Line (1) Line (29) + Line (32) + Line (33)
CONFIDENTIA	Aug-20 Actual 31 (e)	(\$6,100,630) \$5,387,032 \$0,152 \$69,152 \$40,751 \$5,001,935 \$1,516,713 \$3,505,222 \$1,516,713 \$1,516,7	\$3,975,835 \$1,899,688 \$0,805,935 \$65,935 \$14,371 \$2,038,648 \$1,681,270 \$347,378 \$4,149,524 \$1,149,5	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	30) [Line (19) + 32) ([Line (30) > 34) Line (29) +
CONTAINS C	Jul-20 Actual 31 (d)	(\$9.488.015) \$5.391,037 \$0.152 \$0.152 \$40.782 \$5.025,971 \$1.636,316 \$5.335,675 \$5.025,971 \$1.636,316 \$5.025,971 \$1.25% \$6.092,360 \$7.790,187 \$8.270 \$8.270 \$6.100,650 \$6.100,650	\$3,753,168 \$1,913,246 \$2,5187 \$2,5187 \$2,219 \$2,038,456 \$1,810,890 \$2,18,566 \$3,971,734 \$3,802,451 \$2,18,560 \$2,18,500 \$2,18,5	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	
	Jun-20 Actual 30 (c)	\$5,553,300 \$0,152 \$0,152 \$0,152 \$0,152 \$2,100 \$2,100 \$2,100 \$2,946,764 \$1,000 \$	\$4,141,027 \$2,126,101 \$2,387 \$2,388,782 \$16,083 \$2,249,242 \$2,641,154 \$3,749,115 \$3,945,071 \$3,945,071 \$3,945,071 \$3,945,071 \$3,945,071 \$3,945,071 \$3,945,071	\$0 \$0 \$0	
	May-20 Actual 31 (b)	(\$9,710,995) \$2,777,190 \$0 \$0,152 \$2,302,331 \$5,096,139 \$2,703,788) \$1,042,882 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782 \$1,147,782	\$7,486,618 \$3,983,048 \$25,187 \$23,482 \$56,661 \$3,110,944 \$6,402,704 \$6,109 \$4,134,858 \$6,109 \$6,109 \$6,109 \$6,109 \$6,109 \$6,109 \$6,109 \$6,109 \$6,109 \$6,109 \$6,109 \$6,109 \$6,109	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	kt 5040 22)
	$\frac{\text{Apr-20}}{\text{Actual}}$ 30 (a)	(\$8,461,383) \$5,567,480 \$0 \$0,152 \$475,000 \$42,116 \$5,203,748 \$6,440,30 \$5,701,664) \$8,701,664) \$8,701,664) \$8,801,223 \$8,701,664) \$8,801,223 \$8,801,823 \$8,801	\$9,288,955 \$6,292,144 \$0 \$25,187 \$23,875 \$54,41,208 \$8,441,208 \$8,478,005 \$8,83,83,480 \$1,25% \$8,81,810,951 \$1,25% \$8,81,810,951 \$1,25% \$8,81,810,951 \$1,25% \$1,25%	\$0 \$0 \$0	(21) Dkt 4955; Dkt 5040 (22) Docket 4770 (23) Sch 5, line (22)
National Grid Rhode Island - Gas Deferred Gas Cost Balances		(2) I Fixed Cost Deferred (3) Seginning Under(Over) Recovery (4) Supply Fixed Costs Inter of eap rel) (5) Supply Fixed Costs Inter of eap rel) (6) Supply Related System Pressure to DAC (7) NGPMP Credits (8) Working Capital (10) Supply Fixed Costs (11) Monthly Under(Over) Recovery (11) Monthly Under(Over) Recovery (12) Prelim Ending Under(Over) Recovery (13) Month's Average Balance minus 200 bps) (14) Interest Applied (15) Marketer Reconciption (17) Fixed Ending Under(Over) Recovery (17) Fixed Ending Under(Over) Recovery		(35) III.COVID Deferred (37) Regiming Balance (38) Perlim Ending Balance (38) Perlim Ending Balance (40) Interest Rate (BOA Prime minus 200 bps) Interest Rate (BOA Prime minus 200 bps) Interest Applied (41) Interest Applied (43) Ending Balance (44) Gas Costs (44) Gas Costs (45) Gas Costs (46) Inventory Finance (47) Gas Costs (48) NGPMP Credits (49) Total Costs (49) Total Costs (49) Total Costs (51) Monthly Under/(Over) Recovery (52) Prelim Ending Under/(Over) Recovery (53) Monthly Luder/(Over) Recovery (54) Interest Rate (BOA Prime minus 200 bps) (53) Interest Rate (BOA Prime minus 200 bps) (54) Interest Rate (BOA) Prime minus 200 bps) (55) Interest Rate (BOA) (56) Gas Purchase Plan Incentives/(Penalties) (57) Ending Under/(Over) Recovery W/ Interest (58) Doke 455; Dat 5040 (59) Docket 4770 (50) Docket 4770 (50) Sull-Lines (4) (8) (50) Sull-Lines (4) (8)	(10) Sch 3, line (10) (11) Line (9) - Line (10) (12) Line (3) + Line (11)

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National Grid Rhode Island - Gas			ŏ	CONTAINS CONFIDENTIAL INFORMATION - DO NOT RELEASE	ONFIDENTIA	L INFORMA1	NON - DO M	OT RELEASE	63				Schedule 2 Page 1 of 3	
Supply Estimates Actuals for Filing														
	$\frac{\text{Apr-20}}{\text{Actual}}$ (a)	$\frac{\text{May-20}}{\text{Actual}}$ (b)	$\frac{\text{Jun-20}}{\text{Actual}}$ (c)	Jul-20 Actual (d)	$\frac{\text{Aug-20}}{\text{Actual}}$ (e)	Sep-20 Actual	$\frac{\text{Oct-20}}{\text{Actual}}$ (g)	$\frac{\text{Nov-20}}{\text{Actual}}$ (h)	Dec-20 Actual	Jan-21 Actual	$\frac{\text{Feb-21}}{\text{Actual}}$ (k)	$\frac{\text{Mar-21}}{\text{Actual}}$	Apr-Mar (m)	
Description							9			•				
SUPPLY FIXED COSTS - Pipeline Delivery														
	80	80	80	80	80	80	\$648,797	80	80	80	80	80	\$648,797	
	\$1,094,343	\$1,110,633	\$1,106,174	\$1,124,707	\$1,126,476	\$1,119,050	\$1,134,257	\$1,025,492	\$1,125,751	\$1,157,911	\$1,272,430	\$1,245,385	\$13,642,609	
	\$11,711	\$11,711	\$11,711	\$11,711	\$11,711	\$11,711	\$11,711	\$21,074	\$21,200	\$21,429	\$25,277	\$23,604	\$194,560	
	86,763	\$6,763	\$6,763	\$5,231	\$6,626	\$7,037	\$7,037	\$7,040	\$7,021	\$7,021	\$7,021	\$7,021	\$81,342	
	\$85,024	\$85,024	\$85,024	\$85,024	\$85,024	\$85,024	\$85,024	\$83,636	\$83,636	\$83,636	\$83,636	\$83,636	\$1,013,348	
	\$104,580	\$104,580	\$104,580	\$104,580	\$104,580	\$104,580	\$104,580	\$102,872	\$102,872	\$102,872	\$102,872	\$102,872	\$1,246,418	
	\$262,800	\$262,800	\$262,800	\$262,800	\$262,800	\$262,800	\$262,800	\$262,800	\$262,800	\$262,800	\$262,800	\$262,800	\$3,153,600	
	\$927,625	\$933,474	\$927,625	\$933,474	\$933,474	\$927,625	\$933,474	\$927,625	\$933,474	\$933,474	\$915,926	\$933,474	\$11,160,741	
	\$6,842	\$6,842	\$6,842	\$6,842	\$6,842	\$6,842	\$6,842	\$6,718	\$6,718	\$6,718	\$6,718	\$6,718	\$81,481	
	80	80	80	80	80	\$0	80	\$525,113	\$524,283	\$525,473	\$747,233	\$764,949	\$3,087,051	
	\$265,371	\$263,371	\$263,371	\$263,371	\$260,971	\$260,971	\$260,971	80	80	80	80	80	\$1,838,397	
	\$418,695	\$418,695	\$418,695	\$418,695	\$418,695	\$488,425	\$488,426	\$0	80	80	80	80	\$3,070,324	
	\$53,385	\$53,013	\$53,013	\$53,013	\$52,565	\$52,565	\$52,565	0\$	80	80	80	80	\$370,118	
	0\$	80	80	0\$	80	0\$	80	\$320,817	\$320,817	\$320,817	\$320,817	\$320,817	\$1,604,085	
	80	80	80	80	80	80	80	\$23,437	\$23,433	\$23,433	\$24,008	\$23,347	\$117,658	
	80	80	80	80	80	0\$	80	\$1,225,946	\$1,227,508	\$1,227,508	\$1,217,302	\$1,217,302	\$6,115,565	
	\$858,269	\$858,269	\$858,269	\$858,269	\$862,264	\$864,189	\$864,189	0\$	80	80	80	80	\$6,023,720	
	\$368,340	\$368,338	\$368,341	\$368,340	\$368,341	\$481,492	\$481,492	80	0\$ \$	80	80	80	\$2,804,683	I
	0\$	(\$2,730,061)	80	0\$	80	(\$108,759)	80	80	08	80	80	80	(\$2,838,819)	RE
	\$9,197	\$9,400	\$7,884	\$8,043	\$8,043	\$8,842	\$9,001	\$8,842	\$9,001	89,001	\$8,525	\$9,001	\$104,779	DA
	OS S	80	80	(\$18,952)	80 80	2	80	8	80	80	80	80	(\$18,952)	4C
														TI
	80	80	80	80	80	\$0	80	\$552,367	\$552,366	\$552,366	\$552,362	\$552,370	\$2,761,831	ED
	0\$	80	80	0\$	80	0\$	80	\$264,223	\$264,222	\$264,222	\$264,222	\$264,222	\$1,321,113	
	\$449,572	\$449,572	\$449,572	\$449,572	\$449,571	\$449,572	\$449,572	08	0£	0\$	80	08	\$3,147,001	
	\$263,953	\$263,953	\$263,953	\$263,953	\$263,953	\$263,953	\$263,953	80	80	80	80	80	\$1,847,674	
AMA Credits Less Credits from Miter Releases	08	(\$5,101)	(\$5,101)	(\$5,751)	(\$5,101)	(\$5,101)	(\$5,101)	(\$31,333)	(\$31,333)	(\$31,333)	(\$59,394)	(\$31,333)	(\$215,984)	
	(222,527)	(0.04,004)	(101,000)	(100,010,10)	(20,0,0,0,0,0)	(010,100,14)	(21 1,11 (4)	(=001-000)	(0.0%)	(201,010)	(0=0,000)	(210,(210,(14))	(****)	
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	08	80	20	80	80	08	0s :	80	0.8	80	80	0\$	20	
	80	80	80	80	80	20	0 \$	0 \$	80	80	80	80	80	
STORAGE FIXED COSTS - Facilities														
	\$9,694	\$9,694	\$9,694	\$9,694	\$9,694	\$9,694	\$9,694	\$9,694	\$9,694	\$9,694	\$23,199	\$23,199	\$143,338	
	\$36,391	\$36,391	\$36,391	\$36,391	\$36,391	\$36,391	\$36,391	\$36,412	\$36,412	\$36,412	\$36,412	\$36,412	\$436,798	
	\$46,764	\$46,764	\$46,764	\$46,764	\$46,764	\$46,764	\$46,764	\$46,790	\$46,790	\$46,790	\$46,790	\$46,790	\$561,297	
	\$163,740	\$163,740	\$163,740	\$163,740	\$163,740	\$163,740	\$163,740	\$163,740	\$163,740	\$163,740	\$163,740	\$163,740	\$1,964,880	
	\$43,258	\$43,258	\$43,258	\$43,258	\$43,258	\$43,258	\$43,258	\$42,313	\$42,313	\$42,313	\$42,313	\$42,313	\$514,370	
	\$2,397	\$2,400	\$2.456	\$2,401	\$2.404	\$2.348	\$2,349	\$2,349	\$2,359	\$2.407	\$2,400	\$2.397	\$28.668	
	\$114,352	\$114,404	\$115,317	\$114,417	\$114,775	\$113,943	\$113,960	\$113,960	\$114,112	\$114,898	\$113,957	\$113,908	\$1,372,002	
STORAGE FIXED COSTS - Delivery														
	\$311,804	\$311,741	\$311,741	\$311,741	\$306,709	\$335,609	\$344,381	\$373,733	\$373,148	\$373,148	\$387,581	\$387,581	\$4,128,916	
Confidential Pipeline and Peaking Supplies	\$442,496	\$442,502	\$530,593	\$486,548	\$486,547	\$486,547	\$486,548	\$893,824	\$3,577,545	\$3,514,063	\$3,524,577	\$3,419,245	\$18,291,033	RIP
	\$5 567 480	82 777 190	\$5 553 300	\$5 391 037	\$5 387 032	\$5 431 471	663 598 98	86 177 559	88 866 638	028 838 970	\$9 180 189	\$9 050 245	878 579 640	A
(T)							11,111,000		20,000,00	2 1 1622626	*******	11,000,00	2.267.762.0	

^{*} Increase in demand rates for the period June 2020 through August 2020, resulting from Algonquin Gas Transmission, LLC rate settlement (44) Sum[Lines (2): (43)]

			REDACTED	Attachment R
Schedule 2 Page 2 of 3	Apr-Mar (m)		\$59,905,420 \$10,149,703 \$0 \$70,055,122 \$1,156,081 \$77,746,363 \$77,801,486	Rec Page
	<u>Mar-21</u> <u>Actual</u> (1)		\$7,289,409 \$305,431 \$0 \$7,594,840 \$1,121,965 \$157,896 \$1,279,861 \$8,874,701 \$17,924,946	
	Feb-21 Actual (k)		\$14,961,635 \$659,969 \$15,621,605 \$17,007,967 \$26,188,156	
	Jan-21 Actual (j)		\$11,915,326 \$2,106,300 \$2,106,300 \$0 \$1,033,914 \$74,424 \$1,108,367 \$15,129,993	
щ	Dec-20		\$9,471,840 \$1,754,079 \$11,225,919 \$831,945 \$72,704 \$904,650 \$12,130,569	
CONTAINS CONFIDENTIAL INFORMATION - DO NOT RELEASE	Nov-20 Actual (h)		\$4,410,356 \$663,614 \$0 \$5,073,971 \$146,539 \$633,790 \$5,707,761 \$11,880,319	
ATION - DO N	$\frac{\mathbf{Oct-20}}{\mathbf{Actual}}$ (g)		\$2,220,317 \$661,718 \$682,035 \$2,882,035 \$20,646 \$204,050 \$3,086,085	
AL INFORMA	$\frac{\text{Sep-20}}{\text{Actual}}$ (f)		\$1,303,238 \$228,734 \$20,110 \$62,110 \$65,962 \$1,660,044 \$7,091,515	
ONFIDENTL	$\frac{\text{Aug-20}}{\text{Actual}}$ (c)		\$1,145,334 \$418,795 \$418,795 \$0,564,129 \$15,664,129 \$169,634 \$1,669,634 \$1,056,666	
ONTAINS C	Jul-20 Actual (d)		\$971,082 \$602,437 \$0 \$0 \$0 \$0 \$1,573,518 \$174,50 \$1,743,631 \$1,743,631	
O	<u>Jun-20</u> Actual (c)		\$802,884 \$476,792 \$0 \$0 \$1,279,677 \$537,511 \$50,287 \$587,798 \$1,867,475 \$1,867,475	
	$\frac{\text{May-20}}{\text{Actual}}$ (b)		\$1,813,879 \$619,112 \$619,112 \$2,432,991 \$51,845 \$433,617 \$2,866,608 \$5,643,799	
	$\frac{\mathrm{Apr-20}}{\mathrm{Actual}}$ (a)		\$3,600,118 \$1,652,722 \$0,500,500	
National Grid Rhode Island - Gas	Supply Estimates Actuals for Filing	<u>Description</u>	(45) VARIABLE COMMODITY COSTS (46) AGT Citygate (48) Const Summer Refill (49) Const Winter Refill (50) Dawn via IGTS (51) Dawn via IGTS (51) Dawn via IGTS (52) Dominion SP (53) Dracut Supply (54) Everett Long-Term (55) Everett Swing (56) Millemium (55) Everett Swing (56) Millemium (57) Niagara (58) TCO Appalachia (59) TCO Appalachia (50) TCO Appalachia (50) Transco Leidy (61) Tetco M3 (60) Tetco M3 (61) Transco Leidy (63) Transco Leidy (64) Waddington (55) Confidential Pipeline and Peaking Supplies (65) Transco Leidy (64) Waddington (65) Transco Leidy (67) Transco Leidy (68) Waddington (69) Transco Leidy (61) Tetco M3 (60) Transco Leidy (61) Tetco M3 (62) Transco Leidy (63) Transco Leidy (64) Waddington (65) Tornal Pipeline Commodity Charges (67) Transco Leidy (68) Waddington (67) Transco Leidy (68) Transco Leidy (67) Wathable STORAGE COSTS (77) TOTAL VARIABLE STORAGE COSTS (77) TOTAL VARIABLE COSTS (78) TOTAL VARIABLE COSTS (79) Sum[Lines (46): (66)] (70) Sum[Lines (46): (66)] (70) Sum[Lines (71:7)]	(77) Line (72) + Line (76) (78) Line (44) + Line (77)
National Grid Rhode Island	Suppl		(45) (46) (46) (46) (46) (46) (46) (46) (46	<i>66</i>

5		REDACTED REDACTED
Schedule 2 Page 3 of 3	Apr-Mar (m)	\$5,021.3 \$21.824.7 \$2.6346.1 \$2,259.7 \$1,017.8 \$876.8 \$31,268.1 \$2,624.6 \$11.91 \$77,801.4 \$77,801.4 \$7,89.6
	Mar-21 Actual (1)	\$428.758 \$43.806.826 \$4,236.828 \$186,508 \$55,649 \$115,939 \$223.362 \$4,627,042 198,491 \$23.3111 \$8,874,701 \$8,874,701 \$8,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,701 \$8,878,874,870 \$8,878,874,870 \$8,878,874,870 \$8,972,16,169
	Feb-21 Actual (k)	\$428,810 \$3,912,158 \$4,908 \$186,508 \$72,015 \$69,152 \$23,365 \$4,692,006 199,289 \$23 543 \$17,007,967 \$52,043) \$0 \$0 \$2 \$24,644 \$17,212,370
	<u>Jan-21</u> <u>Actual</u> (j)	\$416,254 \$3,887,211 \$4,303,464 \$186,508 \$81,063 \$89,152 \$23,159 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993 \$15,129,993
m	Dec-20 Actual (i)	\$415,420 \$3,950,693 \$4,66,113 \$186,508 \$91,074 \$69,152 \$23,152 \$4,736,000 \$198,466 \$23,8630 \$12,130,569 \$192,501 \$188,000 \$11,965,664
CONTAINS CONFIDENTIAL INFORMATION - DO NOT RELEASE	Nov-20 Actual (h)	\$415,258 \$1,267,557 \$1,65,385 \$1,86,508 \$98,650 \$99,152 \$12,574 \$2,049,699 \$25,770 \$9,0787 \$1,049,699 \$1,049,6
JION - DO N	Oct-20 Actual (g)	\$416,156 \$\$\script{\$\sint{\$\script{\$\script{\$\script{\$\script{\$\script{\$\script{\$\script{\$\script{\$\script{\$\script{\$\script{\$\sint{\$\sint{\$\sint{\$\sint{\$\sint{\$\sint{\$\script{\$\sint{\$
L INFORMA	Sep-20 Actual (f)	\$416,138 \$\frac{\$\sigma 776,529}{\$\sigma 8,190,604}\$ \$\frac{\$\sigma 64426}{\$\sigma 86,191}\$ \$\frac{\$\sigma 64426}{\$\sigma 86,799}\$ \$\frac{\$\sigma 64799}{\$\sigma 86,8799}\$ \$\frac{\$\sigma 6779}{\$\sigma 67,927}\$ \$\frac{\$\sigma 6779}{\$\sigma 6779}\$ \$\frac{\$\sigma 6779}{\$\
ONFIDENTIA	Aug-20 Actual (e)	\$417,026 \$5747,629 \$1,164,645 \$189,604 \$89,402 \$20,224 \$20,224 \$1,445,737 \$27,542 \$6 7932 \$6 80 \$6 80
ONTAINS CO	<u>Jul-20</u> Actual (d)	\$416,665 \$752,661 \$1,89,604 \$85,550 \$69,152 \$23,483 \$1,546,115 \$6,744 \$1,743,631 \$5,568 \$6,568 \$6,569 \$1,743,631 \$1,743,6
O	Jun-20 Actual (c)	\$417,620 \$1796,706 \$189,604 \$818,604 \$81,871 \$69,152 \$34,272 \$1,887,440 \$6 8667 \$1,887,475 \$1,867,475 \$1,867,440 \$0 \$0 \$44,485 \$10,238 \$10,238 \$219,637 \$10,238 \$2,126,101
	<u>May-20</u> Actual (b)	\$416,651 \$708,616 \$1,5266 \$189,604 \$80,143 \$69,152 \$4,789 \$1,498,954 \$23,216 \$6,450 \$0 \$0 \$0 \$0 \$0 \$0 \$2,244,390 \$0 \$2,983,048 \$2,983,048
	Apr-20 Actual (a)	\$416,596 \$432,008 \$843,504 \$189,604 \$76,279 \$69,152 \$1197,384 \$1,197,344 \$5,057,018 \$6,597 \$0 \$0 \$0 \$1,849 \$0 \$0 \$0 \$1,849 \$0 \$1,849 \$0 \$1,849 \$0 \$1,849 \$0 \$1,849 \$0 \$1,849 \$0 \$1,849 \$0 \$1,849 \$0 \$1,849 \$
National Grid Rhode Island - Gas Supply Estimates Actuals for Filing	Description	(8) Storage Costs for FT-2 Calculation (8) Storage Fixed Costs - Bacilities Storage Fixed Costs - Deliveries (82) Sup-Total Storage Costs (83) Tennessee Dracut for Peaking. (84) Inventory Financing (85) Supply related LNG O&M Costs (86) Working Capital Requirement (87) Total FT-2 Storage Fixed Costs (88) Working Capital Requirement (87) Total FT-2 Storage Fixed Costs (88) System Storage MDQ (Dth) (89) FT-2 Storage Cost per MDQ (Dth) (90) Pipeline Variable (91) Less Non-firm Gas Costs (92) Less Manchester St Balancing (94) Pus Cashout (95) Less Manchester St Balancing (96) Mkter Over-takes/Undertakes (97) Marketer Reconciliation Surcharge (98) Plus Pipeline Sochg/Credit (99) Less Mkter FT-2 Daily weather true-up (100) TOTAL FIRM COMMODITY COSTS (82) Line (80) + Line (81) (87) Sum[Lines (83) : (86)] (89) Line (77) (100) Sum[Lines (90) : (99)]

Schedule 3 Page 1 of 1		Apr-Mar (m)	25,482,701 \$65,467,828	678,829	26,161,530	\$69,960,298	26,161,530 \$76,672,975 142,497	55,996 \$333,809 \$0	\$47,069	\$77,053,853	25,482,701 (\$3,269,785)	678,829 (\$53,822) (\$3,323,607)	\$143,690,544	
		Mar-21 <u>Actual</u> (l)	4,026,399 \$2 7424 \$11,042,053	82,908 \$2 0899 \$173,270	4,109,307	\$11,455,910	4,109,307 \$2,9098 \$11,957,369 28,253 \$0,000	7,082 \$7.38 \$52,232 \$0	80	\$12,009,601	4,026,399 (\$0 1952) (\$785,754)	82,908 (\$0 1531) (\$12,691) (\$798,445)	\$22,667,067	
		Feb-21 Actual (k)	4,870,211 \$2,7417 \$13,352,444	87,253 \$2 0903 \$182,385	4,957,463	\$13,776,383	4,957,463 \$2,9090 \$14,421,500 29,433 \$0,0000	9,700 87.45 872,259 80	\$1,799	\$14,495,558	4,870,211 (\$0 1951) (\$950,161)	87,253 (\$0 1531) (\$13,359) (\$963,520)	\$27,308,421	
		Jan-21 Actual (j)	4,364,731 \$2,7528 \$12,015,412	87,323 \$2 0895 \$182,460	4,452,054	\$12,439,023	4,452,054 \$2 9207 \$13,002,944 23,963 \$0 0000	11,301 \$5.46 \$61,654 \$0	\$3,345	\$13,067,943	4,364,731 (\$0 1959) (\$855,018)	87,323 (\$0 1530) (\$13,364) (\$868,382)	\$24,638,584	
		Dec-20 <u>Actual</u> (i)	2,711,846 \$2,7401 \$7,430,771	69,007 \$2 0901 \$144,233	2,780,853	\$7,815,561	2,780,853 \$2,9075 \$8,085,195 15,186 \$0,0000	7,269 85 54 840,294 80	\$5,381	\$8,130,870	2,711,846 (\$0 1950) (\$528,774)	69,007 (\$0 1531) (\$10,564) (\$539,339)	\$15,407,093	
RELEASE		Nov-20 Actual (h)	1,546,738 \$2,4750 \$3,828,215	50,599 \$1,8710 \$94,671	1,597,337	\$4,198,905	1,597,337 \$2 9230 \$4,668,958 \$126 \$0 0000	3,291 \$5 20 \$17,114	\$4,833	\$4,690,905	1,546,738 (\$0 0970) (\$150,078)	50,599 (\$0 0760) (\$3,844) (\$153,922)	\$8,735,887	
CONTAINS CONFIDENTIAL INFORMATION - DO NOT RELEASE		Oct-20 Actual (g)	710,322 \$2 2339 \$1,586,813	38,614 \$1 6785 \$64,816	748,936	\$1,927,112	748,936 \$2 9672 \$2,222,279 1,691 \$0 0000	1.674 \$5.20 \$8,709 \$0	\$1,345	\$2,232,332	710,322 \$0 0000 \$0	38,614 \$0 0000 \$0 \$0	\$4,159,444	[[1]]
AL INFORMAT		Sep-20 Actual (f)	489,988 \$2 2388 \$1,096,967	28,225 \$1 6791 \$47,391	518,213	\$1,420,511	\$18,213 \$2 9734 \$1,540,832 745 \$0 0000	1,890 \$5 20 \$9,827 \$0	\$18,807	\$1,569,467	489,988 \$0 0000 \$0	28,225 \$0 0000 \$0 \$0	\$2,989,977	(27) Line (28) + Line (26) (29) Seh 6, Sum[lines (22), (23), (29), (31)] (30) Line (31) + Line (29) (32) Line (28) + Line (31) (33) Line (10) + Line (24) + Line (32)
CONFIDENTIA		Aug-20 Actual (c)	530,136 \$2 2419 \$1,188,503	29,789 \$1 6793 \$50,025	559,925	\$1,516,713	\$59,925 \$2 9773 \$1,667,072 1,248 \$0 0000	1,510 \$520 \$7,855	\$6,343	\$1,681,270	530,136 \$0 0000 \$0	29,789 \$0 0000 \$0 \$0	\$3,197,983	(27) Line (28) + Line (26) (29) Seh 6, Sum[lines (22), (23), (29), (30) Line (31) + Line (29) (32) Line (28) + Line (31) (33) Line (10) + Line (24) + Line (32)
CONTAINS		Jul-20 Actual (d)	\$74,273 \$2 2354 \$1,283,704	38,763 \$1 6789 \$65,081	613,036	\$1,630,316	613,036 \$2 9690 \$1,820,135 202 \$0 0000	(172) \$5 20 (\$894) \$0	\$648	\$1,819,890	574,273 \$0 0000 \$0	38,763 \$0 0000 \$0 \$0	\$3,450,206	(27) 1 (29) 8 (30) 1 (32) 1 (33) 1
		Jun-20 Actual (c)	842,394 \$2 2329 \$1,880,951	45,155 \$1,6786 \$75,795	887,550	\$2,239,697	887,550 \$2 9659 \$2,632,380 1,115 \$0 0000	1,510 \$5 20 \$7,855	\$919	\$2,641,154	842,394 \$0 0000 \$0	45,155 \$0 0000 \$0 \$0	\$4,880,850	e [6) [8) [77, (20) (23)] (24) : (28), (30)]
		May-20 Actual (b)	2,108,558 \$2,2363 \$4,715,368	57,683 \$16794 \$96,872	2,166,242	\$5,096,139	2,166,242 \$2,9704 \$6,434,515 16,173 \$0,000	5.097 \$5.20 \$26,509 \$0	\$1,679	\$6,462,704	2,108,558 \$0 0000 \$0	57,683 \$0 0000 \$0 \$0	\$11,558,842	(15) Sch 6, line (20) (16) Company's website (17) Line (15) x Line (16) (18) Sch 6, line (19) (19) Line (20) + Line (18) (22) Company Data (24) Sum[Lines (14), (17), (20) (23)] (26) Sch 6, Sum[lines (24) : (28), (36)
		Apr-20 Actual (a)	2,707,105 \$2,2336 \$6,046,626	63,510 \$1,6768 \$106,494	2,770,615	\$6,444,030	2,770,615 \$2,9668 \$8,219,796 16,361 \$0,0000	5,844 \$520 \$30,394 \$0	81,969	\$8,252,159	2,707,105 \$0 0000 \$0	63,510 \$0 0000 \$0 \$0	\$14,696,189	(15) S (16) C (17) I (17) I (18) S (18) S (18) S (24) S (24) S
National Grid Rhode Island - Gas	GCR Revenue	Description (1) I. Fixed Cost Revenue	(2) (a) Low Load dth(3) Fixed Cost Factor(4) Low Load Revenue	(e)	Sub		(11) II. Variable Cost Revenue (12) (a) Firm Sales dth (13) Variable Supply Cost Factor (14) Variable Supply Revenue (15) (b) TSS Sales dth (16) TSS Sales dth (17) TSS Counter Description	ତ୍ତି	(22) (e) Deferred Responsibility (23) (e) FT-1 Storage and Peaking		(26) (a) Low Load dth (27) Low Load COVID Factor (\$/dth) (28) Low Load Revenue	 (29) (b) High Load dth (30) High Load COVID Factor (\$\sqrt{s}\text{dth})\$ (31) High Load Revenue (32) Total Reduction to GCR 	(33) Total Gas Cost Revenue (w/o FT-2)	(2) Sch 6, Sum[lines (24): (28), (30)] (3) Line (4) + Line (2) (5) Sch 6, Sum[lines (22), (23), (29), (31)] (6) Line (7) + Line (5) (8) Line (2) + Line (5) (10) Line (4) + Line (7) + Line (9) (12) Line (8) (13) Line (14) + Line (12)

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									KL	DAC	IED						Attachment RMS-2 Redacted
Schedule 4 Page 1 of 1	Apr-Mar (m)		\$78,579,640	$ ($4,967,984) $ $ \frac{$0}{$84,967,984)} $	\$73,611,656				\$556,850	\$79,789,407	\$0 80 80	\$79,789,407				\$603,582	Page 6 of 8 (87) (97)
	Mar-21 Actual (1)		\$9,050,245	$ \begin{array}{c} (\$1,147,240) \\ \underline{\$0} \\ (\$1,147,240) \end{array} $	\$7,903,005 32 92 \$712,786	7 13% \$50,822	2 40% \$17,107	\$33,715 0 79 \$42,677	\$59,784	\$9,216,169	\$0 \$0 \$0	\$9,216,169 32,92 \$831,223	7 13% \$59,266	2 40% \$19,949	\$39,317 0 79 \$49,768	\$69,717	(25) Docket 4770 (26) Line (22) x Line (25) (27) Line (24) - Line (26) (28) Docket 4770 (29) Line (27) + Line (28) (30) Line (26) + Line (29)
	Feb-21 <u>Actual</u> (k)		\$9,180,189	$ \begin{array}{c} (\$1,252,572) \\ \underline{\$0} \\ (\$1,252,572) \end{array} $	\$7,927,617 32 92 \$715,006	7 13% \$50,980	2 40% \$17,160	\$33,820 0 79 \$42,810	\$59,970	\$17,212,370	\$0 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$17,212,370 32 92 \$1,552,414	7 13% \$110,687	2 40% \$37,258	\$73,429 0 79 \$92,948	\$130,206	(25) 1 (26) 1 (27) 11 (27) 11 (28) 1 (29) 1 (30) 1
	Jan-21 Actual (j)		\$8,836,970	$ \begin{array}{c} (\$1,242,058) \\ \underline{\$0} \\ (\$1,242,058) \end{array} $	\$7,594,912 32 92 \$684,999	7 13% \$48,840	2 40% \$16,440	\$32,400 0 79 \$41,013	\$57,453	\$15,388,563	\$0 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$15,388,563 32 92 \$1,387,922	7 13% \$98,959	2 40% \$33,310	\$65,649 0 79 \$83,100	\$116,410	
SE	$\frac{\underline{Dec-20}}{\underline{Actual}}$ (i)		\$8,866,638	$(\$1,305,540)$ $\frac{\$0}{\$0}$ $(\$1,305,540)$	\$7,561,097 32 92 \$681,949	7 13% \$48,623	2 40% \$16,367	\$32,256 0 79 \$40,831	\$57,197	\$11,965,664	\$0 80 80	\$11,965,664 32 92 \$1,079,205	7 13% \$76,947	2 40% \$25,901	\$51,046 0 79 \$64,616	\$90,517	(18) (19) (21)] + 365 (23)
CONTAINS CONFIDENTIAL INFORMATION - DO NOT RELEASE	Nov-20 Actual (h)		\$6,172,559	$ \begin{array}{c} (\$20,574) \\ \hline \$0 \\ (\$20,574) \end{array} $	\$6,151,984 32 92 \$554,858	7 13% \$39,561	2 40% \$13,317	\$26,245 0 79 \$33,221	\$46,538	\$5,716,480	80 80	\$5,716,480 32 92 \$515,579	7 13% \$36,761	2 40% \$12,374	\$24,387 0 79 \$30,870	\$43,243	(19) Line (17) + Line (18) (20) Line (16) + Line (19) (21) Docket 4770 (22) (Line (20) x Line (21)] + 365 (23) Docket 4770 (24) Line (22) x Line (23)
ATION - DO	$\frac{\text{Oct-20}}{\text{Actual}}$ (g)		\$6,365,529	80 80 80	\$6,365,529 32 92 \$574,118	7 13% \$40,935	2 40% \$13,779	\$27,156 0 79 \$34,374	\$48,153	\$3,227,386	\$0 \$0 \$0	\$3,227,386 32 92 \$291,084	7 13% \$20,754	2 40% \$6,986	\$13,768 0 79 \$17,428	\$24,414	(19 L (20) L (21) D (23) D (23) D (24) L
AL INFORM	Sep-20 Actual (f)		\$5,431,471	\$0 80 80	\$5,431,471 32 92 \$489,874	7 13% \$34,928	2 40% \$11,757	\$23,171 0 79 \$29,330	\$41,087	\$1,848,549	80 80 80	\$1,848,549 32 92 \$166,724	7 13% \$11,887	2 40% \$4,001	\$7,886 0 79 \$9,982	\$13,984	te (13)
CONFIDENTI	<u>Aug-20</u> <u>Actual</u> (e)		\$5,387,032	\$0 80 80	\$5,387,032 32 92 \$485,866	7 13% \$34,642	2 40% \$11,661	\$22,981 0 79 \$29,090	\$40,751	\$1,899,688	\$0 80 80	\$1,899,688 32 92 \$171,336	713% \$12,216	2 40% \$4,112	\$8,104 0 79 \$10,258	\$14,371	(13) Docket 4770 (14) Line (12) + Line (13) (15) Line (11) + Line (14) (16) Seh I, line (20) (17) Seh I, line (21) (18) Docket 4770
CONTAINS	Jul-20		\$5,391,037	80 80 80	\$5,391,037 32 92 \$486,227	7 13% \$34,668	2 40% \$11,669	\$22,999 0 79 \$29,112	\$40,782	\$1,913,246	\$0 80 80	\$1,913,246 32 92 \$172,559	7 13% \$12,303	2 40% \$4,141	\$8,162 0 79 \$10,332	\$14,473	(13) (14) (15) (17) (17) (18)
J	Jun-20		\$5,553,300	\$0 80 80	\$5,553,300 32 92 \$500,862	7 13% \$35,711	2 40% \$12,021	\$23,691 0 79 \$29,988	\$42,009	\$2,126,101	\$ 0 8 0 8 0	\$2,126,101 32 92 \$191,757	7 13% \$13,672	2 40% \$4,602	\$9,070 0 79 \$11,481	\$16,083	365
	May-20 Actual (b)		\$2,777,190	\$0 \$0 \$0	\$2,777,190 32 92 \$250,480	7 13% \$17,859	2 40% \$6,012	\$11,848 0 79 \$14,997	\$21,009	\$2,983,048	\$0 80 80	\$2,983,048 32 92 \$269,046	7 13% \$19,183	2 40% \$6,457	\$12,726 0 79 \$16,109	\$22,566	(3) [Line (5) x Line (6)] + 365 (8) Docket 4770 (9) Line (7) x Line (8) (10) Docket 4770 (11) Line (7) x Line (10) (12) Line (9) - Line (11)
	$\frac{\text{Apr-20}}{\text{Actual}}$ (a)		\$5,567,480	08 80 80	\$5,567,480 32 92 \$502,141	7 13% \$35,803	2 40% \$12,051	\$23,751 0 79 \$30,065	\$42,116	\$6,292,144	\$0 80 80	\$6,292,144 32 92 \$567,500	7 13% \$40,463	2 40% \$13,620	\$26,843 0 79 \$33,978	\$47,598	(7) [Line (5) x Lin (8) Docket 4770 (9) Line (7) x Lin (10) Docket 4770 (11) Line (7) x Lin (12) Line (9) - Lin
National Grid Rhode Island - Gas	WORKING CAPITAL	<u>Description</u>	(1) Supply Fixed Costs	(2) Less: System Pressure to DAC(3) Plus: Supply Related LNG O&M Costs(4) Total Adjustments	(5) Allowable Working Capital Costs(6) Number of Days Lag(7) Working Capital Requirement	(8) Cost of Capital (9) Return on Working Capital Requirement	(10) Weighted Cost of Debt (11) Interest Expense	(12) Taxable Income(13) 1 - Combined Tax Rate(14) Return and Tax Requirement	(15) Supply Fixed Working Capital Requirement	(16) Supply Variable Costs	(17) Less: Bal Related Syst Pressure Commodity to DAC(18) Plus: Supply Related LNG O&M Costs(19) Total Adjustments	(20) Allowable Working Capital Costs(21) Number of Days Lag(22) Working Capital Requirement	(23) Cost of Capital (24) Return on Working Capital Requirement	(25) Weighted Cost of Debt (26) Interest Expense	 (27) Taxable Income (28) 1 - Combined Tax Rate² (29) Return and Tax Requirement 	(30) Supply Variable Working Capital Requirement	(1) Sch 1, line (4) (2) Sch 1, line (5) (3) Docket 4770 (4) Line (2) + Line (3) (5) Line (1) + Line (4) (6) Docket 4770

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Schedule 5 Page 1 of 1		Apr-Mar (m)			\$7,539,206	\$2,537,741	\$6,330,968	\$8,868,709	\$739,059	\$2,843,687	\$957,202	\$2,387,956	\$3,345,158	\$278,763	\$1,017,822	
		Mar-21 Actual (1)		\$6,126,219 \$1 \$6,126,220	7 13% \$436,800	2 40% \$147,029	\$289,770 0 79 \$366,798	\$513,827	\$42,819	\$3,266,372 7 13% \$232,892	2 40% \$78,393	\$154,499 0 79 \$195,569	\$273,962	\$22,830	\$65,649	
		$\frac{\text{Feb-21}}{\text{Actual}}$ (k)		\$6,699,522 \$416,953 \$7,116,475	7 13% \$507,405	2 40% \$170,795	\$336,609 0 79 \$426,088	\$596,883	\$49,740	\$3,186,896 7 13% \$227,226	2 40% \$76,486	\$150,740 0 79 \$190,810	\$267,296	\$22,275	\$72,015	
		Jan-21 Actual (j)		\$7,325,858 \$1,009,463 \$8,335,320	7 13% \$594,308	2 40% \$200,048	\$394,261 0 79 \$499,064	\$699,112	\$58,259	\$3,262,629 7 13% \$232,625	2 40% \$78,303	\$154,322 0 79 \$195,345	\$273,648	\$22,804	\$81,063	
ASE		$\frac{\underline{Dec-20}}{\underline{Actual}}$ (i)		\$8,042,722 \$1,689,752 \$9,732,474	713% \$693,925	2 40% \$233,579	\$460,346 0 79 \$582,717	\$816,296	\$68,025	\$3,297,776 7 13% \$235,131	2 40% \$79,147	\$155,985 0 79 \$197,449	\$276,596	\$23,050	\$91,074	
CONTAINS CONFIDENTIAL INFORMATION - DO NOT RELEASE		$\frac{\text{Nov-20}}{\text{Actual}}$ (h)		\$8,565,450 \$2,150,593 \$10,716,043	7 13% \$764,054	2 40% \$257,185	\$506,869 0 79 \$641,606	\$898,791	\$74,899	\$3,398,061 7 13% \$242,282	2 40% \$81,553	\$160,728 0 79 \$203,454	\$285,007	\$23,751	\$98,650	
MATION - DO		$\frac{\text{Oct-20}}{\text{Actual}}$ (g)		\$8,754,267 \$2,194,483 \$10,948,749	713% \$780,646	2 40% \$262,770	\$517,876 0 79 \$655,539	\$918,309	\$76,526	\$3,349,082 7 13% \$238,790	2 40% \$80,378	\$158,412 0 79 \$200,521	\$280,899	\$23,408	\$99,934	
TIAL INFOR		$\frac{\text{Sep-20}}{\text{Actual}}$ (f)		\$8,535,099 \$1,879,110 \$10,414,209	7 13% \$742,533	2 40% \$249,941	\$492,592 0 79 \$623,534	\$873,475	\$72,790	\$3,348,116 7 13% \$238,721	2 40% \$80,355	\$158,366 0 79 \$200,463	\$280,818	\$23,401	\$96,191	ne (17) ine (19) ine (20) 2 ine (22)
CONFIDENT		$\frac{\text{Aug-20}}{\text{Actual}}$ (c)		\$7,815,992 \$1,617,472 \$9,433,464	7 13% \$672,606	2 40% \$226,403	\$446,203 0 79 \$564,814	\$791,217	\$65,935	\$3,357,595 7 13% \$239,396	2 40% \$80,582	\$158,814 0 79 \$201,031	\$281,613	\$23,468	\$89,402	(18) Line (15) - Line (17) (19) Docket 4770 (20) Line (18) + Line (19) (21) Line (17) + Line (20) (22) Line (21) + 12 (23) Line (12) + Line (22)
CONTAINS		Jul-20 Actual (d)		\$7,576,717 \$1,325,125 \$8,901,842	7 13% \$634,701	2 40% \$213,644	\$421,057 0 79 \$532,984	\$746,628	\$62,219	\$3,338,032 7 13% \$238,002	2 40% \$80,113	\$157,889 0 79 \$199,859	\$279,972	\$23,331	\$85,550	(18) (19) (20) (21) (22) (23)
		Jun-20 Actual (c)		\$7,386,030 \$1,024,123 \$8,410,153	7 13% \$599,644	2 40% \$201,844	\$397,800 0 79 \$503,545	\$705,388	\$58,782	\$3,303,365 7 13% \$235,530	2 40% \$79,281	\$156,249 0 79 \$197,784	\$277,065	\$23,089	\$81,871	ine (9) 12 12 12 2 ine (14) 2 ine (16)
		$\frac{\underline{\text{May-20}}}{\underline{\text{Actual}}}$ (b)		\$7,547,181 \$559,506 \$8,106,687	7 13% \$578,007	2 40% \$194,560	\$383,446 0 79 \$485,375	\$679,936	\$56,661	\$3,359,565 7 13% \$239,537	2 40% \$80,630	\$158,907 0 79 \$201,149	\$281,778	\$23,482	\$80,143	(10) Line (8) ÷ Line (9) (11) Line (7) + Line (10) (12) Line (11) ÷ 12 (14) Docket 4770 (15) Line (13) x Line (14) (16) Docket 4770 (17) Line (13) x Line (16)
		$\frac{\underline{Apr-20}}{\underline{Actual}}$ (a)		\$7,339,795 \$157,781 \$7,497,576	7 13% \$534,577	2 40% \$179,942	\$354,635 0 79 \$448,906	\$628,847	\$52,404	\$3,415,916 7 13% \$243,555	2 40% \$81,982	\$161,573 0 79 \$204,523	\$286,505	\$23,875	\$76,279	(10 (11 (14 (15 (15 (15 (16 (16
National Grid Rhode Island - Gas	INVENTORY FINANCE		Description	 Storage Inventory Balance Monthly Storage Deferral/Amortization Subtotal 	(4) Cost of Capital(5) Return on Working Capital Requirement	(6) Weighted Cost of Debt(7) Interest Charges Financed	(8) Taxable Income(9) 1 - Combined Tax Rate(10) Return and Tax Requirement	(11) Working Capital Requirement	(12) Monthly Average	 (13) LNG Inventory Balance (14) Cost of Capital (15) Return on Working Capital Requirement 	(16) Weighted Cost of Debt(17) Interest Charges Financed	(18) Taxable Income(19) 1 - Combined Tax Rate(20) Return and Tax Requirement	(21) Working Capital Requirement	(22) Monthly Average	(23) TOTAL GCR Inventory Financing Costs	(3) Line (1) + Line (2) (4) Docket 4770 (5) Line (3) x Line (4) (6) Docket 4770 (7) Line (3) x Line (6) (8) Line (5) - Line (7) (9) Docket 4770

Natio	National Grid Rhode Island - Gas A Actual DAA From Contract				CONTAINS	CONFIDEN	CONTAINS CONFIDENTIAL INFORMATION - DO NOT RELEASE	RMATION.	- DO NOT R	ELEASE				Schedule 6 Page 1 of 1
Acu	iai Dui Osage ior ruing	$\frac{\text{Apr-20}}{\text{Actual}}$	May-20 Actual	Jun-20 Actual	Actual	$\frac{\text{Aug-20}}{\text{Actual}}$	Sep-20 Actual	$\frac{\text{Oct-20}}{\text{Actual}}$	$\frac{\text{Nov-20}}{\text{Actual}}$	Dec-20 Actual	Jan-21 Actual	Feb-21 Actual	Mar-21 Actual	Apr-Mar
	THROUGHPUT (Dth) Rate Class	(a)	9	E	<u> </u>	Đ	Ξ	100	1	3	€	<u>ચ</u>	3	Î
≘®€	SALES Residential Non-Heating Pacidantial Non-Heating	35,701	31,884	19,358	15,026	13,867	12,733	15,448	24,249	32,651	49,873	49,981	44,626	345,397
9 4		1,925,877	1,524,285	602,351	402,672	364,713	341,335	484,559	1,082,842	1,911,972	3,079,189	3,399,975	2,795,586	17,915,355
ତ ତ	Residential Heating Low Income Small C&I	188,477 221,149	150,327	61,353 56,287	42,038 34,464	38,718 36,320	37,323 35,449	48,940 49,808	108,880	169,529 233,932	277,546 413,973	291,378 473,489	246,319 391,685	1,660,826 2,220,079
(C)		296,219	218,546	110,408	85,100	81,927	69,814	101,349	192,957	322,356	487,636	549,707	457,550	2,973,569
<u>@</u>	Large LLF Large HLF	20,259	42,207 16,298	8,942 15,457	9,299	6,951 11,305	5,346 9,958	9,342	17,253	21,650	28,963	27,754	29,044	225,764
ê E		5,026	4,780	1,938	498	3.925	58 4.834	14,725	6,492	7,442	5,228	6,309	6,129	58,938 84.133
(12)		2,754,254	2,150,069	886,434	612,834	558,677	517,468	747,245	1,589,210	2,765,666	4,428,091	4,928,030	4,081,054	26,019,032
(13)	TSS Small	1,540	1,150	2	27	70	(36)	(81)	165	999	910	1,265	1,173	6,851
(15)		9,614	12,156	1,113	58	1,102	479	1,223	3,661	8,371	13,151	15,628	14,682	81,238
(16)	Large LLF	3,946	1,440	0 0	117	25	220	455 94	4,159	5,930	9,495	12,150	12,124	50,061
(18)		0	0 (00	0	0 0	0 9	0	0	0 4	0	0 (· O «	0
(19)	Extra Large HLF Total TSS	16.361	16.173	1.115	202	1.248	745	1.691	8.126	15.186	23.963	29.433	28.253	142,497
(21)						1								î
(22)	Residential Non-Heating Residential Non-Heating Low Income	35,701	31,884	19,358	15,026	13,867	12,733	15,448	24,249	32,651	49,873 2,896	49,981	44,626 2,688	345,397
(24)		1,925,877	1,524,285	602,351	402,672	364,713	341,335	484,559	1,082,842	1,911,972	3,079,189	3,399,975	2,795,586	17,915,355
(25)	Residential Heating Low Income	188,477	150,327	61,353	42,038	38,718	37,323	48,940	108,880	169,529	277,546	291,378	246,319	1,660,826
(27)		305,833	230,702	111,521	85,158	83,028	70,293	102,573	196,618	330,727	500,788	565,335	472,232	3,054,808
(28)	Large LLF	59,203	43,647	8,942	9,416	6,976	5,566	9,797	31,887	57,580	87,098	132,459	113,276	565,845
(3)		5,026	4,780	1,938	498	312	58	14,725	6,492	7,442	5,228	6,309	6,129	58,938
(31)	Extra Large HLF	4,200	6,309	9,362	9,733	3,925	4,834	7,331	7,665	13,195	5,185	6,116	6,277	84,133
(22)		2,770,013	7,100,242	066,100	050,510	524,466	516,215	/46,930	1,66,176,1	2,700,033	4,432,034	4,937,403	4,105,507	20,101,230
(34)		0	0	0	0	0	0	0	0	0	0	0	0	0
(35)) F1-1 Medium) FT-1 Large LLF	39,875	38,431 60,840	4,978	8,581	17,647	18,901	26,982 27,229	49,147 74.224	65,463	105,383	95,744	71,951	543,083 833.357
(37)		32,983	24,926	16,851	26,425	22,596	17,068	20,155	24,902	30,545	43,265	41,213	33,703	334,631
(38)	FT-1 Extra Large LLF	100,362	77,008	367.817	(8,602)	18,150	24,280	32,928	388.807	148,418	226,942	215,127	147,432	1,085,504
(6)		5,844	5,097	1,510	(172)	1,510	1,890	1,674	3,291	7,269	11,301	9,700	7,082	55,996
(41)	,	739,538	620,323	381,967	379,679	478,653	518,491	485,735	651,402	885,936	1,155,933	1,088,061	828,723	8,214,441
(42) (43)	FT-2 TRANSPORTATION FT-2 Small	19.347	14.451	5.709	4.010	3,741	3,330	5.031	10.968	19.809	32,316	37.376	30.090	186.178
4		190,183	144,794	64,652	46,873	45,397	38,138	63,483	126,800	197,417	285,214	314,456	279,625	1,797,031
(45) (46)	FT-2 Large LLF	156,577	115,345	36,944 41 195	18,352	15,031	16,147	31,730	91,406	148,342	235,254	280,675	241,752	1,387,555
£ (4)		908'9	3,406	1,492	503	250	506	796	2,608	6,390	11,552	11,320	10,141	55,770
(48)	_ `	34,018	25,434	33,930	33,899	26,441	35,884	37,081	41,216	43,499	44,550	44,114	5,247	405,313
(49)	Total FT-2 Transportation Total THROUGHPITE	464,135	352,108	183,922	142,611	125,964	127,580	177,910	318,480	479,456	690,754	765,505	642,474	4,470,898
(51)		35,701	31,884	19,358	15,026	13,867	12,733	15,448	24,249	32,651	49,873	49,981	44,626	345,397
(52)	Residential Non-Heating Low Income	2,089	1,766	978	713	9640	618	731	1,291	1,767	2,896	3,012	2,688	19,188
(54)		188,477	150,327	61,353	42,038	38,718	37,323	48,940	108,880	169,529	277,546	291,378	246,319	1,660,826
(55)		242,036	169,268	61,998	38,501	40,131	38,744	54,758	130,988	254,406	447,199	512,131	422,948	2,413,108
(57)		288.349	219.831	44.269	19.926	35.106	38.045	68.757	197.517	316.673	508.166	576.482	473.636	2.786.756
(58)		111,706	91,329	73,503	78,691	69,057	60,682	75,049	87,776	115,938	154,502	146,920	138,639	1,203,793
(65)		112,194	85,194	(4,141)	(7,601)	18,712	24,844	48,449	120,132	162,251	243,722	232,756	163,702	1,200,212
(60)		526,123 5,844	445,764 5,097	1,510	404,921 (172)	456,016 1,510	480,738 1,890	421,1 <i>7</i> 9 1,674	457,000 3,291	580,184 7,269	632,963 11,301	9,700	461,472 7,082	5,851,316
(62)	Total Throughput	3,974,288	3,138,673	1,453,439	1,135,327	1,164,541	1,164,284	1,412,581	2,567,219	4,146,245	6,298,740	6,811,028	5,580,505	38,846,870

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESS: RYAN M. SCHEIB
SEPTEMBER 1, 2021

Attachment RMS-3 Projected Gas Cost Balances

						Attachn
tt Electric Company d/b/a National Grid Docket No. 5180 Attachment RMS-3 Page 1 of 1	Nov - Oct 365 (n)	\$3,569,594 \$90,887,120 \$6,685,226 (\$6,685,226) (\$6,039,179) \$620,234 \$87,612,792 (\$81,180,652) \$6 (\$105,281) \$6 (\$105,281)	\$7.128.552 \$78.612.614 \$0 \$302.244 \$267.879 \$468.035 \$80.229,835 \$8729,835 \$87.356,120 \$77,699 \$77,699	\$4,863,540 (\$4,861,746) \$21,331 \$23,124	\$15,561,686 \$163,946,576 \$735,914 \$1,99,336 \$157,842,646 \$1773,398,518) \$5,814 \$(\$11,252) \$(\$5,438)	
The Narragansett Electric Company db/a National Grid Docket No. 5180 Attachment RMS-3 Page 1 of 1	Oct-22 forecast 31 (m)	(\$3,075,477) \$6,420,090 (\$20,909) (\$60,932) \$47,138 \$69,152 \$5,845,540 (\$1,586) (\$1,588) (\$1,25% (\$1,25% (\$1,25%	(\$128,896) \$3,007,443 \$0 \$22,187 \$23,915 \$76,888 \$22,1676) \$76,888 \$2,95,1676) \$75,015	\$186,844 (\$163,831) \$23,013 \$104,929 1.25% \$111 \$23,124	\$5,500,963 \$100,803 \$100,803 \$6,00,912 \$5,001,126 \$5,907,126 \$1,510,681 \$1,510,681 \$1,506 \$1,604 \$1,604	
The	<u>Sep-22</u> <u>forecast</u> 30	\$6,750,885) \$6,420,090 \$8,420,090 \$8,69,332 \$47,138 \$8,845,540 \$8,845,640 \$8,106,659 \$1,25% \$8,910,659 \$1,25% \$8,075,477	\$1,142,249 \$0,525,187 \$25,659 \$65,434 \$84,44 \$1,264,943	\$306,548 (\$119,957) \$186,591 \$246,569 1.25% \$253 \$186,844	\$5.674.907 \$7.635.769 \$89.093 \$5.55.52 \$7.110.483 \$7.110.483 \$7.41	ine (49)] + 2 ine (49)] + 2 e (30) + Line (39) i, (52), (53)]
	Aug-22 forecast 31 (k)	\$6,40,530,847) \$6,420,090 \$6,60,909 \$6,909 \$47,138 \$5,445,540 \$5,647,147 \$6,741,716 \$8,636,532 \$8,636,536 \$8,636,532 \$8,636,532 \$8,636,532 \$8,636,532 \$8,636,532 \$8,636,532 \$8,636,532 \$8,636,532 \$8,636,532 \$8,636,532 \$8,636,532 \$8,6	\$1,559,148 \$1,140,875 \$0 \$25,187 \$23,167 \$23,167 \$23,167 \$23,042 \$1,251,588 \$1,251,588 \$1,251,588 \$1,253 \$1,63,672 \$1,63,673 \$1,63,673 \$1,235	\$419,378 (\$113,215) \$306,163 \$362,770 1.25% \$385 \$306,548	\$5,522,321) \$7,634,395 \$7,122 \$5,542 \$6,69,932 \$7,097,127 \$5,667,389 \$7,109,840 \$1,25% \$5,667,389 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840 \$7,109,840	(49) Sum[Lines (42), (47), (48)] (50) [Lines (42) + Line (49)] + 2 (52) Line (14) + Line (30) + Line (39) (53) Line (31) (54) Sum[Lines (49), (52), (53)]
	<u>Jul-22</u> <u>forecast</u> 31 (j)	(\$14,206,494) \$6,420,090 (\$20,909) (\$6,932) \$47,138 \$6,912 \$6,912 \$5,845,540 (\$10,517,723) (\$11,362,109) (\$11,362,109) (\$11,362,109) (\$13,124)	\$2,576,795 \$1,037,896 \$25,187 \$23,789 \$40,232 \$7,645 \$1,134,749 \$2,066,874 \$2,066,874 \$2,066,874 \$2,066,874 \$2,066,874 \$2,066,874 \$2,066,874 \$2,066,874	\$538,318 (\$119,448) \$418,870 \$478,594 1.25% \$508 \$419,378	\$7.531,416 \$64.021 \$64.021 \$64.024 \$6.980,289 \$6.980,289 \$6.431,900) \$9.816,641) 1.25% \$(\$1.422) \$6.422 \$6.	€
	<u>Jun-22</u> <u>forecast</u> 30 (i)	(\$17,389,888) \$6,420,090 (\$20,909) (\$6,932) \$47,138 \$69,152 \$5,845,540 (\$14,190,271) (\$15,790,080) (\$16,223) (\$14,206,494)	\$3,972,087 \$1,216,273 \$0 \$25,187 \$23,298 \$23,208 \$23,209 \$2,57,00 \$2,770,592 \$2,773,60 \$2,774,422 \$2,774,422 \$2,774,422 \$2,774,62 \$2,774,62 \$3,362 \$3,862 \$3	\$687,516 (\$149,828) \$537,688 \$612,602 1.25% \$629 \$538,318	(\$12,730,286) \$7,709,793 \$51,518 \$56,097 (\$669,932) \$7,147,477 (\$5,496,343) (\$11,004,151) (\$11,004,718) 1,25% (\$12,231) \$10,01,382)	(39) [Line (37) x Line (38)] + 365 x Line (1) (40) Line (36) + Line (39) (42) Line (3) + Line (13) (43) Sun(Lines (4), (3), (15), (19), (21)] (44) Line (22) + Line (23) (45) Line (7) + Line (24) (46) Line (6) (47) Sun(Lines (43), (46)]
	May-22 forecast 31 (h)	\$6,420,090 (\$20,090) (\$20,090) (\$60,932) \$47,138 \$69,122 \$5,845,540 (\$4,130,696) (\$17,370,537) (\$18,27,589) (\$18,27,589) (\$19,382)	\$6,283,516 \$1,949,045 \$0 \$25,187 \$23,453 \$21,661 \$21,661 \$21,661 \$2,035,704 \$3,966,646 \$3,966,646 \$3,966,646 \$3,966,646 \$3,966,646 \$3,972,087	\$928,503 (\$241,844) \$886,659 \$807,581 1.25% \$857 \$887,516	\$8.442.565 \$8.442.565 \$45.115 \$61.495 \$1.8669.232 \$7.879.244 \$7.879.244 \$1.777.232 \$1.229.5.297 \$1.25% \$1.3	(39) [Line (37) x Line (38) (40) Line (37) x Line (39) (42) Line (39) (42) Line (3) + Line (3) + Line (3) + Line (3) + Line (2) + Line (2) + Line (2) + Line (2) + Line (3) + Line (3) + Line (3) + Line (3) (45) Line (7) + Line (3) (46) Line (6) (47) Sun[Lines (43) (46)]
is Filing Balances	<u>Apr-22</u> <u>forecast</u> 30 (g)	\$15,750,151) \$6,420,090 (\$20,999) (\$60,932) \$47,138 \$69,152 \$5,845,540 (\$9,102,884) (\$17,408,823) (\$17,408,823) (\$17,886)	\$10,880,889 \$5,244,070 \$0 \$25,187 \$23,469 \$8,151 \$88,623 \$6,274,703 \$8,339,506 \$8,77,796 \$8,813 \$8,813 \$8,813 \$8,284,7139 \$8,284,7139 \$8,813 \$8,813 \$8,216	\$1,481,049 (\$553,783) \$927,266 \$1,204,157 1.25% \$1,237 \$928,503	(\$13.38,213) \$11,737,590 \$31,620 \$85,767 [\$669.922] \$11,185,045 (\$11,865,256) (\$1,662,359) (\$1,6	
National Grid - RI Gas Gas Cost Recovery (GCR) Filing Projected Gas Cost Deferred Balances	<u>Mar-22</u> <u>forecast</u> 31 (f)	(\$12,562,102) \$10,285,725 (\$1,629,488) (\$1,629,488) (\$69,932) \$63,764 \$8,119,221 (\$11,292,249) (\$15,735,130) (\$15,735,130) (\$15,735,130) (\$15,735,130)	\$11.281,933 \$11.758,848 \$0 \$25,187 \$22,084 \$7,726 \$86,619 \$11,900,464 \$11,900,464 \$11,500,464 \$11,738 \$11,738 \$11,738 \$11,738 \$11,738	\$2,164,894 (\$685,780) \$1,479,114 \$1,822,004 1,25% \$1,934 \$1,934	\$884,725 \$20,509,423 \$28,810 \$10,381 \$26,69,932 \$20,019,685 \$24,291,295 \$1,251,080 \$1,25% \$1,25% \$1,328 \$1,328 \$1,328 \$1,328	(26) RMS-1, pg 8, Line (15) (27) Sum[Lines (18), (25), (26)] (28) [Line (18) + Line (27)] + 2 (30) [Line (28) x Line (29)] + 365 x Line (1) (32) Sum[Lines (27), (30), (31)] (34) RMS-1, pg 7, Line (43)(m) (35) RMS-1, pg 7, Line (35)
Natio Gas Cost F Projected Ga	Feb-22 forecast 28 (e)	(\$6,067,310) \$10,285,725 (\$1,629,488) (\$669,932) \$69,152 \$8,119,221 (\$1,660,886) (\$12,553,175) (\$8,310,242) (\$8,310,242) (\$8,310,242) (\$8,228)	\$12,142,969 \$14,953,292 \$0 \$25,187 \$16,234 \$17,814 \$11,0156 \$15,122,677 \$11,706,838 \$11,276,707 \$11,206,838 \$11,276,707 \$11,226 \$11,226 \$11,226 \$11,226 \$11,226 \$11,226 \$11,226 \$11,226 \$11,226 \$11,226	\$3,053,486 (\$891,092) \$2,162,394 \$2,607,940 1.25% \$2,501 \$2,501	\$9,129,145 \$23,703,867 \$34,048 \$173,914 \$23,241,897 \$33,441,116) \$831,941,116) \$879,926 \$5,004,336 \$1,799 \$4,799 \$8,799 \$8,799	(26) RMS-1, pg 8, Line (15) (27) Sum[Lines (18), (25), (28) [Line (18) + Line (29)] (20) [Line (28) X Line (29)] (23) Sum[Lines (27), (30), (34) RMS-1, pg 7, Line (43) (35) RMS-1, pg 8, Line (23) (36) Line (34) + Line (35)
	<u>Jan-22</u> <u>forecast</u> 31 (d)	(\$159,751) \$9,737,455 (\$16.29,488) (\$66.932) \$59,725 \$57,725 \$7,566,912 (\$1,5471,168) (\$5,064,006) (\$3,111,878) (\$6,064,006) (\$3,111,878) (\$6,064,006) (\$3,111,878)	\$9,462,957 \$17,201,504 \$0 \$25,187 \$18,967 \$33,088 \$12,671 \$17,405,447 \$12,131,506 \$12,131,506 \$12,142,969 \$12,142,969	\$3,870,687 (\$820,875) \$3,049,812 \$3,460,250 1.25% \$3,674 \$3,053,486	\$13,173,894 \$25,403,809 \$52,055 \$1866,302 \$24,972,369 \$24,972,369 \$24,972,369 \$21,145,603 \$21,145,603 \$21,145,603 \$21,145,603 \$21,145,603 \$21,145,603 \$21,145,603 \$21,145,603 \$21,145,603 \$21,145,603 \$21,145,603 \$21,145,603	€
	<u>Dec-21</u> <u>forecast</u> 31 (c)	\$2,593,333 \$9,741,455 (\$1,629,488) (\$60,932) \$59,755 \$69,152 \$7,570,942 (\$10,325,317) (\$161,042) \$1,216,146 \$1,226 \$1,221 (\$159,751)	\$7.878,933 \$12,624,035 \$25,621 \$22,621 \$49,714 \$12,84,549 \$11,239,725 \$1,639,	\$4,492,133 (\$625,883) \$3,866,250 \$4,179,192 1.25% \$4,437 \$3,870,687	\$14,964,399 \$20,830,340 \$72,335 \$152,747 (\$669,932) \$20,385,490 \$22,186,645 \$13,18,965 \$14,061,682 \$14,061,682 \$14,083 \$14,928 \$14,083 \$14,28	(14)] + 365 x Lin (14), (15)] pg 7, Line (35)(m ne (77) ne (8) + 12 ine (22) ine (22) ine (22)
	Nov-21 forecast 30 (b)	\$3,569,594 \$5,896,129 (\$20,099) (\$66,932) \$43,278 \$6,127 \$5,317,719 (\$6,297,144) \$2,590,169 \$3,079,881 \$1,25% \$3,164 \$3,164 \$3,164 \$3,164 \$3,164	\$7,128,552 \$7,337,085 \$0 \$25,187 \$23,222 \$65,154 \$65,163 \$7,504,695 \$7,504,695 \$7,871,227 \$7,871,227 \$7,871,227 \$7,705 \$7,705 \$7,705 \$7,705 \$7,878,933	\$4,863,540 (\$376,210) \$4,487,330 \$4,675,435 1.25% \$4,804 \$4,492,133	\$113.561.686 \$13.306.645 \$88.376 \$9.325 \$12.822.414 (\$113.43.374) \$14.948.726 \$15.255.206 \$15.255.206 \$15.255.206 \$15.673 \$14.964.399	(14) [Line (12) x Line (13)] + 365 x Line (1)] (16) Sum[Lines (11), (14), (15)] (18) Nov-21; RMS-1, pg 7, Line (35)(m) (19) RMS-1, pg 6, Line (77) (21) RMS-1, pg 11, Line (22) (22) RMS-1, pg 11, Line (12) (23) RMS-1, pg 11, Line (12) (24) RMS-1, pg 9, Line (13)
	Description (1) # of Days in Month (2) 1 Fixed Cost Deformed				CACK Degrands Junmary Beginning Under(Over) Recovery Gas Costs Inventory Finance Working Capital NGPMP Credits Total Costs Revenue Month's Average Balance Interest Rate (BOA Prine minus 200 bps) Interest Applied Gas Purchase Plan Incentives((Penalties)) Ending Under((Over) Recovery Month's Average Balance Interest Applied Gas Purchase Plan Incentives((Penalties))	(3) RMS-1, pg 7, Line (17)(m) (4) RMS-1, pg 5, Line (41) (6) GSP-1 (7) RMS-1, pg 9, Line (17) (8) RMS-1, pg 2, Line (8) + 12 (9) Sum[(4)-(8)] (10) RMS-1, pg 8, Line (10) (11) Sum[Lines (3), (9), (10)]
	E 6	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	(18) (18) (18) (18) (18) (18) (18) (18)	33 33 33 33 33 33 33 33 33 33 33 33 33	(4.1) (4.2) (4.3) (4.3) (4.3) (4.3) (4.3) (5.3) (5.3) (5.3) (5.3) (5.3) (5.3) (5.3) (5.3)	

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESS: RYAN M. SCHEIB
SEPTEMBER 1, 2021

Attachment RMS-4
Bill Impact Analysis
Includes the proposed GCR And DAC Factors

National Grid - RI Gas
Gas Cost Recovery (GCR) Filing
Bill Impact Analysis with Various Levels of Consumption

Residential Heating:

															GET	\$1.55	\$1.72	\$1.89	\$2.05	\$2.22	\$2.39	\$2.56	\$2.73	\$2.89	\$3.06	\$3.23
	GET	\$2.14	\$2.37	\$2.60	\$2.83	\$3.06	\$3.30	\$3.53	\$3.76	\$3.99	\$4.22	\$4.45			LIHEAP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	LIHEAP	\$0.00	80.00	\$0.00	00.08	00.08	00.08	00.08	80.00	00.08	\$0.00	\$0.00			EE	\$0.00	80.00	80.00	80.00	80.00	\$0.00	\$0.00	\$0.00	80.00	\$0.00	\$0.00
ie to:	EE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	80.00	80.00	\$0.00		Difference due to: DAC	ISR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	80.00	\$0.00	80.00	\$0.00	00.08	\$0.00
Difference due to:	ISR	\$0.00	80.00	80.00	\$0.00	\$0.00	00.08	00.08	80.00	00.0	\$0.00	\$0.00		Differe DAC	Base DAC	\$25.12	\$27.86	\$30.57	\$33.27	\$35.96	\$38.71	\$41.47	\$44.17	\$46.87	\$49.57	\$52.29
DAC	Base DAC	\$27.40	\$30.40	\$33.35	\$36.30	\$39.25	\$42.25	\$45.25	\$48.20	\$51.15	\$54.10	\$57.10		Total Bill		(\$16.71)	(\$18.53)	(\$20.33)	(\$22.13)	(\$23.93)	(\$25.75)	(\$27.59)	(\$29.38)	(\$31.19)	(\$32.98)	(\$34.80)
	GCR	\$41.71	\$46.27	\$50.76	\$55.23	\$59.75	\$64.30	\$68.87	\$73.34	\$77.87	\$82.34	886.90			GCR	\$41.71	\$46.27	\$50.76	\$55.23	\$59.75	\$64.30	\$68.87	\$73.34	\$77.87	\$82.34	\$86.90
	% Chg	7.5%	7.6%	7.8%	7.9%	7.9%	8.0%	8.1%	8.2%	8.2%	8.3%	8.3%			% Chg	7.3%	7.4%	7.6%	7.7%	7.8%	7.8%	7.9%	8.0%	8.0%	8.1%	8.1%
	Difference	\$71.25	\$79.04	\$86.71	\$94.36	\$102.06	\$109.85	\$117.65	\$125.30	\$133.01	\$140.66	\$148.45			Difference	\$51.67	\$57.32	\$62.88	\$68.43	\$74.00	\$79.65	\$85.31	\$80.86	\$96.45	\$101.99	\$107.62
Current	Rates	\$951.75	\$1,035.96	\$1,118.73	\$1,201.52	\$1,284.19	\$1,368.36	\$1,452.57	\$1,535.29	\$1,618.03	\$1,700.81	\$1,785.03		Current	Rates	\$707.36	\$769.83	\$831.21	\$892.61	\$953.92	\$1,016.34	\$1,078.79	\$1,140.13	\$1,201.50	\$1,262.89	\$1,325.36
Proposed	Rates	\$1,023.00	\$1,115.00	\$1,205.44	\$1,295.88	\$1,386.25	\$1,478.21	\$1,570.22	\$1,660.59	\$1,751.04	\$1,841.47	\$1,933.49	me:	Proposed	Rates	\$759.03	\$827.14	\$894.09	\$961.03	\$1,027.92	\$1,095.98	\$1,164.10	\$1,230.99	\$1,297.95	\$1,364.88	\$1,432.98
Annual	Consumption (Therms)	548	809	299	726	785	845	905	964	1,023	1,082	1,142	Residential Heating Low Income:	Annual	Consumption (Therms)	548	809	199	726	785	845	905	964	1,023	1,082	1,142

National Grid - RI Gas Gas Cost Recovery (GCR) Filing Bill Impact Analysis with Various Levels of Consumption

Residential Non-Heating:

		S0.09 \$0.10 \$0.10 \$0.11 \$0.12 \$0.13 \$0.14 \$0.15 \$0.15
GET	\$0.13 \$0.14 \$0.15 \$0.17 \$0.17 \$0.19 \$0.22 \$0.22 \$0.24 \$0.25	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00
LIHEAP	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	SO.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00
ie to: <u>EE</u>	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Difference due to: DAC C ISR 12) \$0.00 57) \$0.00 10) \$0.00 11) \$0.00 11) \$0.00 12) \$0.00 13) \$0.00 142) \$0.00 52) \$0.00 52) \$0.00 53) \$0.00 54) \$0.00 55) \$0.00 55) \$0.00 55) \$0.00 55) \$0.00 55) \$0.00
Difference due to: ISR E	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Differe DAC Base DAC (\$5.12) (\$5.57) (\$6.71) (\$6.71) (\$7.18) (\$7.18) (\$7.82
DAC Base DAC	(\$4.68) (\$5.15) (\$5.15) (\$5.19) (\$6.19) (\$7.19) (\$7.80) (\$8.24) (\$8.76) (\$9.21) (\$9.72)	Total Bill Solution Figure Figur
GCR	\$8.81 \$9.69 \$10.53 \$11.56 \$12.36 \$13.47 \$14.56 \$15.37 \$16.40 \$17.27 \$18.16	\$8.81 \$9.69 \$10.53 \$11.56 \$12.36 \$13.47 \$14.56 \$15.37 \$16.40 \$17.27
% Chg	1.1% 1.2% 1.2% 1.3% 1.3% 1.4% 1.4% 1.4%	% Chg 1.0% 1.1% 1.1% 1.2% 1.2% 1.3% 1.3%
Difference	\$4.26 \$4.68 \$5.05 \$5.54 \$5.92 \$6.97 \$7.35 \$7.35 \$8.31 \$8.70	\$2.85 \$3.19 \$3.19 \$3.43 \$3.75 \$4.01 \$4.37 \$4.37 \$4.37 \$4.37 \$4.37 \$5.51
Current <u>Rates</u>	\$383.62 \$403.03 \$422.62 \$446.29 \$464.37 \$489.45 \$514.52 \$532.64 \$556.27 \$575.76 \$596.68	Current Rates \$286.03 \$286.03 \$300.42 \$314.94 \$332.47 \$345.91 \$364.50 \$383.07 \$396.52 \$414.07
Proposed <u>Rates</u>	\$387.87 \$407.71 \$427.67 \$451.83 \$470.29 \$495.93 \$521.49 \$539.99 \$564.15 \$584.07 \$605.38	Proposed Rates \$288.88 \$303.60 \$318.37 \$336.22 \$349.92 \$368.87 \$368.87 \$368.87 \$368.87 \$349.92 \$368.87
Annual Consumption (Therms)	144 \$387 158 \$407 172 \$427 172 \$427 189 \$451 202 \$451 220 \$495 238 \$521 251 \$539 268 \$564 282 \$584 297 \$605	Annual Consumption (Therms) 144 158 172 172 189 202 220 220 238 251 268 282
(31) (32) (33)	(54) (35) (36) (37) (38) (39) (40) (41) (43) (44) (44)	(46) (47) (48) (49) (50) (51) (52) (53) (53) (54) (55) (56) (57) (58) (59) (60)

National Grid - RI Gas Gas Cost Recovery (GCR) Filing Bill Impact Analysis with Various Levels of Consumption

		LIHEAP GET	\$0.00							\$0.00							<u>CIHEAP</u> GEI	\$0.00										\$0.00 \$64.31
	ue to:	EE LIE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		ue to:		<u> </u>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	80.00	80.00	\$0.00	\$0.00	\$0.00
	Difference due to:	ISR	\$0.00	\$0.00	80.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		Difference due to:	-	X	\$0.00	\$0.00	\$0.00	00.08	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	00.08	\$0.00
	DAC	Base DAC	\$44.67	\$49.43	\$54.34	\$59.10	\$63.85	\$68.71	\$73.56	\$78.33	\$83.07	\$87.95	\$92.80		2	DAC	Base DAC	\$475.87	\$527.12	\$578.13	\$629.49	\$680.72	\$731.92	\$783.10	\$834.46	\$885.69	\$936.77	8988.00
		GCR	\$63.17	\$69.93	\$76.87	\$83.63	\$90.32	\$97.19	\$104.00	\$110.78	\$117.47	\$124.43	\$131.25			Ę	N N	\$525.64	\$582.16	\$638.56	\$695.22	\$751.87	\$808.39	\$864.97	\$921.62	\$978.27	\$1,034.65	\$1,091.28
		% Chg	8.0%	8.1%	8.3%	8.4%	8.6%	8.7%	8.8%	8.8%	8.9%	%0.6	%0.6			5	% Chg	11.9%	12.1%	12.2%	12.3%	12.4%	12.5%	12.5%	12.6%	12.7%	12.7%	12.8%
		Difference	\$1111.18	\$123.05	\$135.27	\$147.14	\$158.94	\$171.03	\$183.05	\$194.96	\$206.74	\$218.95	\$230.98			8 2	Difference	\$1,032.48	\$1,143.59	\$1,254.32	\$1,365.68	\$1,476.90	\$1,587.95	\$1,699.04	\$1,810.39	\$1,921.61	\$2,032.39	\$2,143.59
	Current	Rates	\$1,394.94	\$1,510.26	\$1,628.23	\$1,743.61	\$1,857.76	\$1,974.28	\$2,090.96	\$2,206.31	\$2,320.44	\$2,438.37	\$2,554.98		,	Cullent	Kates	\$8,645.65	\$9,461.62	\$10,274.98	\$11,092.97	\$11,909.97	\$12,725.96	\$13,541.97	\$14,359.95	\$15,176.97	\$15,990.33	\$16,807.33
	Proposed	Rates	\$1,506.12	\$1,633.31	\$1,763.49	\$1,890.76	\$2,016.70	\$2,145.32	\$2,274.01	\$2,401.27	\$2,527.19	\$2,657.32	\$2,785.96		Decorate	rioposed	Kates	\$9,678.13	\$10,605.21	\$11,529.30	\$12,458.66	\$13,386.87	\$14,313.91	\$15,241.01	\$16,170.34	\$17,098.58	\$18,022.72	\$18,950.92
C & I Small:	Annual	Consumption (Therms)	830	919	1,010	1,099	1,187	1,277	1,367	1,456	1,544	1,635	1,725	C & I Medium:	Correct	Amilian	Consumption (Therms)	6,907	7,650	8,391	9,136	6,880	10,623	11,366	12,111	12,855	13,596	14,340
	(61)	(63)	(65)	(99)	(67)	(89)	(69)	(70)	(71)	(72)	(73)	(74)	(75)		(76)	200	(8/)	(80)	(81)	(82)	(83)	(84)	(85)	(98)	(87)	(88)	(88)	(06)

National Grid - RI Gas Gas Cost Recovery (GCR) Filing Bill Impact Analysis with Various Levels of Consumption

		EE LIHEAP GET	\$0.00 \$0.00 \$120.43	\$0.00		\$0.00			\$0.00	\$0.00	\$0.00 \$0.00 \$224.18					FF THEAD GET	PHILDA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00 \$0.00 \$270.34 \$0.00 \$0.00 \$285.13	
	Difference due to:	ISR	\$0.00	80.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		Difference due to:	ISB		\$0.00	\$0.00	\$0.00							\$0.00 \$0.00	
	DAC	Base DAC	\$1,033.65	\$1,144.96	\$1,256.28	\$1,367.61	\$1,478.87	\$1,590.20	\$1,701.52	\$1,812.82	\$1,924.11	\$2,035.46	\$2,146.74		Š	Base DAC	Dase DAC	\$1,871.26	\$2,072.64	\$2,274.20	\$2,475.62	\$2,677.27	\$2,878.73	\$3,080.14	\$3,281.82	\$3,483.23	\$3,684.81 \$3,886.33	
		GCR	\$2,860.37	\$3,168.33	\$3,476.47	\$3,784.52	\$4,092.43	\$4,400.47	\$4,708.54	\$5,016.50	\$5,324.46	\$5,632.61	\$5,940.60			J aJ	<u> </u>	\$2,567.71	\$2,844.03	\$3,120.64	\$3,397.03	\$3,673.72	\$3,950.13	\$4,226.58	\$4,503.29	\$4,779.69	\$5,056.28 \$5,332.77	
		% Chg	%0.6	9.1%	9.1%	9.1%	9.2%	9.2%	9.2%	9.2%	9.2%	9.3%	9.3%			% Cha	0 CIIB	11.0%	11.1%	11.1%	11.2%	11.2%	11.2%	11.3%	11.3%	11.3%	11.3% 11.4%	
		Difference	\$4,014.45	\$4,446.69	\$4,879.12	\$5,311.47	\$5,743.61	\$6,175.95	\$6,608.31	\$7,040.54	\$7,472.75	\$7,905.23	\$8,337.46			Difference	Dineignee	\$4,576.26	\$5,068.73	\$5,561.69	\$6,054.28	\$6,547.41	\$7,040.06	\$7,532.70	\$8,025.89	\$8,518.47	\$9,011.43 \$9,504.23	
	Current	Rates	\$44,559.50	\$49,089.45	\$53,622.03	\$58,153.60	\$62,682.51	\$67,214.07	\$71,745.68	\$76,275.60	\$80,806.13	\$85,338.74	\$89,868.64		C	Current Rates	Nates	\$41,573.70	\$45,780.40	\$49,991.31	\$54,198.85	\$58,410.61	\$62,619.02	\$66,827.41	\$71,039.13	\$75,246.66	\$79,457.61 \$83,667.75	
	Proposed	Rates	\$48,573.95	\$53,536.14	\$58,501.16	\$63,465.07	\$68,426.12	\$73,390.02	\$78,353.99	\$83,316.14	\$88,278.88	\$93,243.97	\$98,206.10		-	Proposed Rates	Naics	\$46,149.96	\$50,849.14	\$55,553.00	\$60,253.13	\$64,958.03	\$69,659.08	\$74,360.11	\$79,065.02	\$83,765.13	\$88,469.04 \$93,171.98	
C & I LLF Large:	Annual	Consumption (Therms)	37,587	41,634	45,683	49,731	53,777	57,825	61,873	65,920	296,69	74,016	78,063	C & I HLF Large:		Annual Consumption (Therms)		41,956	46,471	50,991	55,507	60,028	64,545	69,062	73,583	78,099	82,619 87,137	
	(91)	(93) (94)	(95)	(96)	(67)	(86)	(66)	(100)	(101)	(102)	(103)	(104)	(105)		(106)	(107)	(109)	(110)	(111)	(112)	(113)	(114)	(115)	(116)	(117)	(118)	(119)	

National Grid - RI Gas
Gas Cost Recovery (GCR) Filing
Bill Impact Analysis with Various Levels of Consumption

C & I LLF Extra-Large:

		~	2	10	0	3	~	2	,	0	~	~					6	_	3	10	2	~	0	0	3	+	5
	GET	\$812.88	\$900.42	\$987.95	\$1,075.50	\$1,163.03	\$1,250.58	\$1,338.12	\$1,425.66	\$1,513.20	\$1,600.73	\$1,688.28			Ę	3	\$1,525.79	\$1,690.11	\$1,854.43	\$2,018.75	\$2,183.06	\$2,347.38	\$2,511.70	\$2,676.00	\$2,840.33	\$3,004.64	\$3,168.96
	LIHEAP	\$0.00	00.08	80.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			4	LIHEAP	\$0.00	80.00	\$0.00	00.0	\$0.00	\$0.00	\$0.00	\$0.00	80.00	80.00	\$0.00
ue to:	EE	\$0.00	\$0.00	80.00	80.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		le to:	1	디디	\$0.00	80.00	\$0.00	\$0.00	\$0.00	\$0.00	80.00	\$0.00	80.00	80.00	\$0.00
Difference due to:	ISR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		Difference due to:	ľ	ISK	\$0.00	\$0.00	\$0.00	80.00	\$0.00	\$0.00	\$0.00	\$0.00	80.00	80.00	\$0.00
DAC	Base DAC	\$8,488.21	\$9,402.38	\$10,316.34	\$11,230.53	\$12,144.61	\$13,058.72	\$13,972.87	\$14,886.99	\$15,801.16	\$16,715.08	\$17,629.28		שלע	JAC - G	Base DAC	\$19,558.41	\$21,664.73	\$23,771.06	\$25,877.47	\$27,983.58	\$30,089.94	\$32,196.28	\$34,302.43	\$36,408.83	\$38,515.12	\$40,621.49
	GCR	\$17,794.86	\$19,711.36	\$21,627.39	\$23,543.90	\$25,460.17	\$27,376.60	\$29,293.02	\$31,209.36	\$33,125.79	\$35,041.84	\$36,958.35			5	<u>5</u>	\$29,775.53	\$32,982.14	\$36,188.77	\$39,395.57	\$42,601.87	\$45,808.58	\$49,015.25	\$52,221.58	\$55,428.38	\$58,634.99	\$61,841.68
	% Chg	13.3%	13.4%	13.4%	13.4%	13.4%	13.5%	13.5%	13.5%	13.5%	13.5%	13.5%			5	% Chg	13.8%	13.8%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%
	Difference	\$27,095.95	\$30,014.16	\$32,931.68	\$35,849.93	\$38,767.81	\$41,685.90	\$44,604.01	\$47,522.01	\$50,440.15	\$53,357.65	\$56,275.91			£.	Difference	\$50,859.73	\$56,336.98	\$61,814.26	\$67,291.79	\$72,768.51	\$78,245.90	\$83,723.23	\$89,200.01	\$94,677.54	\$100,154.75	\$105,632.13
Current	Rates	\$203,327.62	\$224,558.53	\$245,784.96	\$267,015.79	\$288,244.43	\$309,474.58	\$330,704.70	\$351,934.12	\$373,164.17	\$394,390.65	\$415,621.51		Current	Cullelli	Kates	\$368,122.95	\$407,100.50	\$446,077.27	\$485,056.14	\$524,029.61	\$563,007.86	\$601,986.14	\$640,959.51	\$679,938.42	\$718,915.22	\$757,893.49
Proposed	Rates	\$230,423.57	\$254,572.70	\$278,716.64	\$302,865.72	\$327,012.25	\$351,160.48	\$375,308.71	\$399,456.13	\$423,604.32	\$447,748.29	\$471,897.42		Pronosed	rioposed	Kates	\$418,982.68	\$463,437.47	\$507,891.53	\$552,347.94	\$596,798.12	\$641,253.76	\$685,709.37	\$730,159.52	\$774,615.96	\$819,069.98	\$863,525.62
Annual	Consumption (Therms)		259,019	284,197	309,381	334,562	359,745	384,928	410,110	435,293			C & I HLF Extra-Large:	Isunah	Allinal Carrier Carrie	Consumption (Therms)		538,924	591,320	643,718	696,109	748,506	800,903	853,294	905,692	958,088	1,010,485
(121)	(123)	(125)	(126)	(127)	(128)	(129)	(130)	(131)	(132)	(133)	(134)	(135)		(136)	(120)	(138)	(140)	(141)	(142)	(143)	(144)	(145)	(146)	(147)	(148)	(149)	(150)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESS: RYAN M. SCHEIB
SEPTEMBER 1, 2021

Attachment RMS-5 FT-2 Demand Rate

Page 1 of 3

REDACTED

National Grid - RI Gas Gas Cost Recovery (GCR) Filing Summary of Marketer Transportation Factors

	<u>Item</u> (a)	Reference (b)	Proposed (c)	Billing Units (d)
(1)	FT-2 Demand Usage (Dt) Nov 2020 - Oct 2021	Pg 2, Line (21)	\$12.2364	Dth/Mth
(2)	Storage and Peaking charge for FT-1 firm transportation Customers eligible for TSS	Pg 3, Line (5)	\$0.9605	Per Dth

REDACTED

National Grid - RI Gas Gas Cost Recovery (GCR) Filing Calculation of FT- 2 Demand Rate (per Dth)

	Source		
Description	Reference	Line #	Amount
(a)	(b)	(c)	(d)
(1) Storage Fixed Costs	RMS-1 pg 5	Line (40)	
Less:			
(2) System Pressure to DAC			(\$6,685,226)
(3) Credits			\$0
(4) Refunds			\$0
(5) Total Credits	Sum [(2)-(4)]		(\$6,685,226)
Plus:			
(6) Supply Related LNG O&M Costs	RMS-1 Pg 2	Line (8)	\$829,823
(7) Working Capital Requirement	RMS-1 pg 10	Line (47)	\$169,227
(8) FT Demand Everett	RMS-1 pg 4	Line (5)	\$1,254,540
(9) Total Additions	Sum [(6)-(8)]		\$2,253,590
(10) Total Storage Fixed Costs	(1) + (5) + (9)		
Inventory Financing			
(11) Underground	RMS-1 pg 11	Line (12)	\$468,035
(12) LNG	RMS-1 pg 11	Line (22)	\$267,879_
(13) Total Storage Fixed Costs	(10) + (11) + (12)		
(14) LNG Storage MDQ (Dth)	RMS-1 pg 13	Line (14)	
(15) AGT	GSP-1	,	
(16) TENN	GSP-1		
(17) Total Storage MDQ	Sum [(14)-(16)]		
(18) Storage MDQ X 12 Months	(17) x 12		MDCQ Dth
(19) FT- 2 Demand Rate	(13) ÷ (18)		\$12.0027 per MDCQ Dth
(20) Uncollectible %	Docket 4770		1.91%
(21) Total FT-2 Demand Rate adjusted for Uncollectibles	(19) ÷ [(1 - (20)]		\$12.2364 per MDCQ Dth
(22) MDQ-U	Mkter MDQ Forecast		4,612
(23) MDQ-P	Mkter MDQ Forecast		15,384
(24) Marketer MDQs	(22) + (23)		19,996 Dth/Mth
(25) FT-2 Storage Costs	(19) x (24) x 12 Months		\$2,880,020

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment RMS-5 Redacted

Page 3 of 3

REDACTED

National Grid - RI Gas Gas Cost Recovery (GCR) Filing Calculation of FT-1 Storage and Peaking Charge Applied to Firm Transportation Customers Eligible for TSS

		Source		
	Description	Reference	Line #	Amount
	(a)	(b)	(c)	(d)
(1)	Total Storage Fixed Costs	Pg 2	Line (13)	
(2)	Usage (Dth) Nov 2021 - Oct 2022	RMS-1, pg 2	Line (15)	
(3)	Volumetric Rate	$(1) \div (2)$		\$0.9422
(4)	Uncollectible %	Docket 4770		1.91%
(5)	Volumetric Rate Including Uncollectible	$(3) \div [1 - (4)]$		\$0.9605 per dth
(6)	Storage & Peaking charge applied to FT-1 customers eligible for TSS	$(5) \div 10$		\$0.0960 per therm

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESS: RYAN M. SCHEIB
SEPTEMBER 1, 2021

Attachment RMS-6 FT-2 Capacity Allocator Percentages

RI Gas Company Capacity Assignment Table

			<u> </u>	% of Peak	Day Requir	rement_	<u>% of</u>	Total Cap	<u>acity</u>
			Pipeline	Storage	Peaking	Total	Pipeline	Storage	Peaking
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	HLF	Res - Non-Heating	67.0%	8.0%	25.0%	100.0%	1.0%	0.8%	0.8%
2	HLF	Res - Non-Heating LI	67.0%	8.0%	25.0%	100.0%			
3	LLF	Res - Heating	52.0%	11.0%	37.0%	100.0%	61.9%	63.9%	63.9%
4	LLF	Res - Heating LI	52.0%	11.0%	37.0%	100.0%			
5	LLF	Small	52.0%	11.0%	37.0%	100.0%	7.7%	8.2%	8.2%
6	LLF	Med	52.0%	11.0%	37.0%	100.0%	9.2%	9.2%	9.2%
7	LLF	Large Low Load	52.0%	11.0%	37.0%	100.0%	2.0%	2.1%	2.1%
8	HLF	Large High Load	67.0%	8.0%	25.0%	100.0%	0.5%	0.4%	0.4%
9	LLF	XL Low Load	52.0%	11.0%	37.0%	100.0%	0.1%	0.1%	0.1%
10	HLF	XL High Load	67.0%	8.0%	25.0%	100.0%	0.1%	0.0%	0.0%

11	HLF	High Load Factor	67.0%	8.0%	25.0%	100.0%
12	LLF	Low Load Factor	52.0%	11.0%	37.0%	100.0%
13		Total	53.0%	11.0%	36.0%	100.0%

6.4%	3.6%	3.6%
93.6%	96.4%	96.4%
100.0%	100.0%	100.0%

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SEPTEMBER 1, 2021

Attachment RMS-7 COVID Deferral

National Grid - RI Gas Gas Cost Recovery (GCR) Filing COVID Deferral Recovery Factors

		COVID Deferal Balance (b)	2020/2021 <u>Throughput</u> (c)	Covid Deferral per Dth (d)
(1)	High Load	\$100,674	655,553	\$0.1535
(2)	Low Load	\$4,762,865	26,898,975	\$0.1770
(3)	Total	\$4,863,540	27,554,528	

Col (b) (1): RMS-7, Page 2, Col (l), Line (14); (2): RMS-7, Page 2, Col (l)

Col (c) Company Forecast

Col(d) $Col(b) \div Col(c)$

	50	res
al Grid - RI Gas	ecovery (GCR) Filing	VID Deferral Balances

					Natio Gas Cost R Projected CO	National Grid - RI Gas Gas Cost Recovery (GCR) Filing Projected COVID Deferral Balances	Gas R) Filing I Balances				The Narr	The Narragansett Electric Company d/b/a National Grid Docket No. 5180 Attachment RMS-7 Page 2 of 2	db/a National Grid Docket No. 5180 Attachment RMS-7 Page 2 of 2
Description (1) # of Days in Month	Nov Actual 30 (a)	<u>Dec</u> Actual 31 (b)	<u>Jan</u> Actual 31 (c)	Feb Actual 28 (d)	Mar Actual 31 (e)	Apr Actual 30 (f)	May Actual 31 (g)	Jun Actual 30 (h)	Jul Actual 31 (i)	Aug <u>Forecast</u> 31 (j)	Sep Forecast 30 (k)	Oct Forecast 31 (1)	Nov-Oct 365 (m)
Monthly Revenue Credit (1) Low Load dth (2) Low Load COVID Factor (\$/dth) (3) Low Load Revenue	1,546,738 (\$150,078)	2,711,846 (\$528,774)	4,382,453 (\$855,018)	4,870,211 (\$950,161)	4,026,399	2,606,931 (\$508,795)	1,510,433 (\$294,801)	824,017 (\$160,763)	507,219 (\$99,002)	\$95,478 (\$0.1950) (\$116,118)	613,567 (\$0.1950) (\$119,646)	801,559 (\$0.1950) (\$156,304)	
 (4) High Load dth (5) High Load COVID Factor (\$\\$\delta\$) (6) High Load Revenue 	50,599	(\$10,564)	87,323 (\$13,364)	87,253 (\$13,359)	82,908 (\$12,691)	(\$66,98)	50,001	41,702 (\$6,383)	33,925 (\$5,193)	34,547 (\$0.1530) (\$5,286)	37,622 (\$0.1530) (\$5,756)	38,418 (\$0.1530) (\$5,878)	
(7) Monthly Covid Credit	(\$153,922)	(\$539,339)	(\$868,382)	(\$963,520)	(\$798,445)	(\$518,793)	(\$302,457)	(\$167,146)	(\$104,195)	(\$121,404)	(\$125,402)	(\$162,182)	
COVID Deferred - Low Load (8) COVID Deferral Beginning Balance (9) Revenue Credit (10) Ending Balance Before Interest (11) Average Monthly Balance (12) Interest Pare (POA Prince minus 200 hres)	\$0 \$150,078 \$150,078 \$75,039	\$150,155 \$528,774 \$678,929 \$414,542	\$679,369 \$855,018 \$1,534,387 \$1,106,878	\$1,535,562 \$950,161 \$2,485,723 \$2,010,643	\$2,487,651 \$785,754 \$3,273,405 \$2,880,528	\$3,276,463 \$508,795 \$3,785,258 \$3,530,861	\$3,788,886 \$294,801 \$4,083,687 \$3,936,286	\$4,087,866 \$160,763 \$4,248,629 \$4,168,247	\$4,252,911 \$99,002 \$4,351,913 \$4,302,412	\$4,356,481 \$116,118 \$4,472,599 \$4,414,540	\$4,477,286 \$119,646 \$4,596,932 \$4,537,109	\$4,601,593 \$156,304 \$4,757,897 \$4,679,745	\$0 \$4,725,214
Ö	\$77 \$77 \$150,155	\$440 \$679,369	\$1,175 \$1,175 \$1,535,562	\$1,928 \$2,487,651	\$3,058 \$3,276,463	\$3,628 \$3,788,886	\$4,087,866	\$4,282 \$4,282 \$4,252,911	\$4,568 \$4,356,481	\$4,687 \$4,477,286	\$4,661 \$4,601,593	\$4,968 \$4,762,865	\$37,651 \$4,762,865
COVID Deferred - High Load (15) COVID Deferral Beginning Balance (16) Revenue Credit (17) Ending Balance Before Interest (18) Average Monthly Balance (19) Interest Rate (BoA Prime minus 200 bps) (20) Interest Applied (21) COVID Deferral Ending Balance	\$0 \$3,844 \$3,844 \$1,922 1.25% \$2 \$3,846	\$3,846 \$10,564 \$14,411 \$9,129 1.25% \$10 \$10	\$14,420 \$13,364 \$27,784 \$21,102 1.25% \$22 \$27,807	\$27,807 \$113,359 \$41,165 \$34,486 1.25% \$33 \$41,199	\$41,199 \$12,691 \$53,890 \$47,544 1.25% \$50 \$53,940	\$53,940 \$9,998 \$63,938 \$58,939 1.25% \$61 \$61	\$63,999 \$7,656 \$71,654 \$67,826 1.25% \$72 \$71,726	\$71,726 \$6,383 \$78,109 \$74,918 1.25% \$77 \$78,186	\$78,186 \$5,193 \$83,379 \$80,783 1.25% \$86 \$88	\$83,465 \$5,286 \$88,751 \$86,108 1,25% \$91 \$88,842	\$88,842 \$5,756 \$94,598 \$91,720 1.25% \$94	\$94,693 \$5,878 \$100,571 \$97,632 1.25% \$104	\$0 \$99,972 \$702 \$100,674
(1) Col (a) - Col (i): Company Report; Col (j) - Col (l): Company Forecast (2) Line (3) + Line (1) (3) Col (a) - Col (i): Company Report; Col (j) - Col (l): Line (1) x Line (2) (4) Col (a) - Col (i): Company Report; Col (j) - Col (l): Company Forecast (5) Line (6) + Line (4) (6) Col (a) - Col (i): Company Report; Col (j) - Col (l): Line (4) x Line (5) (6) Col (a) - Col (i): Company Report; Col (j) - Col (j): Line (4) x Line (5)	(d): Company For (d): Line (1) x Lin (d): Company For (d): Line (4) x Lin (d): Line (4) x Lin	ecast e (2) ecast e (5)	(7) (9) (10) (11) (13) (13)	Line (3) + Line (6) Line (3) Line (8) + Line (9) [Line (8) + Line (10)] + 2 [Line (11) x Line (12)] + 3 Line (10) + Line (13)	ine (3) + Line (6) ine (3) ine (8) + Line (9) Line (8) + Line (10] + 2 Line (11) x Line (12)] + 365 x Line (1) ine (10) + Line (13)	Line (1)	(16) (17) (18) (20) (21)	Line (6) Line (15) + Line (16) [Line (15) + Line (17)] + 2 [Line (18) x Line (19)] + 3 Line (17) + Line (20)	Line (6) Line (15) + Line (16) Line (15) + Line (17)] + 2 Line (18) x Line (19)] + 365 x Line (1) Line (17) + Line (20)	Line (1)			

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC DOCKET NO. 5180
2021 GAS COST RECOVERY FILING
WITNESSES: THEODORE POE, JR. AND SHIRA HOROWITZ
SEPTEMBER 1, 2021

JOINT DIRECT TESTIMONY

OF

GAS LOAD FORECASTING ("GLF") WITNESSES

THEODORE POE, JR.

AND

SHIRA HOROWITZ

September 1, 2021

2021 GAS COST RECOVERY FILING

WITNESSES: THEODORE POE, JR. AND SHIRA HOROWITZ SEPTEMBER 1, 2021

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1	I.	Introduction

- 2 O. Mr. Poe, please state your name and business address.
- 3 A. My name is Theodore Poe, Jr. My business address is 40 Sylvan Road, Waltham,
- 4 Massachusetts 02451.

5

- 6 Q. By whom are you employed and in what capacity?
- 7 A. I am Manager, Gas Load Forecasting for National Grid USA Service Company, Inc. In
- 8 this position, I am responsible for preparing forecasts of the resource requirements for the
- 9 New England local gas distribution companies that operate as The Narragansett Electric
- 10 Company (the Company), Boston Gas Company, and Colonial Gas Company, each d/b/a
- National Grid. In addition to the New England portfolios, I am responsible for preparing
- forecasts of the resource requirements for The Brooklyn Union Gas Company d/b/a
- National Grid NY (formerly KeySpan Energy Delivery New York), KeySpan Gas East
- 14 Corporation d/b/a National Grid (formerly d/b/a KeySpan Energy Delivery Long Island),
- and Niagara Mohawk Power Corporation, all of which are located in New York. For
- purposes of this testimony, references to the Company relate solely to The Narragansett
- 17 Electric Company.

18

- 19 Q. Please summarize your educational background and professional experience.
- 20 A. I graduated from the Massachusetts Institute of Technology in 1978 with a Bachelor of
- Science degree in Geology. From 1981 to 1989, I worked as a Research Associate with

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1		Jensen Associates, Inc. of Boston, where I was responsible for developing a variety of
2		computer-forecasting models to analyze natural gas supply and demand for interstate
3		pipeline and local gas distribution companies. I joined Boston Gas Company in 1989,
4		where I was responsible for modeling and forecasting customers' natural gas resource
5		requirements and managing the resource planning process. In 1998-99, I assumed the
6		same responsibilities for Essex Gas Company and Colonial Gas Company. In 2000, I
7		assumed responsibility for modeling and forecasting the natural gas resource
8		requirements of The Brooklyn Union Gas Company and KeySpan Gas East Corporation.
9		In 2008, I assumed responsibility for modeling and forecasting the natural gas resource
10		requirements for the Company and Niagara Mohawk Power Corporation.
11		
12	Q.	Are you a member of any professional organizations?
13	A.	Yes. I am a member of the Northeast Gas Association, the New England-Canada
14		Business Council and the American Meteorological Society.
15		
16	Q.	Have you previously testified before the Rhode Island Public Utilities Commission
17		(PUC) or any other regulatory commissions?
18	A.	Yes. I testified before the PUC in previous Gas Cost Recovery filings in Docket Nos.
19		4719, 4647, 4872, 4963 and 5066. I also submitted pre-filed written testimony in support
20		of the Company's 2017 rate case filing in Docket No. 4770. In addition, I have testified

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1 in a number of proceedings before the Massachusetts Department of Public Utilities and 2 the New Hampshire Public Utilities Commission. 3 4 Q. Ms. Horowitz, please state your name and business address. 5 A. My name is Shira Horowitz, and my business address is 40 Sylvan Road, Waltham, Massachusetts 02451. 6 7 8 Q. By whom are you employed and in what capacity? 9 A. I am the Director, Economics and Gas Forecasting for the National Grid USA Service Company, Inc. ("Service Company"). Service Company provides engineering, financial, 10 administrative, and other technical support to direct and indirect subsidiary companies of 11 12 National Grid USA ("National Grid"), which include The Narragansett Electric Company d/b/a National Grid ("Narragansett" or the "Company"). I oversee the gas load forecasts 13 14 for National Grid, as well as economic analysis. 15 Q. Please summarize your professional and educational background. 16 I have been in my current position at National Grid since May 2021 where I oversee gas 17 A. load forecasting and general economic analysis for National Grid. Before that, from June 18 2019 through April 2021, I was the Manager of Economics and Load Forecasting at 19 20 National Grid. Prior to joining National Grid, I worked at Con Edison in New York and 21 PJM Interconnection in Pennsylvania.

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1		I received a Bachelor	of Engineering in Electrical Engineering from The Cooper Union in
2		New York and a Do	ctor of Philosophy in Engineering and Public Policy from Carnegie
3		Mellon University in	Pennsylvania. I also completed a Fulbright Fellowship in Sustainable
4		Power Generation in	Stockholm, Sweden.
5			
6	Q.	Have you ever testif	ied before the Rhode Island Public Utilities Commission
7		("PUC") or any other	er regulatory body?
8	A.	Yes. I recently provi	ded testimony at the evidentiary hearings in R.I.P.U.C. Docket No.
9		5076 and R.I.P.U.C.	Docket No. 5127.
10			
11	Q.	What is the purpose	e of your joint testimony in this proceeding?
12	A.	Our joint testimony s	upports the underlying retail and wholesale forecasts of natural gas
13		customer requiremen	ts that are used to estimate gas costs in the Company's Gas Cost
14		Recovery submission	ı.
15			
16	Q.	Are you sponsoring	any attachments?
17	A.	Yes. We are sponsor	ring the following attachments with this testimony:
18 19		Attachment GLF-1	National Grid RI Retail Volume Forecast 2021 vs. 2020 Forecast
20 21		Attachment GLF-2	National Grid RI Retail Meter Count Forecast 2021 vs. 2020 Forecast
22 23 24		Attachment GLF-3	National Grid RI Economic Forecast 2021 vs. 2020 Forecast

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1 2 3		Attachment GLF-4	National Grid RI Retail Volume Forecast by Rate Class 2021 vs. 2020 Forecast
4 5 6		Attachment GLF-5	National Grid RI Retail Meter Count Forecast by Rate Class 2021 vs. 2020 Forecast
7	Q.	What was the source	e of the projected sendout requirements and costs used in this
8		filing?	
9	A.	As in prior cost of g	as filings, the Company used its internal billing and cost data and
10		external economic da	ta to forecast its sendout requirements.
11			
12	II.	Summary of Retail a	and Wholesale Natural Gas Forecasts
13	Q.	How did the Compa	ny develop its retail and wholesale forecasts?
14	A.	Annually, beginning i	in April, the Company uses the following five-step process to
15		prepare its 10-year for	recast of customer requirements:
16		1) Forecast retail der	mand requirements;
17		2) Develop reference	e-year wholesale sendout requirements using regression analysis;
18		3) Normalize forecas	st of customer requirements;
19		4) Determine design	weather planning standards; and
20		5) Determine wholes	sale customer requirements under design weather conditions.
21			
22		For the Company's fo	precast, "retail" refers to gas delivered and metered at customers'
23		burner tips, and "who	lesale" refers to gas received and metered flowing into the

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Company's distribution system. The Company's retail forecast is prepared through
econometric and statistical modeling of both customer count (meter count) and use-per-
customer. This process is documented in greater detail in the Company's Gas Long-
Range Resource and Requirements Plan for the Forecast Period 2021/22 through 2025/26
dated June 30, 2021 (Long Range Plan) that was submitted to the Rhode Island Division
of Public Utilities and Carriers and filed for information purposes with the Commission
in Docket 5043. Billing data is modeled at the rate class level and further sub-
categorized as sales or transportation (either capacity-eligible or capacity-exempt). The
Company's volume forecast is the product of meter count and use-per-customer at the
rate class level. The retail forecast takes into account the impact of the COVID-19
Pandemic on the Rhode Island economy and the impact of the Company's energy
efficiency programs.
The Company's wholesale forecast is based on its retail forecast. The retail forecast is
adjusted to correct for the billing lag inherent therein, and it is further adjusted to account
for unaccounted-for gas. Unaccounted-for gas is the measure of the difference between
gas supplies that are received and metered flowing into the Company's distribution
system and gas delivered and metered at customers' burner tips. These two forecasts
(retail and wholesale) serve as the annual basis of the Company's supply, engineering,
and financial planning.

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III. The 2021 Gas Forecast

Q. What is the role of the 2021 gas forecast in the Gas Cost Recovery proceeding?

A. With 72 percent of the Company's wholesale deliveries occurring between the months of November through March, as set forth in the pre-filed joint direct testimony of the Company's Gas Supply Panel, the Company's gas resource portfolio and gas supply purchase planning are designed to address its customers' needs during the winter peak period and throughout the year. Each year, the Company develops its gas forecast by accounting for the most recent heating season's actual customer usage patterns. This provides the Company with a growing set of historical data with which to build its

econometric forecast using its most recent economic outlook.

The Company's forecast of sales and throughput requirements under normal weather conditions and under design winter conditions serves three purposes. First, the forecasts provide key inputs for the computation of National Grid's projected Gas Cost Recovery costs. Second, the Company's forecasts of design winter requirements form the basis for the Company's allocation of fixed costs between High Load Factor and Low Load Factor service classifications. Third, forecasts of total annual sales and throughput requirements provide the denominators used in the Company's computation of applicable charges on a dollars per therm basis. The Company's forecasts of future gas service requirements also serve as important indicators of the need for additional capacity to ensure the reliability of the Company's service, particularly during periods of extreme weather, as reflected in

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measures of design winter, cold snap, and design day requirements. The Company's long-range forecasts of service requirements also play an important role in assessing the economics of alternative gas supply resources.

4

5

7

8

9

Q. How do the forecasted sales requirements for 2021/22 compare to the prior retail

6 **forecast for 2020/21?**

A. A comparison of the Company's 2020 gas forecast of firm retail volumes for the period November 2020 through October 2021 and its current firm retail volume forecast for November 2021 through October 2022 is shown in Table 1 below.

10

Table 1

	2020/21 Forecasted Volume (MMBtu)	2021/22 Forecasted Volume (MMBtu)
Residential Sales	20,169,756	20,504,326
C&I Sales	7,014,708	7,034,186
Total Sales	27,184,464	27,538,512
C&I Transportation	12,286,326	12,546,041
Total	39,470,789	40,084,553

12

Source: Attachment GLF-1

13

14

15

16

17

In summary, the 2021/22 forecast shows a 1.6 percent increase in Total Sales and Commercial and Industrial (C&I) Transportation customer volumes over the 2020/21 forecast, with Total Sales increasing by 1.3 percent and C&I Transportation increasing by 2.1 percent.

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1	Attachment GLF-1 contains tables showing planning year ¹ (PY) volumes from PY 2011
2	through PY 2030 for the Company's current (2021) volume forecast and last year's
3	(2020) forecast. The data is presented for Residential Non-Heating, Residential Heating,
4	C&I Sales, C&I FT-1 Transportation, and C&I FT-2 Transportation customers, and all
5	other volumes. Charts are provided in Attachment GLF-1 for visual comparison. The
6	primary change in the forecast from 2020 to 2021 is the rebound from the COVID-19
7	pandemic in the Residential, C&I Sales, and C&I Firm Transportation volumes. The
8	five-year per annum growth rate in volumes (excluding Other) from PY 2021 to PY 2026
9	is 2.1 percent, which is greater than the 1.6 percent per annum growth rate forecasted last
10	year for the same period.
11	
12	Attachment GLF-2 contains tables from PY 2011 through PY 2030 showing the
13	Company's current (2021) meter count forecast and last year's (2020) forecast. The
14	data is presented for Residential Non-Heating, Residential Heating, C&I Sales, C&I FT-1
15	Transportation, and C&I FT-2 Transportation customers, and all other volumes. Charts
16	are provided in Attachment GLF-2 for visual comparison. The primary change in the
17	meter count forecast from 2020 to 2021 is a minor increase in the overall forecasted
18	growth rate as the Rhode Island economy rebounds from the impact of COVID-19. The
19	five-year per annum growth rate in meter count (excluding Other) from PY 2021 to

¹ The forecast planning year is November 1 through October 31.

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1	PY 2026 is 1.0 percent, which is greater than the 0.9 percent per annum growth rate
2	forecasted last year.
3	
4	On a wholesale basis (see Attachment GSP-1, 'Delivery Point Volumes'), the Company
5	forecasts sales volumes to be 29,230,000 MMBtu² for the period November 2021 through
6	October 2022. Comparatively, in the Company's previous wholesale forecast for
7	November 2020 through October 2021, as filed in Docket No. 5066, the sales volume
8	was projected to be 28,670,000 MMBtu. Wholesale sales volume is projected to increase
9	2.0 percent as the Rhode Island economy recovers from the COVID-19 Pandemic.
10	
11	Attachment GLF-3 contains tables for calendar year economic data from 1990 through
12	2023 for the Company's current (2021) forecast and last year's (2020) forecast. The data
13	is presented for the following key indicators: Natural Gas Residential Price, Residential
14	No. 2 Oil Price, the Gas-to-Oil Price Ratio, Rhode Island Gross Domestic Product,
15	Households, and Non-Farm Employment. Charts are provided in Attachment GLF-3 for
16	visual comparison. The overall 2021 economic forecast, as compared to the 2020
17	economic forecast, shows higher oil prices as compared to natural gas and slightly lower
18	GDP and employment with the economic recovery from the COVID-19 pandemic.

² One million British thermal units (MMBtu).

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1 Q. Have there been any changes to the forecasted sales requirements for 2021/22 as 2 compared to the Company's Long Range Plan filed in Docket No. 5043 on June 30, 2021? 3 4 Α. No. There are no changes to the forecasted sales requirements for 2021/22 as compared 5 to the Company's Long Range Plan filed on June 30, 2021 in Docket No. 5043. 6 7 Q. How has the Company accounted for the effects of weather variations in the historic 8 data inputs to its 2021 gas forecast? In preparing the 2021 gas forecast, the Company used its monthly customer billing data 9 A. (volume and number of customers) for the period September 2010 through February 2021 10 to forecast the number of customers and use-per-customer for each of the rate groups the 11 12 Company analyzes. The Company obtained the historical monthly use-per-customer values by dividing volume of total billed therm for each month by the number of 13 customers for the month. Weather, particularly heating degree days, plays a dominant 14 15 role in modeling the use-per-customer behavior of the Company's customers under the wide range of weather observed in the historical period. The Company's forecast then 16 applies its normalized heating degree days as the basis of its forecast of use-per-customer 17 under normal weather conditions. 18

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Q.	How did the Company's 2020/21 forecast compare to the actual billings weather
	normalized for the same period?

A.

- A. According to the Company's most recent analysis where it normalized its actual billing data for November 2020 through February 2021 and forecasted March through October 2021, actual normalized Firm Sales customers plus C&I Transportation customers totaled 38,758,412 MMBtu. In the Company's 2020 Gas Cost Recovery filing (Docket 5066), the Company's normalized forecast volume for November 2020 through October 2021 was 39,842,972 MMBtu, as set forth in Table 1, above. Actual normalized sales were 2.7 percent lower than forecast, driven principally by the impact of the COVID-19 Pandemic.
- Q. How has the Company addressed the effects of colder than normal weather on the development of its design winter and design day requirements?
 - The Company develops appropriate design day and design year planning standards to design a least-cost, reliable supply portfolio for its forecast period. The purpose of a design day standard is to establish the amount of system-wide throughput (interstate pipeline and underground storage capacity plus local supplemental capacity) that is required to maintain the integrity of the distribution system. The Company maintains a design year standard for planning purposes to identify the amount of seasonal supplies of natural gas that will be required to provide continuous service under all reasonable weather conditions. The Company establishes its design standards using a three-step process. First, the Company performs statistical analyses of the coldest days and of the

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8	A.	Yes.
7	Q.	Does this conclude your testimony?
6		
5		lowest cost.
4		Third, the Company identifies design standards that would maintain reliability at the
3		design-level demand versus the cost to customers of experiencing service curtailments.
2		cost-benefit analyses to evaluate the cost of maintaining the resources necessary to meet
1		annual degree days recorded over a historical period. Second, the Company conducts

ATTACHMENTS

Attachments of Theodore Poe, Jr. and Shira Horowitz

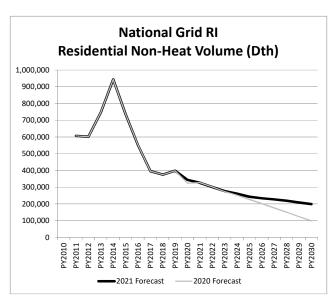
Attachment GLF-1	National Grid RI Retail Volume Forecast 2021 vs. 2020 Forecast
Attachment GLF-2	National Grid RI Retail Meter Count Forecast 2021 vs. 2020 Forecast
Attachment GLF-3	National Grid RI Economic Forecast
Attachment GLF-4	20210 vs. 2020 Forecast National Grid RI Retail Volume Forecast by Rate Class
Au 1 CLE 5	2021 vs. 2020 Forecast
Attachment GLF-5	National Grid RI Retail Meter Count Forecast by Rate Class 2021 vs. 2020 Forecast

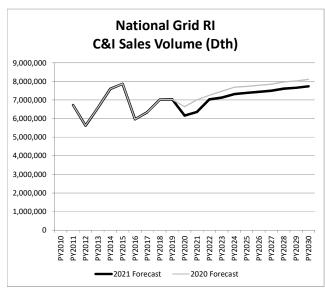
Attachment GLF-1 National Grid RI Retail Volume Forecast 2021 vs. 2020 Forecast

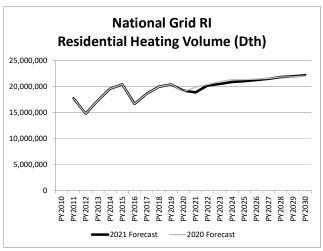
PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,321,323 2,267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211 PY2014 944,174 19,573,872 7,599,227 8,563,673 33,483,82 40,229,308 17,792 2,204,203,00 PY2015 756,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,203 1,828,764 43,223,185 PY2016 551,336 16,675,372 5,999,428 8,666,943 3,569,303 3,783,732 1,860,594 39,274 1,803,201 1,866,594 3,928,732 1,861,444 3,727,812 1,994,709 7,021,050 9,022,578 4,05,501 40,566,340 1,938,339 42,506,679 1,938,490 7,021,050 9,022,578 4,05,501 40,566,340 1,938,339 42,506,679 1,929,982 4,929,982 4,929,982 1,929,982 4,929,982 4,929,982 4,250,679 4,929,982 4,250,679	2021 National Grid RI Volume Forecast (Dth) Planning Year (Nov-Oct) Chart III-B								
PX2012 601.399 14,783,757 5,621.832 7,610.425 2,338,884 30,951,297 2,195,914 33,147,211 PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,747,522 2,014,144 37,988,895 PY2015 736,952 20,389,772 7,890,323 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2017 395,749 18,594,274 6,348,282 8,688,747 3,950,370 37,987,422 1,880,594 39,848,016 PY2019 397,877 20,381,718 7,031,498 8,768,235 4,469,173 41,050,152 2,012,027 43,066,719 PY2019 397,877 20,381,718 7,031,418 8,768,235 4,469,173 41,050,152 2,012,027 43,066,179 PY2019 397,877 20,381,718 7,031,418 7,779,116 4,766,925 40,084,553 2,493,493 39,447,155 PY2012 30,785 20,203,814 7,034,186 7,779,116 4,766,925 40,084,553 2,495,494		RNH	RH	CI_Sales	FT1	FT2	Subtotal	Other	Total
PY2013	PY2011	606,350	17,738,289	6,726,982	7,680,544	2,569,158	35,321,323	2,267,651	37,588,973
PY2014 94.174 19.573.872 7.599.237 8.563.63 3.543.382 40.229.338 1.793.702 42.023.040 PY2015 736,952 20.389,772 7.870,336 9.416,525 3.680.836 42.094.20 1.828,764 43.923.185 PY2017 395,749 18.675,372 5.959.428 8.656,943 3.569,930 35,413.008 1.865,144 37.728.1529 PY2019 397,877 20.381,718 7.021,505 9.022.578 4.005,501 40.568.30 1.938.339 4.256,679 PY2019 397,877 20.381,718 7.031.149 8.768,235 4.690,173 41.050,152 2.012.027 43.062,179 PY2020 343,560 19.204,168 6.161,983 8.208,510 4.313,144 38.231,365 2.067,717 40.299.082 PY2021 325,747 18.874,655 6.358,826 7.907,310 4.334,777 37,801,316 2.045,839 38,947,155 PY2022 300,785 20,203,541 7.034,186 7.779,116 4.766,925 40.084,533 2.459,542 42.324,095 PY2024 260,581 20.878,142 7.319,546 8.134,775 4.889,558 41.491,601 2.511,128 40.002,729 PY2026 233,703 21,239,154 7.436,635 8.034,205 4.934,251 41,884,947 2.482,684 44,367,632 PY2027 26,965 21,467,738 7.503,053 7.999,121 4.959,688 42,146,566 2.470,607 44,118,159 PY2029 208,599 21,934,358 7.656,121 7.914,767 5.031,032 42,744,877 2.451,954 45,107,173 PY2029 208,599 11,934,358 7.655,121 7.914,767 5.031,032 42,744,877 2.451,954 45,107,073 PY2029 208,599 11,934,358 7.656,121 7.914,767 5.031,032 42,744,877 2.451,954 45,107,107 PY2011 606,350 17,738,289 6,726,982 7.680,544 2.569,158 35,321,323 2.267,651 37,588,973 PY2022 208,599 11,934,358 7.656,121 7.914,767 5.031,032 42,744,877 2.451,954 45,106,607 PY2011 606,350 17,738,289 6,726,982 7.680,544 2.569,158 35,321,323 2.267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7.650,650 5,070,235 43,061,486 2.445,121 45,506,607 PY2017 36,749 14,144 15,573,872 7.599,237 8,553,673 3,548,382 40,229,338 1,793,002 42,203,004 PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,788,895 PY2016 37,549 18,594,264 6,348,822 8,688,747 3,950,370 37,987,121 1,860,594 38,980,694 42,094,200 1,828,764 43,934,304 44,934,734 44,935,934 44,934,749 44,944 14,945,943 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,945 44,	PY2012	601,399	14,783,757	5,621,832	7,610,425	2,333,884	30,951,297	2,195,914	33,147,211
PY2015 736,952 20,389,772 7,870,335 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,930 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,274 6,348,282 8,698,747 3,950,370 37,987,422 1,860,594 39,848,016 PY2018 375,502 19,943,709 7,021,050 9,022,578 4,205,501 40,568,340 1,938,339 42,506,679 PY2019 397,877 20,381,718 7,033,149 8,768,225 4,469,173 41,050,152 2,012,027 43,062,179 PY2020 343,550 19,204,168 6,161,938 8,208,510 4,313,444 38,213,65 2,067,717 40,299,082 76,392 20,488,801 7,126,938 8,050,746 4,832,976 40,775,897 2,499,722 42,540,95 PY2023 276,392 20,488,801 7,126,938 8,050,746 4,832,976 40,775,897 2,499,722 42,576,19 PY2024 260,581 20,878,142 7,319,546 8,134,775 4,898,558 141,641,601 2,511,128 40,002,729 PY2025 242,867 21,008,058 7,382,548 8,080,744 4,908,508 41,622,955 2,495,241 44,118,195 PY2026 233,703 21,239,154 7,443,655 8,034,205 4,934,251 41,884,947 2,482,684 44,507,622 PY2027 226,965 21,467,738 7,503,053 7,989,121 4,995,688 42,146,566 2,470,607 44,617,127 PY2028 218,461 21,828,142 7,607,716 7,958,767 5,010,890 42,623,977 2,463,942 45,087,919 PY2029 208,599 21,944,388 7,565,121 7,914,767 5,010,890 42,623,977 2,463,942 45,087,919 PY2030 198,661 22,170,600 7,736,384 7,885,606 5,070,235 43,061,486 2,445,121 45,506,607 PY26/PY21 4-6.4% 2.4% 3.2% 0.3% 2.6% 2.1% 3.9% 2.2% 2.2% 2020 National Grid RI Volume Forecast (Dth) Planning Year (Nov-Oct) PY2017 36,749 13,15,788 6,583,721 8,788,33 3,643,828 40,229,338 1,793,702 42,03,000 42,03,000 42,03,000 42,03,000 42,000	PY2013	746,890	17,315,788	6,583,721	8,278,483	3,049,869	35,974,752	2,014,144	37,988,895
PY2016	PY2014	944,174	19,573,872	7,599,237	8,563,673	3,548,382	40,229,338	1,793,702	42,023,040
PV2017 395,749 18,594,274 6,346,382 8,688,747 3,950,370 37,987,422 1,360,594 39,848,016 PV2018 375,502 19,943,709 7,021,050 9,022,578 4,205,501 40,568,340 1,938,339 42,506,679 PV2020 343,560 19,204,168 6,161,938 8,768,235 4,469,173 41,050,1512 2,012,027 43,062,179 PV2021 325,747 18,874,655 6,5158,826 7,797,116 4,766,925 40,084,553 2,459,542 42,544,095 PV2023 276,392 20,488,801 7,126,938 8,050,746 4,832,976 40,775,897 2,499,722 42,546,095 PV2024 260,581 20,878,142 7,319,546 8,134,775 4,898,558 41,491,601 2,511,128 44,002,729 PV2025 242,867 21,080,088 7,382,548 8,080,974 4,905,508 41,622,955 2,495,414 44,118,195 PV2027 226,965 21,467,738 7,503,053 7,989,121 4,959,688 42,146,566 2,470,607 44,617,173 PV2028 218,461 21,828,142 7,607,716 7,958,767 5,010,890 42,623,977 2,463,942 45,196,839 PV2030 198,661 22,170,600 7,736,384 7,885,606 5,070,235 43,061,486 2,445,121 45,506,607 PV2017 6,648 24,485,148 4,485,483 4,48	PY2015	736,952	20,389,772	7,870,336	9,416,525	3,680,836	42,094,420	1,828,764	43,923,185
PY2018 375,502 19,943,709 7,021,050 9,022,578 4,205,501 40,568,400 1,938,339 42,506,679 PY2019 397,877 20,381,718 7,033,149 8,768,235 4,469,173 41,050,152 2,012,027 43,062,179 PY2021 325,747 18,874,655 6,358,826 7,907,310 4,331,477 37,801,316 2,067,317 40,299,082 PY2021 325,747 18,874,655 6,358,826 7,907,310 4,331,477 37,801,316 2,045,839 39,847,155 PY2024 200,581 20,878,142 7,315,546 8,134,775 4,898,558 41,691,601 2,511,128 44,002,729 PY2026 23,3703 21,239,154 7,443,635 8,034,205 4,934,251 41,884,664 4,367,632 4,667,632 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 4,676,732 <	PY2016	551,336	16,675,372	5,959,428	8,656,943	3,569,930	35,413,008	1,865,144	37,278,152
PY2019 397,877 20,381,718 7,033,149 8,768,235 4,469,173 41,050,152 2,012,027 43,062,179 PY2020 343,560 19,204,168 6,161,933 8,208,510 4,313,144 38,231,365 2,067,717 40,299,082 7,907,310 43,347,77 37,801,316 2,063,393 39,847,155 PY2022 300,785 20,203,541 7,034,186 7,779,116 4,766,925 40,084,553 2,459,542 42,544,095 PY2023 276,392 20,488,801 7,126,983 8,050,746 4,832,976 40,775,897 2,499,722 43,275,619 PY2024 260,581 20,878,142 7,319,546 8,134,775 4,898,558 41,491,601 2,511,128 44,002,729 PY2025 242,867 21,008,058 7,382,548 8,080,974 4,908,508 41,622,955 2,499,221 44,118,195 PY2026 233,703 12,391,544 7,443,635 8,034,205 4,934,251 41,884,947 2,486,684 44,676,777,897 2,200,200 208,599 11,934,358 7,656,121 7,794,767 5,010,990 42,623,977 2,463,942 45,087,999 200,599 21,934,358 7,656,121 7,794,767 5,031,032 42,748,877 2,445,954 45,196,890 PY2030 198,661 22,170,600 7,736,384 7,885,606 5,070,235 43,061,486 2,445,121 45,506,607 PY26/PY21 -6.4% 2.4% 3.2% 0.3% 2.6% 2.1% 3.9,34 2,445,121 45,506,607 PY26/PY21 -6.4% 2.4% 3.2% 0.3% 2.6% 2.1% 3.5,343,24 2,445,121 45,506,607 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211 PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,974,752 2,195,914 33,147,211 PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,974,752 2,014,144 3,798,895 PY2016 551,336 16,675,372 5,599,237 8,563,673 3,569,390 35,413,008 1,865,144 37,278,152 PY2015 736,952 20,389,772 7,599,237 8,563,673 3,569,390 35,413,008 1,865,144 37,278,152 PY2013 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,559,839 20,129,343,86 7,021,056 9,022,578 4,205,501 40,559,839 20,129,343 31,472,11 19,573,872 7,599,237 8,563,673 3,569,390 35,413,008 1,865,104 43,727,878,142 1,970,328 1,984,006 1,944,174 19,573,872 1,959,488 8,656,659 4,529,998 42,091,649 1,941,674 43,933,389 PY2015 375,505 19,943,386 7,021,056 9,022,578 4,205,501 40,559,391 39,742 12,186,059 43,946,069 1,941,674 44,033,323 44,500,259 19,343,386 7,021,056 9,022,578 4,205,501 40,559,391 41,674 44,073,332 44,904,591 3	PY2017	395,749					37,987,422		
PY2020	PY2018	375,502	19,943,709	7,021,050	9,022,578	4,205,501	40,568,340	1,938,339	42,506,679
PY2021 325,747 18,874,655 6,358,826 7,907,310 4,334,777 37,801,316 2,045,839 39,847,155 PY2022 300,785 20,203,541 7,341,86 7,797,116 4,766,925 40,084,553 2,499,722 42,275,619 PY2024 260,581 20,878,142 7,319,546 8,134,775 4,889,558 41,491,601 2,511,128 40,002,729 PY2025 242,867 21,008,058 7,382,548 8,080,974 4,908,508 41,491,601 2,511,128 44,002,729 PY2027 226,965 21,467,738 7,503,053 7,989,121 4,998,568 42,146,566 2,470,607 44,617,173 PY2028 218,461 21,828,422 7,607,716 7,958,767 5,010,890 42,623,977 2,463,942 45,196,830 PY2030 198,661 22,170,600 7,736,884 7,885,606 5,070,235 43,061,486 2,445,121 45,506,607 PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,321,323 2,267,651	PY2019	397,877	20,381,718	7,033,149	8,768,235	4,469,173	41,050,152	2,012,027	43,062,179
PY2022 300,785 20,203,541 7,034,186 7,779,116 4,766,925 40,975,837 2,439,752 43,275,619 PY2023 276,392 20,488,801 7,126,983 8,050,746 4,832,976 40,775,897 2,499,722 43,275,619 PY2025 242,867 21,008,058 7,382,548 8,080,974 4,908,508 41,421,601 2,511,128 40,002,729 PY2026 233,703 21,239,154 7,434,635 8,034,205 4,934,251 41,884,947 2,482,684 44,118,195 PY2028 218,461 21,828,142 7,607,716 7,958,767 5,010,890 42,623,977 2,463,942 45,087,919 PY2092 208,599 21,934,358 7,656,121 7,914,767 5,031,032 42,744,877 2,451,954 45,506,607 PY26/PY21 -6.4% 2.4% 3.2% 0.3% 2.6% 2.1% 3.9% 2.2% PY26/PY21 -6.65 2.7,766,982 7,680,544 2,569,158 35,21,323 2,267,651 37,588,93 PY2011<	PY2020	343,560	19,204,168	6,161,983	8,208,510	4,313,144	38,231,365	2,067,717	40,299,082
PY2022 300,785 20,203,541 7,034,186 7,779,116 4,766,925 40,975,837 2,439,752 43,275,619 PY2023 276,392 20,488,801 7,126,983 8,050,746 4,832,976 40,775,897 2,499,722 43,275,619 PY2025 242,867 21,008,058 7,382,548 8,080,974 4,908,508 41,421,601 2,511,128 40,002,729 PY2026 233,703 21,239,154 7,434,635 8,034,205 4,934,251 41,884,947 2,482,684 44,118,195 PY2028 218,461 21,828,142 7,607,716 7,958,767 5,010,890 42,623,977 2,463,942 45,087,919 PY2092 208,599 21,934,358 7,656,121 7,914,767 5,031,032 42,744,877 2,451,954 45,506,607 PY26/PY21 -6.4% 2.4% 3.2% 0.3% 2.6% 2.1% 3.9% 2.2% PY26/PY21 -6.65 2.7,766,982 7,680,544 2,569,158 35,21,323 2,267,651 37,588,93 PY2011<	PY2021	325,747	18,874,655	6,358,826	7,907,310	4,334,777	37,801,316	2,045,839	39,847,155
PY2023 276,392 20,488,801 7,126,983 8,050,746 4,832,976 40,775,897 2,499,722 43,275,619 PY2024 26,0581 20,878,142 7,319,546 8,134,775 4,988,558 41,491,601 2,511,128 44,002,729 PY2026 233,703 21,239,154 7,434,635 8,034,205 4,934,251 41,884,947 2,482,684 44,367,632 PY2027 226,965 21,467,738 7,503,053 7,989,167 5,010,890 42,623,977 2,463,942 45,087,919 PY2029 208,599 21,934,358 7,665,121 7,914,767 5,031,032 42,744,877 2,451,1954 45,196,830 PY2030 198,661 22,170,600 7,736,384 7,885,606 5,070,235 43,061,486 2,445,121 45,506,607 PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,321,323 2,267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914	PY2022								
PY2024 260,581 20,878,142 7,319,546 8,134,775 4,898,558 41,491,601 2,511,128 44,002,729 PY2025 242,867 21,008,058 7,382,548 8,080,974 49,908,508 44,622,955 2,952,241 44,118,195 PY2027 226,965 21,467,738 7,503,053 7,989,121 4,959,688 42,146,566 2,470,607 44,617,173 PY2028 218,461 21,828,142 7,607,716 7,998,767 5,010,890 42,623,977 2,463,942 45,506,7919 PY2030 198,661 22,170,600 7,736,384 7,885,606 5,070,235 43,061,486 2,445,121 45,506,607 PY26/PY21 -6.4% 2.4% 3.2% 0.3% 2.6% 2.1% 3.9% 2.2% PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,221,323 2,267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211									
PY2025 242,867 21,008,058 7,382,548 8,080,974 4,908,508 41,622,955 2,495,241 44,118,195 PY2026 233,703 21,239,154 7,434,655 8,034,205 4,934,251 41,884,947 2,485,684 44,367,632 PY2028 218,461 21,828,142 7,607,716 7,958,767 5,010,890 42,623,977 2,463,942 45,087,919 PY2029 208,599 21,934,358 7,656,121 7,914,767 5,031,032 42,744,877 2,451,954 45,086,007 PY2030 198,661 22,170,600 7,736,384 7,885,606 5,070,235 43,061,486 2,445,121 45,066,007 PY26/PY21 -6.4% 2.4% 3.2% 0.3% 2.6% 2.1% 3.9% 2.2% EXP2011 Gol,399 IA,783,757 5,621,832 7,680,544 2,569,158 35,321,323 2,267,651 37,588,973 PY2012 Gol,399 IA,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211 2,203,000 2,203,000 2,203,000 2,203,000 2,203,000	PY2024								
PY2026 233,703 21,239,154 7,443,635 8,034,205 4,934,251 41,884,947 2,482,684 44,367,632 PY2027 226,965 21,467,738 7,503,053 7,989,121 4,959,688 42,146,566 2,470,607 44,617,173 PY2029 208,599 21,934,358 7,656,121 7,914,767 5,031,032 42,744,877 2,453,925 45,196,830 PY2030 198,661 22,170,600 7,736,384 7,885,606 5,070,235 43,061,486 2,445,121 45,506,607 PY26/PY21 -6.4% 2.4% 3.2% 0.3% 2.6% 2.1% 3.9% 2.2% RNH RH CI_Sales FT1 FT2 Subtotal Other Total PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,321,323 2,267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211									
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PY2030 198,661 22,170,600 7,736,384 7,885,606 5,070,235 43,061,486 2,445,121 45,506,607 PY26/PY21 -6.4% 2.4% 3.2% 0.3% 2.6% 2.1% 3.9% 2.2% 2020 National Grid RI Volume Forecast (Dth) Planning Year (Nov-Oct) FRI FFI FFI FFI FFI FFI FFI Subtotal Other Total PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,321,323 2,267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211 PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,974,752 2,014,144 37,988,895 PY2014 944,174 19,573,872 7,599,237 8,563,673 3,568,382 40,293,338 1,793,702 42,023,040 PY2016 551,336		,					, ,		
2020 National Grid RI Volume Forecast (Dth) Planning Year (Nov-Oct) RNH RH CI_Sales FT1 FT2 Subtotal Other Total PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,321,323 2,267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211 PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,974,752 2,014,144 37,988,895 PY2014 944,174 19,573,872 7,599,237 8,563,673 3,548,382 40,229,338 1,793,702 42,023,040 PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,930 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43),071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,660 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,339,906 7,686,813 8,908,249 4,589,397 42,766,22 1,936,813 44,713,035 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,573,365 42,594,397 1,904,790 44,499,187 PY2026 201,699 21,431,465 7,791,607 8,647,306 4,584,956 42,656,633 1,884,881 44,541,514 PY2027 176,056 21,553,988 7,849,419 8,550,507 4,596,793 42,726,763 1,861,753 44,992,409 PY2029 123,602 21,862,099 8,022,933 8,458,272 4,660,570 43,127,475 1,851,302 44,978,778 PY2030 98,317 22,039,250 8,113,332 8,430,431 4,667,161 43,378,491 1,847,671 45,226,169									
Planning Year (Nov-Oct) RNH RH Cl_Sales FT1 FT2 Subtotal Other Total PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,321,323 2,267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211 PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,974,752 2,014,144 37,988,895 PY2014 944,174 19,573,872 7,599,237 8,563,673 3,548,382 40,229,338 1,793,702 42,023,040 PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,930 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,369 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2012 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,060 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,378 PY2024 251,856 21,339,906 7,686,813 8,908,249 4,589,397 42,776,222 1,936,813 44,713,035 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,573,365 42,594,397 1,904,790 44,499,187 PY2026 201,699 21,431,465 7,791,207 8,647,306 4,584,956 42,656,633 1,884,881 44,541,514 PY2027 176,056 21,553,988 7,849,419 8,550,507 4,596,793 42,726,763 1,866,108 44,592,871 PY2028 150,402 21,841,445 7,744,627 8,517,749 4,646,435 43,130,657 1,861,753 44,998,778 PY2030 18,317 22,039,250 8,113,332 8,430,431 4,697,161 43,378,491 1,847,671 45,526,169	PY26/PY21	-6.4%	2.4%	3.2%	0.3%	2.6%	2.1%	3.9%	2.2%
PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,321,323 2,267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211 PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,974,752 2,014,144 37,988,895 PY2014 944,174 19,573,872 7,599,237 8,563,673 3,548,382 40,229,338 1,793,702 42,023,040 PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,330 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 4,747,475 1,880,060 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,339,906 7,686,813 8,908,249 4,589,397 42,776,222 1,936,813 44,713,035 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,573,365 42,594,397 1,904,790 44,499,187 PY2026 201,699 21,431,465 7,791,207 8,647,306 4,584,956 42,666,533 1,884,881 44,541,514 PY2027 176,056 21,553,988 7,849,419 8,550,507 4,596,793 42,726,763 1,866,108 44,592,871 PY2028 150,402 21,841,445 7,794,627 8,517,749 4,664,35 43,130,657 1,861,753 44,992,409 PY2029 123,602 21,862,099 8,022,933 8,458,272 4,660,570 43,127,475 1,851,302 44,978,778 PY2030 98,317 22,039,250 8,113,332 8,430,431 4,697,161 43,378,491 1,847,671 45,226,162			e Forecast (Dth)						
PY2011 606,350 17,738,289 6,726,982 7,680,544 2,569,158 35,321,323 2,267,651 37,588,973 PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211 PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,974,752 2,014,144 37,988,895 PY2014 944,174 19,573,872 7,599,237 8,563,673 3,548,382 40,229,338 1,793,702 42,023,040 PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,930 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,55 8 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,060 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,339,906 7,686,813 8,908,249 4,589,397 42,776,222 1,936,813 44,713,035 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,573,365 42,594,397 1,904,790 44,499,187 PY2026 201,699 21,431,465 7,791,207 8,647,306 4,584,956 42,656,633 1,884,881 44,541,514 PY2027 176,056 21,553,988 7,849,419 8,550,507 4,596,793 42,726,763 1,866,108 44,592,871 PY2029 123,602 21,861,099 8,022,993 8,458,272 4,660,570 43,127,475 1,851,302 44,992,409 PY2029 123,602 21,862,099 8,022,993 8,458,272 4,660,570 43,127,475 1,851,302 44,992,409 PY2030 98,317 22,039,250 8,113,332 8,430,431 4,697,161 43,378,491 1,847,671 45,226,162	Planning Year	(Nov-Oct)							
PY2012 601,399 14,783,757 5,621,832 7,610,425 2,333,884 30,951,297 2,195,914 33,147,211 PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,974,752 2,014,144 37,988,895 PY2014 944,174 19,573,872 7,599,237 8,563,673 3,548,382 40,229,338 1,793,702 42,023,040 PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,930 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633		RNH	RH	CI_Sales	FT1	FT2	Subtotal	Other	Total
PY2013 746,890 17,315,788 6,583,721 8,278,483 3,049,869 35,974,752 2,014,144 37,988,895 PY2014 944,174 19,573,872 7,599,237 8,563,673 3,548,382 40,229,338 1,793,702 42,023,040 PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,930 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964	PY2011	606,350	17,738,289	6,726,982	7,680,544	2,569,158	35,321,323	2,267,651	37,588,973
PY2014 944,174 19,573,872 7,599,237 8,563,673 3,548,382 40,229,338 1,793,702 42,023,040 PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,930 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,664	PY2012	601,399	14,783,757	5,621,832	7,610,425	2,333,884	30,951,297	2,195,914	33,147,211
PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,930 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,26,323 4,388,407 40,747,475 1,880,060	PY2013	746,890	17,315,788	6,583,721	8,278,483	3,049,869	35,974,752	2,014,144	37,988,895
PY2015 736,952 20,389,772 7,870,336 9,416,525 3,680,836 42,094,420 1,828,764 43,923,185 PY2016 551,336 16,675,372 5,959,428 8,656,943 3,569,930 35,413,008 1,865,144 37,278,152 PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,606	PY2014	944,174	19,573,872	7,599,237	8,563,673	3,548,382	40,229,338	1,793,702	42,023,040
PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,060 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,339,906 7,686,813 8,908,249 4,589,397 42,776,222 1,936,813	PY2015	736,952	20,389,772	7,870,336	9,416,525	3,680,836	42,094,420	1,828,764	43,923,185
PY2017 395,749 18,594,264 6,348,282 8,698,747 3,950,370 37,987,412 1,860,594 39,848,006 PY2018 375,500 19,943,386 7,021,056 9,022,578 4,205,501 40,568,021 1,938,339 42,506,360 PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,060 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,339,906 7,686,813 8,908,249 4,589,397 42,776,222 1,936,813	PY2016	551,336	16,675,372	5,959,428	8,656,943	3,569,930	35,413,008	1,865,144	37,278,152
PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,060 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,333,493 7,731,019 8,749,950 4,573,365 42,594,397 1,904,790 44,991,187 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,584,956 42,594,397 1,904,790 44,991,187 PY2026 201,699 21,431,465 7,791,207 8,647,306 4,584,956 42,565,633 1,884,881	PY2017	395,749	18,594,264	6,348,282	8,698,747	3,950,370	37,987,412	1,860,594	39,848,006
PY2019 397,642 20,381,686 7,030,001 8,770,816 4,479,693 41,059,838 2,012,039 43,071,878 PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,060 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,333,493 7,731,019 8,749,950 4,589,397 42,776,222 1,936,813 44,713,035 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,584,956 42,594,397 1,904,790 44,991,87 PY2026 201,699 21,431,465 7,791,207 8,647,306 4,584,956 42,594,397 1,904,790	PY2018	375,500	19,943,386	7,021,056	9,022,578	4,205,501	40,568,021	1,938,339	42,506,360
PY2020 323,837 19,039,603 6,639,392 8,251,676 4,300,551 38,555,058 1,890,633 40,445,691 PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,060 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,333,493 7,686,813 8,908,249 4,589,397 42,776,222 1,936,813 44,713,035 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,573,365 42,594,397 1,904,790 44,991,187 PY2026 201,699 21,431,465 7,791,207 8,647,306 4,584,956 42,656,633 1,884,881 44,591,514 PY2027 176,056 21,553,988 7,849,419 8,550,507 4,596,793 42,726,763 1,866,108	PY2019								
PY2021 327,328 19,842,428 7,014,708 8,051,014 4,235,312 39,470,789 1,799,964 41,270,753 PY2022 301,598 20,377,128 7,254,018 8,426,323 4,388,407 40,747,475 1,880,060 42,627,535 PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,339,906 7,686,813 8,908,249 4,589,397 42,776,222 1,936,813 44,713,035 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,573,365 42,594,397 1,904,790 44,499,187 PY2026 201,699 21,431,465 7,791,207 8,647,306 4,584,956 42,656,633 1,884,881 44,541,514 PY2027 176,056 21,553,988 7,849,419 8,550,507 4,596,793 42,726,763 1,866,108 44,592,871 PY2028 150,402 21,841,445 7,974,627 8,517,749 4,646,435 43,130,657 1,861,753									
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PY2023 274,203 20,948,766 7,472,223 8,866,659 4,529,798 42,091,649 1,941,674 44,033,323 PY2024 251,856 21,339,906 7,686,813 8,908,249 4,589,397 42,776,222 1,936,813 44,713,035 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,573,365 42,594,397 1,904,790 44,499,187 PY2026 201,699 21,431,465 7,791,207 8,647,306 4,584,956 42,656,633 1,884,881 44,541,514 PY2027 176,056 21,553,988 7,849,419 8,550,507 4,596,793 42,726,763 1,866,108 44,592,871 PY2028 150,402 21,841,445 7,974,627 8,517,749 4,646,435 43,130,657 1,861,753 44,992,409 PY2029 123,602 21,862,099 8,022,933 8,458,272 4,660,570 43,127,475 1,851,302 44,978,778 PY2030 98,317 22,039,250 8,113,332 8,430,431 4,697,161 43,378,491 1,847,671									
PY2024 251,856 21,339,906 7,686,813 8,908,249 4,589,397 42,776,222 1,936,813 44,713,035 PY2025 226,569 21,313,493 7,731,019 8,749,950 4,573,365 42,594,397 1,904,790 44,499,187 PY2026 201,699 21,431,465 7,791,207 8,647,306 4,584,956 42,656,633 1,884,881 44,541,514 PY2027 176,056 21,553,988 7,849,419 8,550,507 4,596,793 42,726,763 1,866,108 44,592,871 PY2028 150,402 21,841,445 7,974,627 8,517,749 4,646,435 43,130,657 1,861,753 44,992,409 PY2029 123,602 21,862,099 8,022,933 8,458,272 4,660,570 43,127,475 1,851,302 44,978,778 PY2030 98,317 22,039,250 8,113,332 8,430,431 4,697,161 43,378,491 1,847,671 45,226,162									
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PY2027 176,056 21,553,988 7,849,419 8,550,507 4,596,793 42,726,763 1,866,108 44,592,871 PY2028 150,402 21,841,445 7,974,627 8,517,749 4,646,435 43,130,657 1,861,753 44,992,409 PY2029 123,602 21,862,099 8,022,933 8,458,272 4,660,570 43,127,475 1,851,302 44,978,778 PY2030 98,317 22,039,250 8,113,332 8,430,431 4,697,161 43,378,491 1,847,671 45,226,162									
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PY2030 98,317 22,039,250 8,113,332 8,430,431 4,697,161 43,378,491 1,847,671 45,226,162									
PY26/PY21 -9.2% 1.6% 2.1% 1.4% 1.6% 1.6% 0.9% 1.5%									
	PY26/PY21	-9.2%	1.6%	2.1%	1.4%	1.6%	1.6%	0.9%	1.5%

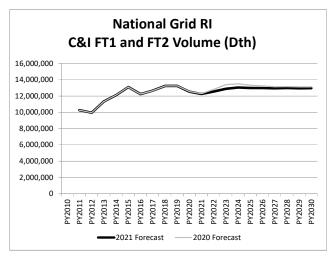
The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GLF-1 Page 2 of 2

Chart III-B-1 Page 2 of 2







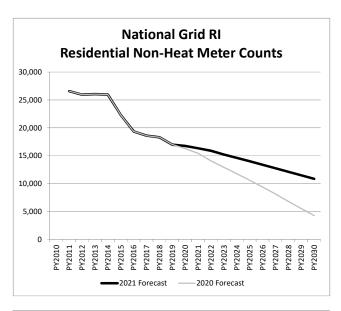


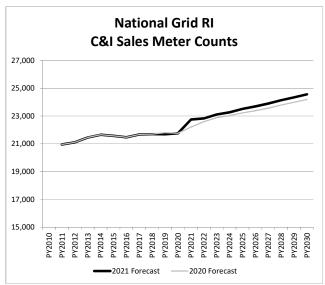
Attachment GLF-2 National Grid RI Retail Meter Count Forecast 2021 vs. 2020 Forecast

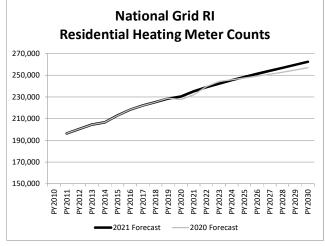
2021 National	Grid RI Meter	r Count Forecas	st					Chart III-B-2
End of Plannin	ng Year (Nov-C	Oct)						Page 1 of 2
	RNH	RH	CI_Sales	FT1	FT2	Subtotal	Other	Total
PY2011	26,570	196,414	20,950	747	1,244	245,925	54	245,979
PY2012	25,955	200,463	21,105	734	1,399	249,656	65	249,721
PY2013	26,042	204,521	21,451	721	1,499	254,234	159	254,393
PY2014	25,958	206,568	21,651	699	1,486	256,362	178	256,540
PY2015	22,313	212,900	21,567	684	1,552	259,016	326	259,342
PY2016	19,351	218,314	21,467	674	1,680	261,486	488	261,974
PY2017	18,591	222,124	21,670	636	1,758	264,779	577	265,356
PY2018	18,299	225,211	21,693	624	1,776	267,603	637	268,240
PY2019	16,978	228,468	21,685	609	1,865	269,605	812	270,417
PY2020	16,750	230,384	21,757	595	1,823	271,309	870	272,179
PY2021	16,329	235,062	22,745	614	1,902	276,652	876	277,528
PY2022	15,883	238,872	22,826	619	1,911	280,111	880	280,991
PY2023	15,215	242,148	23,110	628	1,935	283,036	891	283,927
PY2024	14,617	245,378	23,268	634	1,947	285,844	896	286,740
PY2025	13,996	248,385	23,513	640	1,967	288,501	905	289,406
PY2026	13,372	251,226	23,689	645	1,981	290,913	912	291,825
PY2027	12,738	254,023	23,900	650	1,998	293,309	920	294,229
PY2028	12,105	256,778	24,132	655	2,017	295,687	928	296,615
PY2029	11,476	259,550	24,342	660	2,034	298,062	936	298,998
PY2030	10,852	262,321	24,556	664	2,050	300,443	944	301,387
PY26/PY21	-3.9%	1.3%	0.8%	1.0%	0.8%	1.0%	0.8%	1.0%
2020 National End of Plannin		r Count Forecas	st					
End of Fidinin			CL C I	574	572	6 1	0.1	
	RNH	RH	CI_Sales	FT1	FT2	Subtotal	Other	Total
PY2011	26,570	196,414	20,950	747	1,244	245,925	54	245,979
PY2012	25,955	200,463	21,105	734	1,399	249,656	65	249,721
PY2013	26,042	204,521	21,451	721	1,499	254,234	159	254,393
PY2014	25,958	206,568	21,651	699	1,486	256,362	178	256,540
PY2015	22,313	212,900	21,567	684	1,552	259,016	326	259,342
PY2016	19,351	218,313	21,467	674	1,680	261,485	488	261,973
PY2017	18,590	222,122	21,672	636	1,758	264,778	577	265,355
PY2018	18,304	225,228	21,702	624	1,776	267,634	637	268,271
PY2019	17,012	228,896	21,804	609	1,888	270,209	816	271,025
PY2020	16,272	227,624	21,758	588	1,861	268,103	845	268,948
PY2021	15,436	231,871	22,202	603	1,899	272,011	862	272,873
PY2022	14,078	239,512	22,592	616	1,936	278,734	877	279,611
PY2023	12,912	244,122	22,881	629	1,964	282,508	887	283,395
PY2024	11,787	245,713	23,024	636	1,976	283,136	893	284,029
PY2025	10,613	247,442	23,223	641	1,991	283,910	900	284,810
PY2026	9,396	249,132	23,379	643	2,005	284,555	906	285,461
PY2027	8,125	250,853	23,565	649	2,021	285,213	914	286,127
PY2028	6,820	252,737	23,786	655	2,039	286,037	922	286,959
PY2029	5,536	254,751	23,984	661	2,058	286,990	929	287,919
PY2030	4,257	256,858	24,192	669	2,076	288,052	937	288,989
PY26/PY21	-9.5%	1.4%	1.0%	1.3%	1.1%	0.9%	1.0%	0.9%

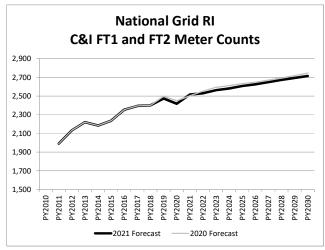
The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GLF-2 Page 2 of 2

Chart III-B-2 Page 2 of 2









Attachment GLF-3 National Grid RI Economic Forecast 20210 vs. 2020 Forecast

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GLF-3 Page 1 of 3

	NGPRCR	OILPRCR No 2	GORR	GDP	НН	EMPL
		Distillate				
	Natural Gas	Residential	Residential			Non-Farm
	Residential	Price by All	Gas-to-Oil	GDP (2009	Households	Employment
Year	Price	Sellers	Price Ratio	Millions of \$)	(thousands)	(thousands)
1990	13.50	14.60	0.92	35616	377	454
1991	13.62	13.32	1.02	34372	381	424
1992	13.33	11.69	1.14	35063	384	424
1993	13.77	11.20	1.23	35716	387	430
1994	15.06	10.61	1.42	35826	391	434
1995	12.79	10.30	1.24	36505	395	439
1996	13.18	11.25	1.17	36926	401	441
1997	14.58	11.19	1.30	38989	406	450
1998	14.24	9.70	1.47	40360	411	458
1999	13.96	9.05	1.54	41651	411	466
2000	13.82	12.91	1.07	45250	410	480
2001	16.81	12.61	1.33	45903	407	481
2002	16.03	11.17	1.43	47581	410	482
2003	15.68	13.33	1.18	49344	411	487
2004	17.18	14.12	1.22	51552	412	491
2005	18.56	18.01	1.03	52284	411	494
2006	21.29	21.17	1.01	53492	411	496
2007	19.70	22.08	0.89	51999	412	495
2008	19.25	27.64	0.70	50413	414	484
2009	19.45	19.50	1.00	50216	414	463
2010	20.06	25.04	0.80	51363	415	462
2011	17.92	31.02	0.58	51263	417	464
2012	16.28	33.03	0.49	51607	421	469
2013	16.62	32.44	0.51	51679	425	475
2014	16.57	31.26	0.53	52004	428	482
2015	15.61	21.83	0.72	52956	428	489
2016	14.75	17.33	0.85	53031	428	494
2017	14.70	19.98	0.74	52728	426	497
2018	16.23	22.12	0.73	53133	426	500
2019	15.53	21.22	0.73	53671	429	504
2020	14.66	16.75	0.88	50796	427	465
2021	13.79	19.99	0.69	53216	424	476
2022	13.28	20.19	0.66	56770	435	490
2023	12.86	22.03	0.58	58328	438	498
2024	12.73	23.01	0.55	59566	440	502
2025	12.91	23.87	0.54	60747	442	504
2026	13.21	24.77	0.53	61800	443	506
2027	13.32	25.17	0.53	62899	445	507
2028	13.45	25.76	0.52	63982	446	509
2029	13.56	26.11	0.52	65056	447	510
2030	13.65	26.63	0.51	66078	448	512

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GLF-3 Page 2 of 3

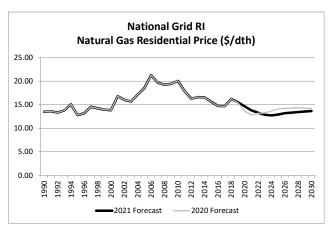
2020 National Grid RI Economic Data (Prices in 2019 \$/Dth)

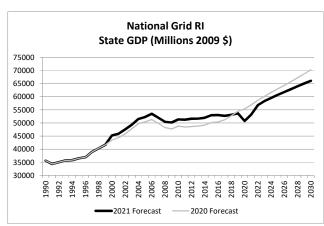
Chart III-B-3 Page 2 of 3

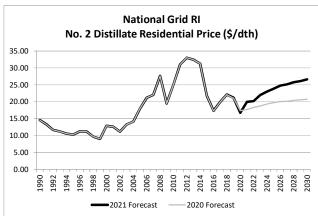
						Non-Farm
	NGPRCR	OILPRCR	GORR	GDP	Households	Employment
		No 2				
		Distillate				
	Natural Gas	Residential				
	Residential	Price by All		(2005 Millions		
Year	Price	Sellers		of \$)	(thousands)	(thousands)
1990	13.50	14.60	0.92	35616	377	454
1991	13.62	13.32	1.02	34372	381	424
1992	13.33	11.69	1.14	35063	384	424
1993	13.77	11.20	1.23	35716	387	430
1994	15.06	10.61	1.42	35826	391	434
1995	12.79	10.30	1.24	36505	395	439
1996	13.18	11.25	1.17	36926	401	441
1997	14.58	11.19	1.30	38989	406	450
1998	14.24	9.70	1.47	40360	411	458
1999	13.96	9.05	1.54	41651	411	466
2000	13.82	12.91	1.07	43474	410	477
2001	16.81	12.61	1.33	44386	407	479
2002	16.03	11.17	1.43	45877	410	479
2003	15.68	13.33	1.18	47804	411	484
2004	17.18	14.12	1.22	49762	412	488
2005	18.56	18.01	1.03	50378	411	491
2006	21.29	21.17	1.01	51304	411	493
2007	19.70	22.08	0.89	49843	411	492
2008	19.25	27.64	0.70	48263	414	481
2009	19.45	19.50	1.00	47708	414	459
2010	20.06	25.04	0.80	48801	414	458
2011	17.92	31.03	0.58	48425	417	461
2012	16.28	33.04	0.49	48630	421	465
2013	16.62	32.45	0.51	48815	425	472
2014	16.57	31.26	0.53	49217	428	479
2015	15.61	21.83	0.72	50174	428	485
2016	14.74	17.32	0.85	50406	427	490
2017	14.69	19.96	0.74	51192	426	494
2018	16.23	22.12	0.73	52719	422 424	501
2019 2020	15.42	21.07	0.73	54456		507
	13.64	17.38	0.78	55401	426	510
2021	12.82	17.73	0.72 0.72	56891	428 429	509 513
2022 2023	13.19 13.26	18.32 18.73	0.72 0.71	58647	429	512 515
2023			0.71	60158	431	
2024	13.68	19.34	0.71	61647	434	518
2025	14.13	19.75		63013		520
2026	14.19 14.30	20.08 20.14	0.71 0.71	64358 65762	435 436	522 524
2028 2029	14.35 14.27	20.43 20.62	0.70 0.69	67267 68769	437 438	526 528
2030	14.19	20.73	0.68	70270	438	530
PY26/PY21	2.04%	2.52%	-0.46%	2.50%	0.35%	0.49%
. 120/1121	2.0-7.0	2.32/0	0.40/0	2.30/0	0.3370	0.7370

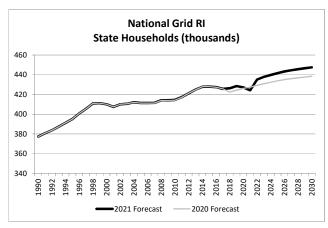
The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GLF-3 Page 3 of 3

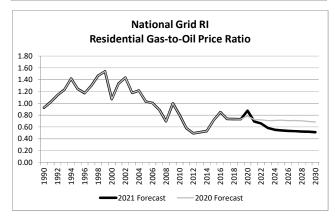
Chart III-B-3 Page 3 of 3

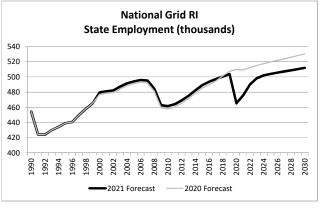








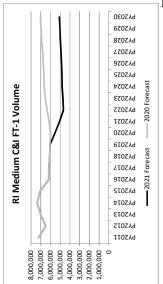


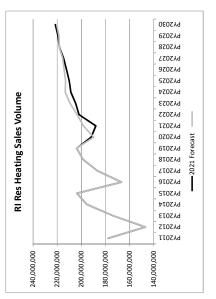


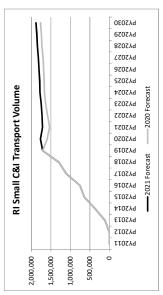
Attachment GLF-4 National Grid RI Retail Volume Forecast by Rate Class 2021 vs. 2020 Forecast

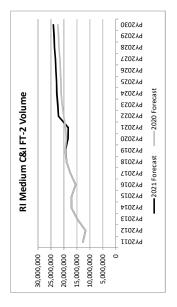
The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GLF-4

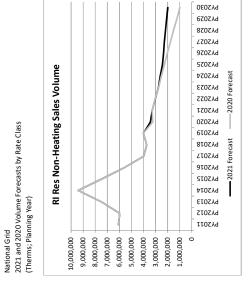
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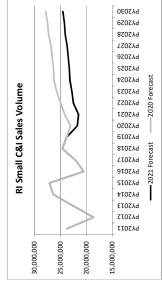


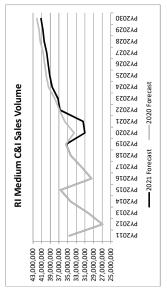




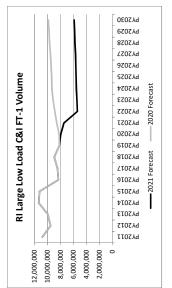


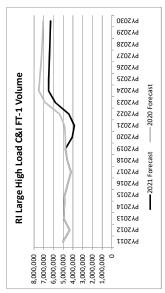


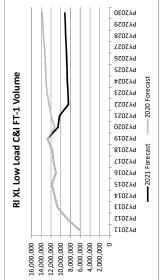


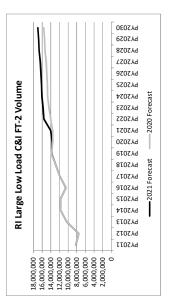


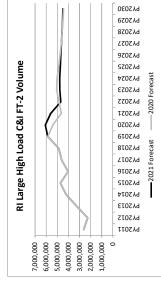
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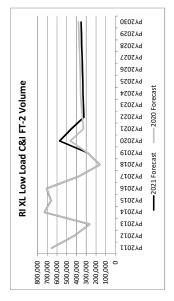


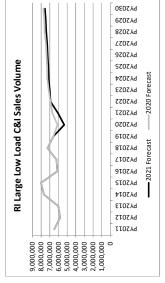




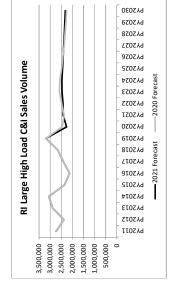


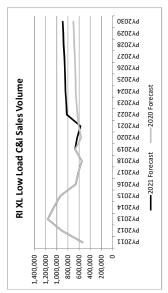


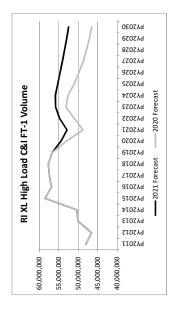


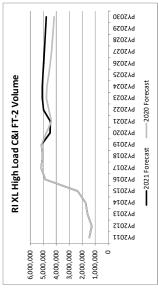


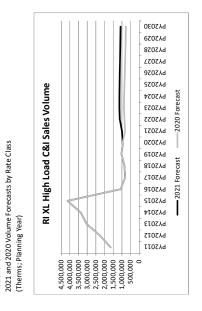
2021 and 2020 Volume Forecasts by Rate Class (Therms; Planning Year)

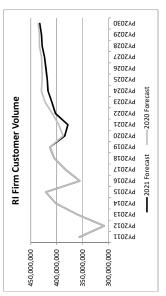








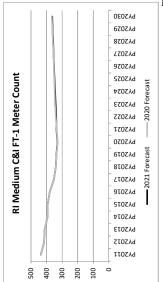


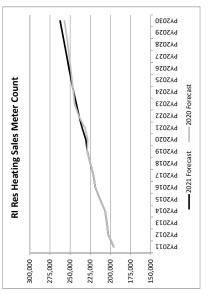


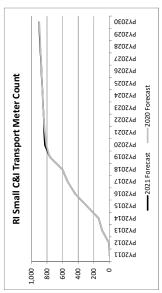
Attachment GLF-5 National Grid RI Retail Meter Count Forecast by Rate Class 2021 vs. 2020 Forecast

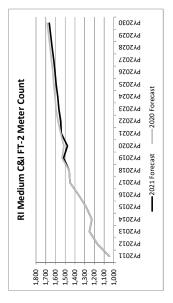
The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 5180 Attachment GLF-5

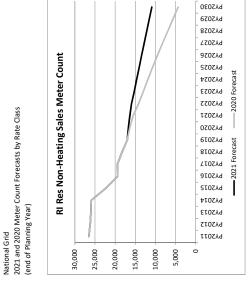
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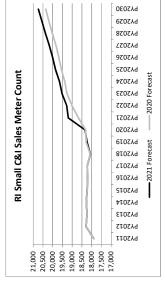


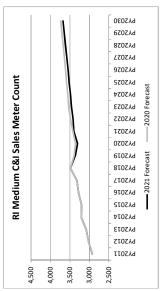






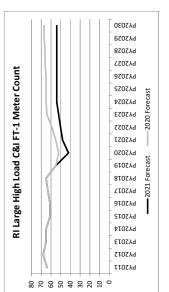


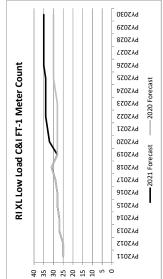


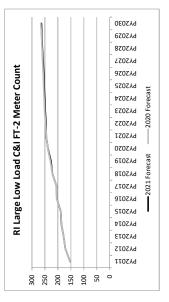


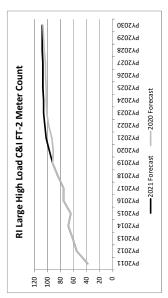
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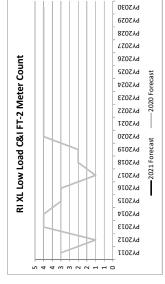
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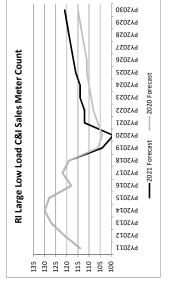












2021 and 2020 Meter Count Forecasts by Rate Class

National Grid

(end of Planning Year)

