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November 17, 2023

VIA ELECTRONIC MAIL

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

**RE: Docket No. 23-46-EE – The Narragansett Electric Company d/b/a
Rhode Island Energy’s 2024-2026 Gas Demand Response Pilot SRP Investment
Proposal**

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”), enclosed please find Rhode Island Energy’s 2024-2026 Gas Demand Response Pilot SRP Investment Proposal containing the joint pre-filed testimony of Dr. Lee Gresham and Stephanie A. Briggs. This filing is being made in accordance with Chapter 5 of the Least Cost Procurement Standards.

Thank you for your attention to this filing. If you have any questions, please contact me at 401-784-4263.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andrew S. Marcaccio".

Andrew S. Marcaccio

Enclosures

cc: Christy Hetherington, Esq.
John Bell, Division

**THE NARRAGANSETT ELECTRIC COMPANY
d/b/a RHODE ISLAND ENERGY
RIPUC DOCKET NO. 23-46-EE
IN RE: 2024-2026 GAS DEMAND RESPONSE PILOT SRP INVESTMENT PROPOSAL
JOINT PRE-FILED DIRECT TESTIMONY
WITNESSES: GRESHAM AND BRIGGS**

JOINT PRE-FILED DIRECT TESTIMONY

OF

LEE GRESHAM

AND

STEPHANIE A. BRIGGS

November 17, 2023

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SCHEDULES

SCHEDULE A: *Gas Demand Response Pilot SRP Investment Proposal*

1 **I. Introduction**

2 **Dr. Gresham**

3 **Q. Dr. Gresham, please state your name and business address.**

4 A. My name is Lee Gresham. My business address is 280 Melrose Street, Providence, Rhode
5 Island 02907.

6
7 **Q. By whom are you employed and in what position?**

8 A. I am employed by The Narragansett Electric Company d/b/a Rhode Island Energy
9 (“Rhode Island Energy” or the “Company”) as Manager of Electric Regulatory Strategy
10 within the Gas Operations team. In this role, I am responsible for general regulatory
11 matters, policy development, and filings, including providing strategic support to inform
12 business decisions that advance safe, reliable, affordable natural gas distribution.

13
14 **Q. Please describe your educational background and professional experience.**

15 A. I graduated from the College of the Holy Cross with a Bachelor of Arts degree in
16 Psychology and concentration in Pre-Medicine in 1999. In 2007, I graduated from
17 Vermont Law School with a Juris Doctorate degree. In 2010, I received a Doctor of
18 Philosophy degree in Engineering and Public Policy from Carnegie Mellon University.
19 From 2010 to 2011, I was a Post-Doctoral Fellow with the Carbon Capture and
20 Sequestration Regulatory Institute. I worked as a Senior Consultant at SAIC’s Energy,
21 Environment, and Infrastructure division from 2011 to 2012. From 2012 to 2018 I held

1 roles of increasing responsibility as an Associate with The Brattle Group in the firm’s
2 utility practice. In 2019 I joined National Grid USA Service Company, Inc. (“National
3 Grid Service Company”) as a Lead Analyst for the Utility of the Future team within the
4 Regulatory and Customer Strategy departments where I worked closely with the
5 Massachusetts Jurisdictional President and staff, leading efforts to reduce methane and
6 carbon emissions, developing strategies to support National Grid’s objectives regarding
7 decarbonization-related investments in the gas system, and providing testimony regarding
8 capital investments to enable National Grid’s operating companies, including Boston Gas
9 Company d/b/a National Grid (“Boston Gas”) and the former Colonial Gas d/b/a National
10 Grid (“former Colonial Gas”), to decarbonize the gas network.

11
12 **Q. Have you previously testified before the Rhode Island Public Utilities Commission**
13 **(“PUC”) or other regulatory bodies?**

14 A. No.

15
16 **Q. What was your role in developing the 2024-2026 Gas Demand Response Pilot**
17 **System Reliability Procurement Investment Plan?**

18 A. I coordinated across relevant Rhode Island Energy teams in customer programs, the gas
19 business, and external affairs, and led the development of the 2024-2026 Gas Demand
20 Response (“DR”) Pilot System Reliability Procurement (“SRP”) Investment Proposal

1 (the “2024-2026 Gas DR Pilot SRP Proposal” or “Gas Demand Response Pilot” or
2 “Proposal”).

3

4 **Q. Are you sponsoring any schedules within this testimony?**

5 A. Yes, I am sponsoring Schedule A: The Company’s 2024-2026 Gas DR Pilot SRP
6 Proposal.

7

8 **Stephanie A. Briggs**

9 **Q. Ms. Briggs, please state your name and business address.**

10 A. My name is Stephanie A. Briggs. My business address is 280 Melrose Street, Providence,
11 Rhode Island 02907.

12

13 **Q. By whom are you employed and in what position?**

14 A. I am employed by PPL Services Corporation (“Service Corporation”) as a Senior
15 Manager Revenue. The Services Corporation provides administrative, management and
16 support services to PPL Corporation (“PPL”) and its subsidiary companies, including the
17 Company. My current duties include responsibility for revenue requirement and rates
18 calculations for the Company.

19

1 **Q. Please describe your educational background and professional experience.**

2 A. In 2000, I received a Bachelor of Arts degree in Accounting from Bryant College. In
3 2004, I was hired by National Grid USA Service Company, Inc. (“National Grid Service
4 Company”) as a Senior Analyst in the Accounting Department. In this position, I was
5 responsible for supporting the books and records of National Grid USA’s (“National
6 Grid”) New York affiliate. In 2009, I was promoted to Senior Analyst in National Grid’s
7 Regulatory Accounting Group. In this capacity, I supported the accounting of regulatory
8 assets and deferrals in accordance with the rate plans and agreements applicable to
9 National Grid’s affiliated distribution operating companies. In 2011, I was promoted to
10 Lead Specialist for Revenue Requirements responsible for supporting New York revenue
11 requirements. In 2017, I was promoted to Director of Revenue Requirements for New
12 York. In July 2020, I became Director of Revenue Requirements for New England. On
13 May 25, 2022, PPL Rhode Island Holdings, LLC, a wholly owned indirect subsidiary of
14 PPL, acquired 100% of the outstanding shares of common stock of the Company from
15 National Grid (the “Acquisition”) at which time I began working in my current position.

16

17 **Q. Have you previously testified before the PUC or other regulatory bodies?**

18 A. Yes. I provided pre-filed direct testimony in numerous dockets including the Company’s
19 2022 Annual Retail Rate Filing, Docket No. 5234, the Company’s 2021 Performance
20 Incentive Mechanism Factor Filing, as part of Docket No. 4770, the Fiscal Year 2023 Gas

21

1 Infrastructure, Safety and Reliability Plan Annual Reconciliation Filing,
2 Docket No. 5098, the Company’s 2023 Distribution Adjustment Charge Filing,
3 Docket No. 23-23-NG, the Company’s Advanced Metering Functionality Business Case,
4 Docket No. 22-49-EL, the Company’s Fiscal Year 2024 Electric Infrastructure, Safety,
5 And Reliability Plan, Docket No. 22-53-EL, Fiscal Year 2024 Gas Infrastructure, Safety,
6 And Reliability Plan, Docket No. 22-54-NG, the Company’s 2023 Electric Revenue
7 Decoupling Mechanism Reconciliation Filing, Docket No. 23-16-EL, and in the
8 Company’s 2023 Residential Assistance Recovery filing, Docket No. 23-17-EL. I also
9 have testified before the Massachusetts Department of Public Utilities and New York
10 Public Service Commission on behalf of the Company’s former affiliates as a revenue
11 requirement witness in various proceedings.

12
13 **Q. What was your role in this filing?**

14 A. I prepared the proposed SRP Factor associated with the Company’s 2024-2026 Gas DR
15 Pilot SRP Proposal.

16
17 **Q. Why is Rhode Island Energy filing this joint pre-filed direct testimony?**

18 A. Rhode Island Energy is filing this direct testimony (1) to comply with Section 5.3 of the
19 Least-Cost Procurement (“LCP”) Standards as adopted in Docket No. 23-07-EE; (2) to
20 describe the existing Gas Demand Response Pilot active under the Company’s Annual
21 Energy Efficiency Plan for 2023 and propose its continuation for 2024 under the 2024-

1 2026 System Reliability Procurement Three-Year Plan (“2024-2026 SRP Three-Year
2 Plan”); (3) identify and explain proposed modifications to the Gas Demand Response
3 Pilot for years 2025 and 2026 of the 2024-2026 SRP Three-Year Plan; and (4) to provide
4 additional context for the PUC, stakeholders, and potential intervenors.

5
6 **Q. How is this testimony organized?**

7 A. This testimony is organized according to the following sections:

- 8 • Section II. Existing Gas Demand Response Pilot
- 9 • Section III. Timing and Relationship to the Annual Gas Infrastructure Safety and
10 Reliability (“ISR”) Plan
- 11 • Section IV. Gas Demand Response Pilot: Objectives, Program Continuation, and
12 Proposed Modifications
- 13 • Section V. Compliance with LCP Standards
- 14 • Section VI. Consistency with the Act on Climate
- 15 • Section VII. Requested Rulings
- 16 • Section VIII. Conclusion
- 17 • Section VIII. Conclusion

18

1 **II. Existing Gas Demand Response Pilot**

2 **Q. Has the Company previously submitted the Gas Demand Response Pilot to the PUC**
3 **for approval?**

4 A. Yes. The Gas Demand Response Pilot was most recently included in the Company’s
5 Annual Energy Efficiency Plan for 2023.

6
7 **Q. Has the PUC previously approved the Gas Demand Response Pilot?**

8 A. Yes. The Gas Demand Response Pilot included in the Company’s Annual Energy
9 Efficiency Plan¹ for 2023 was approved by the PUC through written order issued on
10 October 17, 2023² and is active from November 1, 2023 through December 31, 2023.

11
12 **III. Timing and Relationship to the Annual Gas ISR Plan**

13 **Q. Why is the Company filing the Gas Demand Response SRP Investment Proposal**
14 **before the Gas ISR Plan?**

15 A. Although Section 5.5 of the LCP Standards indicates the PUC “prefers that the [SRP
16 investment] proposals be filed alongside, but separately from, annual Infrastructure,
17 Safety, and Reliability Plans,” which would be mid-December, filing this Proposal in
18 mid-December would likely not provide sufficient time for regulatory review and

¹ Rhode Island Energy’s 2023 Annual Plan may be accessed at:

<https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2022-10/2233-EE-RIE-2023EEPplan%209-30-22.pdf>

² Written Order No. 24845 issued October 17, 2023, effective January 1, 2023;

<https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2023-10/2233-RIE-2023EEP-Ord24845%2010-17-23.pdf>

1 approval prior to the desired start date for the Gas Demand Response Pilot as an SRP
2 investment (and transition from an Energy Efficiency Plan investment), which is
3 January 1, 2024. Therefore, the Company is filing its SRP Investment Proposal for
4 continuation of its Gas Demand Response Pilot in November, with the target of
5 implementing the Gas Demand Response Pilot by January 1, 2024.

6
7 **Q. What are the risks if the Gas Demand Response SRP Investment Proposal is not**
8 **approved by January 1, 2024 or is rejected?**

9 A. If the Company's Proposal is not approved by January 1, 2024 there may be a gap in the
10 program; if the Proposal is rejected, the program will expire. In both cases, the Company
11 will not be able to rely on customers currently participating in the Gas Demand Response
12 Pilot to reduce gas demand during peak events for the purpose of mitigating capacity
13 constraints, nor will incentives be available to those customers who wish to continue their
14 participation in the program.

15
16 **Q. If the PUC is unable to complete its review of the Company's Proposal by January**
17 **1, 2024, what does the Company propose to prevent an interim lapse in the pilot**
18 **program?**

19 A. Rhode Island Energy requests the PUC grant approval to continue the Gas Demand
20 Response Pilot customer incentives until the PUC is able to complete its review and a
21 decision is reached. Following that decision, rates would be set accordingly.

1 **IV. Gas Demand Response Pilot: Objectives, Program Continuation, and Proposed**
2 **Modifications**

3 **Q. What is the Company’s objective(s) in proposing to continue the Gas Demand**
4 **Response Pilot?**

5 A. Each year, the Company must ensure it maintains sufficient gas supply in its resource
6 portfolio to continuously supply the amount of gas required by customers (called
7 ‘demand’ or ‘load’) throughout the year under all reasonable weather conditions.
8 Ensuring there is adequate supply to meet customer requirements is particularly
9 important on the coldest days during the winter period when customer demand is at its
10 highest (called ‘peak demand’), as the inability to provide gas to customers for heating
11 could create unsafe environments. During the coldest days of the year, forecasted
12 peak demand may exceed pipeline capacity, resulting in capacity-constrained areas on the
13 system. Reducing peak demand through demand response has the potential to mitigate
14 capacity constraints on the system.

15

16 Rhode Island Energy proposes to continue to offer the Gas Demand Pilot to test (1) the
17 level of customer interest and scalability of the program, and (2) the gas system benefits
18 of incentivizing the reduction or curtailment of gas usage during system peak demand
19 periods (from November 1st to March 31st) when requested, provided doing so does not
20 compromise safety. Learnings for the pilot program will focus on how to increase

1 program enrollment and participation during peak demand events, as well as scalability
2 of the program.

3
4 **Q. Why is the Company proposing to continue to offer gas demand response as a pilot
5 program?**

6 A. The Company is trying to assess the scalability of the program and the degree to which it
7 might offset a utility reliability procurement. However, gas demand response has yet to
8 provide a reliable level of reduction in gas usage during system peak demand periods due
9 to lack of performance during called events and low customer interest, so enhancements
10 may be needed to create a more effective program. Continuing to test the efficacy of gas
11 demand response will allow Rhode Island Energy to understand gas demand response's
12 impact on gas system needs and optimization, customer interest, effectiveness of
13 incentive levels, and, if potentially efficacious, position the Company to test program
14 design modifications that facilitate the scalability of participation and rely on anticipated
15 impacts. Specifically, the goal of the Gas Demand Response Pilot is to leverage following
16 research questions in ascertaining how to increase program enrollment and participation
17 during peak demand events:

- 18 • Are large commercial and industrial customers interested in participating in an
19 incentivized gas demand response program?
- 20
- 21 • Are residential customers with eligible smart thermostats interested in
22 participating in gas demand response?
23

- 1 • What incentive structure and level are sufficient to stimulate program enrollment
2 and participation?
3
- 4 • How do we increase enrollment – within and possibly across customer classes –
5 and scale the program? Can program enrollment be increased through targeted
6 marketing and/or the use of aggregators?
7
- 8 • What are distribution system benefits of gas demand response? From large
9 commercial and industrial customer participation? For residential customer
10 participation, if the pilot is expanded?
11
- 12 • Is there a minimum threshold for participation to realize system benefits? Does
13 this differ across customer classes?
14

15 **Q. Please describe the existing Gas Demand Response Pilot the Company is proposing**
16 **to continue?**

17 A. The Company will continue to target 40-50 Dth of hourly peak reduction during the
18 winter months (November 1st through March 31st) of 2024-2026 through two individual
19 large commercial and industrial customer DR offerings. During the winter of 2018/19,
20 the Company launched the Peak Period Gas Demand Response (“PPDR”) pilot offering,
21 which incentivizes customers to shift their usage outside of the peak-period of the gas
22 system (6AM-9AM from November 1st to March 31st). This pilot targets large
23 commercial and industrial customers who have intra-day flexibility of their natural gas
24 usage. Customers participating in this pilot are able to achieve demand reduction via non-
25 gas backup heating or thermostat setback. In 2019/20, the Company added the Extended
26 Demand Response (“EDR”) offering, which targets large commercial and industrial
27 customers that can achieve 24-hour gas reductions (10AM on day 1 until 10AM on day 2,
28 November 1st through March 31st), primarily with non-gas back-up heating. Going into

1 the 2024-2026 winter seasons, the Company is proposing to maintain both the PPDR and
2 EDR offerings.

3
4 Customer compensation for participation in the Gas Demand Response Pilot offering will
5 continue to be based on a combination of ‘reservation’ and ‘energy’ payments that differ
6 for the PPDR and EDR offerings. Each of these rates will be standard offers to all
7 customers, though customer earning opportunity will vary based on the volume of peak
8 hour Dth reduction that each customer can commit to and deliver. The Company will
9 utilize a rolling performance rating that measures customer reliability and limits
10 payments to nonperforming resources.

11
12 **Q. How is the Company proposing to modify the existing Gas Demand Response Pilot?**

13 A. In 2024, Rhode Island Energy will initiate testing the effectiveness of leveraging target
14 marketing and aggregators to increase enrollment and participation of large commercial
15 and industrial customers. Depending on the outcome from the use of target marketing and
16 aggregators, in 2025 the Company may adjust the incentive for large commercial and
17 industrial customers to test the impact on enrollment and participation.

18
19 Also in 2025, Rhode Island Energy anticipates testing residential and small business
20 customers’ interest in a gas demand response offering and the associated benefits of
21 participation in such a program expansion on the gas system during peak events. A

1 possible expansion of the Gas Demand Response Pilot to residential and small-business
2 customers would target eligible smart thermostats who are already enrolled in the
3 Company’s ConnectedSolutions residential smart thermostat electric demand response
4 program.³ If the Gas DR Pilot is expanded, during peak periods smart thermostats would
5 automatically decrease target heating levels, thereby reducing gas demand during peak
6 periods.

7
8 Similar to the ConnectedSolutions electric demand response offering, Rhode Island
9 Energy is contemplating a one-time enrollment incentive per enrolled customer followed
10 by an annual participation incentive per device per year, to be rendered at the end of the
11 peak season for all participants with full participation in at least 50% percent of peak
12 events. The actual incentive levels will be developed and proposed as an amendment to
13 this Gas DR Pilot SRP Investment Proposal prior to the 2025 peak heating season
14 (January 1 through March 31), and will be dependent on anticipated enrollment,
15 participation levels, and system benefits.

³ See Rhode Island Energy’s 2023 Annual Energy Efficiency Plan, pp. 29-31. See also <https://www.rienergy.com/RI-Home/ConnectedSolutions/>

1 **Q. What is the annual peak reduction target associated with a continuation of the**
2 **existing Gas Demand Response Pilot? How will it be affected by the proposed**
3 **modifications?**

4 A. The anticipated annual peak reduction target for the existing pilot targeting large
5 commercial and industrial customers is expected to continue to be 2,752 Dth for the
6 2024-2026 period. An increase in participation by large commercial and industrial
7 customers, and/or a successful expansion of the Gas Demand Response Pilot to
8 residential and small business customers, may result in additional incremental savings.
9 Incremental reduction targets will be dependent on enrollment and participation levels.
10 Estimated incremental savings associated with increased participation among large
11 commercial and industrial customers at any juncture during 2024-2026, and/or possible
12 new participation of residential and small business customers in 2025, will be developed
13 and proposed in an amended Gas Demand Response Pilot SRP Investment Proposal.

14

15 **Q. Who will administer the Gas Demand Response Pilot?**

16 A. Because the gas demand response program is in the pilot stage and designed to test the
17 benefits of reducing gas system peak demand, customer adoption of gas demand
18 response, the incentive levels required to drive participation, and Rhode Island Energy's
19 role in influencing market adoption, it is, by nature of its design and goals, natural for the
20 Company to administer the program. Should the Pilot be successful in increasing
21 enrollment and participation – particularly if the program is successfully expanded to

1 include residential and small business customers – to the degree it is no longer practical
2 for Rhode Island Energy to manage administration of the program, the Company may
3 propose to contract with a third-party administrator. Any incremental costs associated
4 with services provided by a third-party administrator will be proposed via an amendment
5 to this Gas Demand Response Pilot SRP Investment Proposal. Following the Gas DR
6 Pilot, Rhode Island Energy will evaluate whether there is value in launching a full-scale
7 demand response program, which may also contemplate the use of a third-party program
8 administrator.

9
10 **V. Compliance with LCP Standards**

11 **Q. Please describe how the 2024-2026 Gas Demand Response Pilot SRP Investment**
12 **Proposal is consistent with the LCP Standards, specifically the requirements that an**
13 **SRP Investment Proposal be cost-effective, prudent, reliable, environmentally**
14 **responsible, lower than the cost of additional energy supply, and lower than the cost**
15 **of the best alternative Utility Reliability Procurement.**

16 **A.** The 2024-2026 Gas Demand Response Pilot SRP Investment Proposal was designed with
17 the LCP Standards in mind but a formal evaluation has not been performed because the
18 Company is still collecting data on the program’s benefits and scalability. It is therefore
19 prudent to continue administering the program as a pilot while evaluating its potential to
20 meet these standards and address or mitigate system needs. A complete and formal review
21 of how the Gas DR Pilot adheres to Section 1.3 of the LCP Standards will be performed

1 in a future SRP Investment Proposal if the Company determines the Pilot should
2 transition and be proposed as a full-fledged program.

3
4 **Q. In accordance with Sections 4.4.A.ii.a-d of the LCP Standards, please describe (1)**
5 **the specific system need and how it was identified during the system planning**
6 **process, and (2) how the system need might be addressed or mitigated by 2024-2026**
7 **Gas Demand Response Pilot SRP Investment Proposal.**

8 A. The Gas Demand Response program is still in the pilot phase and not linked to a specific
9 system need. However, the natural gas outage on Aquidneck Island during January 2019
10 due to a low-pressure condition on the system underscored the need to be able to address
11 and mitigate capacity constraints in real-time. Gas demand response is one potential
12 solution, which is why the Company continues to evaluate its potential to provide system
13 benefits while avoiding Utility Reliability Procurement. Aquidneck Island will continue
14 to be a particular focus, but other areas with similar capacity constraints will be
15 evaluated.

16

1 **Q. In accordance with Sections 4.4.A.iv-v of the LCP Standards, please describe (1) the**
2 **proposed procurement process used by the Company to procure market-sourced**
3 **System Reliability Procurement and Utility Reliability Procurement, and (2) the**
4 **proposed general evaluation process for choosing among System Reliability**
5 **Procurement options or market-based solutions.**

6 A. The process the Company proposes to use to procure market-sourced System Reliability
7 Procurement and Utility Reliability Procurement, and associated evaluation process, is
8 described in detail in the 2021-2023 Three-Year SRP Plan. Because the gas demand
9 response program is in the pilot stage, this formal process is not currently applicable. If
10 and when the Pilot transitions to a full-scale program the process will be leveraged.

11
12 **Q. In accordance with Section 5.3.A.c of the LCP Standards, please describe the**
13 **proposed budget, funding plan, and cost-recovery mechanism for the Gas Demand**
14 **Response Investment Proposal.**

15 A. The anticipated annual budget for the large commercial and industrial customer Gas DR
16 Pilot is expected to continue to be \$268,042 for the 2024-2026 period. An increase in
17 participation by large commercial and industrial customers, and/or a successful expansion
18 of the Gas Demand Response Pilot to residential and small business customers, may
19 result in incremental spend associated with incentive payments, administrative, and
20 marketing costs. Estimated costs associated with increased participation among large
21 commercial and industrial customers at any juncture during 2024-2026, and/or possible

1 new participation of residential and small business customers in 2025, will be developed
2 and proposed in an amended Gas Demand Response Pilot SRP Investment Proposal.
3 Funding will be through cost recovery of the budget via the System Reliability
4 Procurement Factor, which the Company proposed be incorporated into the Gas Energy
5 Efficiency Charge.

6
7 **Q. Is the Company proposing a shareholder incentive as part of the Gas DR Pilot**
8 **Proposal?**

9 A. No.

10
11 **Q. What is the proposed SRP Factor associated with the Company's Proposal?**

12 A. The proposed SRP Factor to be effective January 1, 2024 is \$0.015 per Dth. The SRP
13 Factor would be applicable to commercial and industrial gas customers.

14
15 **Q. Would the proposed SRP Factor remain constant through 2026 subject to any**
16 **reconciliation that may occur?**

17 A. The SRP Factor would be updated annually effective January 1 as part of the Gas Energy
18 Efficiency Charge to reflect the upcoming year's forecasted Dth. In addition, as
19 discussed above, if there are changes to the DR Pilot Proposal that resulted in a change to
20 the annual estimated cost, the Company would update the SRP Factor.

21

1 **Q. How and when will the SRP Factor be reconciled?**

2 A. The Company will reconcile the SRP Factor annually and include any necessary
3 adjustments in the future SRP Factor in a similar manner to how the Gas Energy
4 Efficiency charge is currently reconciled.

5
6 **Q. In accordance with Section 6.G of the LCP Standards, did the Company submit a**
7 **draft of this Investment Proposal to Rhode Island’s Energy Efficiency and Resource**
8 **Management Council (“Council”) six weeks prior to this submission to the**
9 **Commission?**

10 A. Yes. A draft of the Gas Demand Response Pilot SRP Investment Proposal was submitted
11 to the Council on September 20, 2023. Subsequently, at the October 19, 2023 EERMC
12 Full Council meeting, the Company presented its Proposal for consideration of the
13 Council’s endorsement.

14
15 **Q. Did the Council vote to endorse the Investment Proposal?**

16 A. Yes. The Council unanimously endorsed the Gas Demand Response Pilot SRP
17 Investment Proposal.

18

1 **VI. Consistency with the Act on Climate**

2 **Q. Is the Gas Demand Response Pilot SRP Investment Proposal consistent with the Act**
3 **on Climate’s greenhouse gas emissions reduction requirements?**

4 A. Yes. While the objectives and goals of the Gas Demand Response Pilot are not directly
5 related to reducing greenhouse gas emissions, the program does not conflict with nor
6 undermine the outcomes sought via the Act on Climate. If the program is successful,
7 greenhouse gas emissions from space heating will be reduced during peak demand events
8 through the curtailment of natural gas combustion. Moreover, the deployment gas
9 demand response has the potential to defer, or avoid altogether, future Utility Reliability
10 Procurement investments that would otherwise be pursued to address or mitigate capacity
11 constraints on the gas system

12
13 **VII. Requested Rulings**

14 **Q. What approvals are the Company requesting from the PUC in connection with the**
15 **Proposal?**

16 A. Rhode Island Energy respectfully requests that the PUC make the following rulings:

- 17 • To approve the Company’s 2024-2026 Gas Demand Response Pilot System
18 Reliability Procurement Investment Proposal, as detailed in this testimony and in
19 Schedule A, for effect January 1, 2024 through December 31, 2026.
- 20 • To approve the proposed SRP Factor of \$.015 per Dth for effect January 1, 2024.
- 21 • To approve the proposed SRP Factor of \$.015 per Dth for effect January 1, 2024.
- 22 • To approve the proposed SRP Factor of \$.015 per Dth for effect January 1, 2024.
- 23 • To direct the Company to incorporate the SRP Factor into the Gas Energy
24 Efficiency Charge effective January 1, 2024.
- 25

1 **VIII. Conclusion**

2 **Q. Does this conclude your testimony?**

3 **A. Yes, it does.**

SCHEDULE A

System Reliability Procurement Investment Proposal

Reducing Gas System Peak

Demand through Gas Demand Response:

A Proposal for the Gas Demand Response Pilot 2024-2026

Introduction

In accordance with Least-Cost Procurement Statute and Least-Cost Procurement Standards, Rhode Island Energy respectfully files this proposal for continuation of its Gas Demand Response Pilot during the period 2024-2026. Herein, the Company motivates the conceptual value of offering a demand response program, describes the general concepts of Gas Demand Response Pilot (or ‘Gas DR Pilot’), proposes a potential program design expansion, offers an hourly peak reduction target and associated budget, and requests approval for cost recovery of the budget via the System Reliability Procurement Factor added to the Energy Efficiency System Benefit Charge.

Motivation, Objectives, and Program Design Principles

Rhode Island Energy is a public utility under the provisions of R.I. Gen. Laws § 39-1-2 and provides natural gas sales and transportation service to approximately 270,000 residential and commercial customers in 33 cities and towns in Rhode Island. Each year, the Company must ensure it maintains sufficient gas supply in its resource portfolio to continuously supply the amount of gas required by customers’ (called ‘demand’ or ‘load’) throughout the year under all reasonable weather conditions.

Ensuring there is adequate supply to meet customer requirements is particularly important on the coldest days during the winter period when customer demand is at its highest (called ‘peak demand’), as the inability to provide gas to customers for heating could create unsafe environments. To accomplish this, the Company must maintain sufficient supply under contract and in storage (underground storage and LNG), reduce peak demand, and/or have sufficient time to contract for additional resources should they be required. Even so, during the coldest days of the year when our system is near daily or hourly peak demand, upstream or on-system constraints may result in demand exceeding available pipeline capacity in certain areas on the system.

Rhode Island Energy proposes to continue to offer the Gas Demand Pilot to test (1) the level of customer interest and scalability of the program, and (2) the gas system benefits of incentivizing the reduction or curtailment of gas usage during system peak demand periods

(from November 1st to March 31st) when requested, provided doing so does not compromise safety. The Gas DR Pilot offerings will continue to target large commercial and industrial customers with firm service – that is, a minimal amount of continuous, uninterruptible gas demand which the Company is obligated to serve. The Gas DR Pilot may also test the interest of residential and small-business customers with eligible smart thermostats who are already enrolled in the Company’s ConnectedSolutions electric demand response program and the system benefits associated with their participation.

Learnings for the pilot program will focus on how to increase program enrollment and participation during peak demand events, as well as scalability of the program within and beyond large commercial and industrial customers. Aquidneck Island will continue to be a particular focus, but other areas with similar capacity constraints will be evaluated. Rhode Island Energy will report the resulting impacts of its demand response program in its SRP Annual Reports.

The objective of Rhode Island Energy’s Gas Demand Response Pilot is to test customer adoption and the effectiveness of gas demand response in reducing system peak demand.

As noted above, during the coldest days of the year, forecasted peak demand may exceed pipeline capacity, resulting in capacity-constrained areas on the system. Reducing peak demand through demand response has the potential to mitigate capacity constraints on the system.

In offering the Gas Demand Response Pilot, the Company asserts the following program design principles, explained further below:

1. Technology and participant agnostic
2. Encourage diffuse and diverse participation for reliable response
3. Right-size incentives
4. Compliant with Least-Cost Procurement Standards
5. Reduce and mitigate distribution system risk
6. Share value created

Stemming from the program objective to reduce peak demand, Rhode Island Energy does not differentiate dekatherms (Dth) reduced by one technology or participant from Dth reduced by another technology or participant. Each of those Dth reduced has the same benefit with respect to reducing peak demand and avoiding or alleviating capacity constraints on the system. In this manner, the Gas DR Pilot is technology and participant agnostic.

This principle is clearly displayed in commercial and industrial participation in the Gas DR Pilot, where participants can use any technology, process, or other innovation to reduce peak demand – this has historically been accomplished either by temporarily switching to an alternative, back-up heating source or through adjusting thermostat settings (called ‘thermostat setback’). For residential and small business participants, technology eligibility is anticipated to be limited to smart thermostats that can be automatically setback during peak demand events. It was originally

contemplated that residential and small business customers with hybrid gas-electric heating systems could temporarily curtail gas use and switch to electric heating to reduce peak demand. After consideration, however, it was determined the cost of relying on all-electric heating during the coldest days of the year – the opposite of how a hybrid electric-gas heating system is designed to perform – is likely to be greater than the incentive a customer would receive for participating in a peak demand event.

Consistent with its electric demand response program, Rhode Island Energy seeks to build a gas demand response program with a reliable level of response from its participants. This leads to favoring program design that encourages diffuse participation (i.e., no one participant's level of response substantially sways the overall peak demand reduction achieved by the program) and diverse participation (i.e., no one technology type exerts a disproportionate influence on the overall peak demand reduction achieved by the program). This principle is intended to be complementary – not contradictory – to the principle of being technology- and participant-agnostic. All else equal, more participants and more technologies will result in a more reliable and consistent level of response. Rhode Island Energy seeks to encourage more participants over fewer, with more technology types than fewer, within its program design for the Gas Demand Pilot.

While each Dth of peak demand reduction is considered to be equal, achieving each Dth of peak demand reduction may require different levels of action or opportunity cost on the part of the participant. For example, an automatic setback to a participant's thermostat or switch to a back-up source of heating requires no action, while a request for participants to manually adjust their thermostats or switch to a backup heating system requires some action. Another example, having a controllable thermostat for purposes of changing the setpoint only is a relatively small upfront cost and workload when compared to the upfront costs and work required to install a new primary or secondary heating system. A third example for good measure, the opportunity cost of setting back a thermostat (below a customer's preferred temperature) is small relative to the opportunity cost of deferring a production sequence (definite lost revenue) or potential increased cost of temporarily running a back-up heating system. Rhode Island Energy's third program design principle posits that incentives should be right sized to spur action so, because different methods of reducing peak demand require different burdens, it makes sense to differentiate incentive levels. Doing so will minimize program costs while achieving the same peak demand reduction.

Demand response activities are contemplated within the Least-Cost Procurement Statute, and further stipulated in the Least-Cost Procurement Standards. Accordingly, demand response must be reliable, prudent, cost-effective, and environmentally responsible. These Standards constitute guardrails on program design. As an example, the electric demand response program, switching from electricity to fossil-fuel generators to reduce peak demand is inconsistent with the Standard of environmentally responsible; therefore, fossil-fuel generation is an ineligible technology for the electric demand response program. However, for the Gas DR Pilot, most large commercial and industrial customers currently cannot meet their space, process, or production heating needs

without use of fossil fuels, so switching from gas to another combustible fuel is not inconsistent with the environmentally responsible guardrail.

Rhode Island Energy's Gas DR Pilot is designed to create value. The primary value – to the company and program participants – is risk mitigation. Participating customers receive incentive payments for reducing demand during peak events, thus potentially reducing the need for on-system investments to mitigate capacity constraints. Rhode Island Energy seeks to share this quantifiable value between customers and its shareholders such that *all* parties are better off with the Gas DR Pilot than without.

Program Design for 2024-2026

This section describes major program design elements and goals of the Gas DR Pilot as well as a potential program design modification for 2024-2026.

Continuation of C&I Customer Offerings – Hourly Peak Reduction Targets and Program Design

The Company will continue to target 40-50 Dth of hourly peak reduction during the winter months (Nov. 1st through March 31st) of 2024-2026 through two individual large commercial and industrial customer DR offerings. The Company expects that the majority of these peak reduction savings will come from customers participating in what is called the full day Extended Demand Response (EDR) pilot offering, with the remainder from customers participating in a Peak Period Gas Demand Response (PPDR) pilot offering. These demand reduction pilot offerings are described in more detail below. The hourly Dth reduction target will be dependent on enrollment levels and establishing a sufficient incentive level to drive effective participation. The hourly peak reduction target and associated budget may be adjusted annually for subsequent winter months (November 1st through March 31st) during the remainder of the 3-year plan (2024-2026).

During the winter of 2018/19, the Company launched the PPDR pilot offering, which incentivizes customers to shift their usage outside of the peak-period of the gas system (6AM-9AM from November 1st to March 31st). This pilot targets large commercial and industrial customers who have intra-day flexibility of their natural gas usage. Customers participating in this pilot are able to achieve demand reduction via non-gas backup heating or thermostat setback.

In 2019/20, the Company added the EDR offering, which targets large commercial and industrial customers that can achieve 24-hour gas reductions (10AM on day 1 until 10AM on day 2, Nov. 1st through March 31st), primarily with non-gas back-up heating.

For both DR offerings, Rhode Island Energy may place a limit on the number of consecutive days on which any individual customer can be called participate during the winter, but the Company will have the right to call up to 6 events during the winter at the established incentive rate. Customer participation in the peak demand events will be compensated via direct incentive

payments, not in the form of a reduced rate. Going into the 2024-2026 winter seasons, the company will maintain both the PPDR and EDR offerings.

Measurement of demand reduction for the PPDR and EDR program offerings will continue to require the installation of data recording hardware that provides granular usage data for participating customers. Additional data recording hardware requirements will be determined if the program is expanded beyond large commercial and industrial customers. The data collected will be directly used to inform the pilot research questions identified in the next section, “Pilot Program Goals”. Data from the Gas DR pilot will be evaluated each year.

Pilot Program Goals

Gas demand response is a pilot program. We are trying to understand the scalability of the program and the degree to which it might offset a utility reliability procurement. However, gas demand response hasn’t provided the level of relief anticipated due to lack of performance during called events and low customer interest, so enhancements may be needed to create a more effective program. Continuing to test the efficacy of gas demand response will allow Rhode Island Energy to understand gas demand response’s impact on gas system needs and optimization, customer interest, effectiveness of incentive levels, and scalability of the program, as well as its potential applicability to other customer classes. Specifically, the goal of the Gas DR Pilot is to leverage following research questions in ascertaining how to increase program enrollment and participation during peak demand events:

- Are large commercial and industrial customers interested in participating in an incentivized gas demand response program?
- Are residential customers with eligible smart thermostats interested in participating in gas demand response?
- What incentive structure and level are sufficient to stimulate program enrollment and participation?
- How do we increase enrollment – within and possibly across customer classes – and scale the program? Can program enrollment be increased through targeted marketing and/or the use of aggregators?
- What are distribution system benefits of gas demand response? From large commercial and industrial customer participation? For residential customer participation, if the pilot is expanded?
- Is there a minimum threshold for participation to realize system benefits? Does this differ across customer classes?

In 2024, Rhode Island Energy will initiate testing the effectiveness of leveraging target marketing and aggregators to increase enrollment and participation of large commercial and industrial customers. Depending on the outcome from the use of target marketing and

aggregators, in 2025 the Company may adjust the incentive for large commercial and industrial customers to test the impact on enrollment and participation. Also in 2025, Rhode Island Energy anticipates testing residential and small business customers' interest in a gas demand response offering and the associated benefits of participation in such a program expansion on the gas system during peak events.

Program Administration

Rhode Island Energy will serve as the Program Administrator for the Gas DR Pilot. In this role, Rhode Island Energy will provide strategic direction and management of the Gas DR Pilot. The Company's role manifests through program design, implementation, and evaluation. Rhode Island Energy is uniquely suited for this role because of its management of gas supply procurement, knowledge of its gas distribution system to mitigate risks through program design, everyday relationship with its customers to promote program participation, and ability to coordinate with all other business activities.

Rhode Island Energy will be responsible for day-to-day program operations and managing relationships and contracts with customers enrolled and participating in the Gas DR Pilot. The Company will also be responsible for data collection, participant enrollment, program impact evaluation, participant satisfaction, participant troubleshooting, incentive payouts, and ancillary technical assistance.

Because the gas demand response program is in the pilot stage and designed to test the benefits of reducing gas system peak demand, customer adoption of gas demand response, the incentive levels required drive participation, and RI Energy's role in influencing market adoption, it is, by nature of its design and goals, natural for the Company to administer the program. Should the Gas DR Pilot be successful in increasing enrollment and participation – particularly if the program is successfully expanded to include residential and small business customers – to the degree it is no longer practical for Rhode Island Energy to manage administration of the program, the Company may propose to contract with a third-party administrator. Any incremental costs associated with services provided by a third-party administrator will be proposed via an amendment to this Gas DR Pilot SRP Investment Proposal. Following the Gas DR Pilot, Rhode Island Energy will evaluate whether there is value in launching a full-scale demand response program, which may also contemplate the use of a third-party program administrator.

Gas Demand Response Pilot Continuation – Large Commercial & Industrial Customers

Target Participants:

The Gas DR Pilot is specifically designed for large commercial and industrial customers with firm service.

Eligible Technologies – HVAC Controls and Back-Up Heating Systems:

Customers participating in the Gas DR Pilot must be able to provide peak demand reduction via HVAC setbacks or by switching to a back-up heating system that utilizes a fuel other than natural gas.

Incentive Structure and Amount:

As was the case in prior years, customer compensation for participation in the Gas DR Pilot offering will be based on a combination of ‘reservation’ and ‘energy’ payments that differ for the PPDR and EDR offerings. Each of these rates will be standard offers to all customers, though customer earning opportunity will vary based on the volume of peak hour Dth reduction that each customer can commit to and deliver. The Company will utilize a rolling performance rating that measures customer reliability and limits payments to nonperforming resources.

	PPDR	EDR
Event Duration (hours) (Maximum 6/winter)	3 6AM-9AM	24 10AM-10AM
Capacity Payment (per month)	\$250/peak-hour Dth	\$700/peak-hour Dth
Energy Payment	\$50/Dth	\$7/Dth

Potential Program Design Modification – Inclusion of Small-Business & Residential Customers

Target Participants:

Rhode Island Energy is proposing to explore a possible expansion of the Gas DR Pilot to residential and small-business customers with eligible smart thermostats who are already enrolled in the Company’s ConnectedSolutions electric demand response program. If pursued, it is anticipated this program expansion will take place in 2025 and be motivated and informed by learnings captured from the large commercial and industrial gas demand response offerings.

Eligible Technologies – Smart Thermostats:

If the Gas DR Pilot is expanded, residential and small business customers may enroll eligible smart thermostats. During peak periods, smart thermostats will automatically decrease target heating levels, thereby reducing demand of gas during peak periods. Eligibility will be defined by thermostat manufacturers and model.

Incentive Structure and Amount:

Similar to the ConnectedSolutions electric demand response offering, Rhode Island Energy is contemplating a one-time enrollment incentive per enrolled customer followed by an annual participation incentive per device per year, to be rendered at the end of the peak season for all participants with full participation in at least 50% percent of peak events. The actual incentive levels will be developed and proposed as an amendment to this Gas DR Pilot SRP Investment

Proposal prior to the 2025 peak heating season (January 1 through March 31), and will be dependent on anticipated enrollment, participation levels, and system benefits.

Annual Peak Reduction Targets

The anticipated annual peak reduction target for the large commercial and industrial customer Gas DR Pilot is expected to continue to be 27,520 therms for the 2024-2026 period. An increase in participation by large commercial and industrial customers, and/or a successful expansion of the Gas DR Pilot to residential and small business customers, may result in additional incremental savings. Incremental reduction targets will be dependent on enrollment and participation levels. Estimated incremental savings associated with increased participation among large commercial and industrial customers at any juncture during 2024-2026, and/or possible new participation of residential and small business customers in 2025, will be developed and proposed in an amended Gas DR Pilot SRP Investment Proposal.

Budget and Funding Source

The anticipated annual budget for the large commercial and industrial customer Gas DR Pilot is expected to continue to be \$268,042 for the 2024-2026 period. An increase in participation by large commercial and industrial customers, and/or a successful expansion of the Gas DR Pilot to residential and small business customers, may result in incremental spend associated with incentive payments, administrative, and marketing costs. Funding will be through cost recovery of the budget via the System Reliability Procurement Factor added to the Gas Energy Efficiency Charge. Estimated costs associated with increased participation among large commercial and industrial customers at any juncture during 2024-2026, and/or possible new participation of residential and small business customers in 2025, will be developed and proposed in an amended Gas DR Pilot SRP Investment Proposal. The SRP Factor proposed to be included in the Gas Energy Efficiency Charge and effective January 1, 2024 is presented in Table S-1 below.

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a RHODE ISLAND ENERGY
RIPUC DOCKET NO. 23-46-EE
2024-2026 GAS DEMAND RESPONSE PILOT SRP INVESTMENT PROPOSAL
SCHEDULE A
PAGE 9 OF 9

Table S-1
Rhode Island Energy
System Reliability Procurement Factor

	<u>Income Eligible</u>			
	<u>Residential</u>	<u>Residential</u>	<u>Commercial & Industrial</u>	<u>Portfolio</u>
✓ (1) 2024 SRP Budget	\$0	\$0	\$268,042	\$268,042
✓ (2) Projected Fund Balance and Interest from Previous Year	\$0	\$0	\$0	\$0
✓ (3) Total Other Funding	\$0	\$0	\$0	\$0
✓ (4) Customer Funding Required	\$0	\$0	\$268,042	\$268,042
✓ (5) Forecasted Firm Dth Volume	0	0	19,340,629	19,340,629
✓ (6) Forecasted Non-Firm Dth Volume			231,819	231,819
✓ (7) Exempt DG Customers			-1,553,294	-1,553,294
✓ (8) Forecasted Dth Volume	0	0	18,019,154	18,019,154
✓ (9) Proposed SRP Factor per Dth (Excluding Uncollectible Recovery)	\$0.000	\$0.000	\$0.015	\$0.015
✓ (10) Currently Effective Uncollectible Rate	0.00%	0.00%	1.91%	
✓ (11) Proposed SRP Factor per Dth (Including Uncollectible Recovery)	\$0.000	\$0.000	\$0.015	\$0.015
✓ (12) Previous Year's SRP Factor per Dth	\$0.000	\$0.000	\$0.000	
✓ (13) Adjustment to Reflect Fully Reconciling Funding Mechanism per Dth	\$0.000	\$0.000	\$0.015	

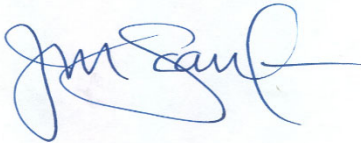
Notes:

- (1) Projected Budget includes only additional funds for SRP. It does not include costs associated with Energy Efficiency in Docket 23-35-EE
- (3) Total Other Funding equals Line (2)
- (4) Customer Funding Required equals Line (1) - Line (3)
- (5), (6), (7) (8) - Forecasted Dth from Energy Efficiency Plan in Docket No. 23-35-EE, Attachment 6, Page 1 of 16, Table G-1, Lines 6 through 9
- (10) Uncollectible rate approved in Docket No. 4770.
- (11) Proposed SRP Factor per Dth (Including Uncollectible Recovery) equals Line (9) ÷ (1-Line (10)), truncated to five decimal places.
- (13) Adjustment to Reflect Fully Reconciling Funding Mechanism per Dth equals Line (11) - Line (12)

Certificate of Service

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

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



Joanne M. Scanlon

January 6, 2023

Date

**Docket No. 23-46-EE – Rhode Island Energy 2024-2026 Gas Demand
Response Pilot Investment Proposal
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