

# The Narragansett Electric Company d/b/a Rhode Island Energy

Proposed Last Resort Service Rate for the Residential Group for  
the Months of October 2022 through March 2023

Proposed Last Resort Service Rates for the Commercial Group for  
the Months of October 2022 through March 2023

Proposed Last Resort Service Rates for the Industrial Group for  
the Months of October 2022 through December 2022

Results of Competitive Procurement:

Residential Group: October 2022 through March 2024

Commercial Group: October 2022 through March 2024

Industrial Group: October 2022 through December 2022

July 21, 2022

Submitted to:

Rhode Island Public Utilities Commission

R.I.P.U.C. Docket No. 4978

Submitted by:



**Rhode Island Energy™**

a PPL company

July 21, 2022

**VIA ELECTRONIC MAIL**

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

**RE: Docket No. 4978 – 2021 Last Resort Service Procurement Plan**

**Proposed Last Resort Service Rates for the Residential Group for the period  
October 2022 through March 2023**

**Proposed Last Resort Service Rates for the Commercial Group for the period  
October 2022 through March 2023**

**Proposed Last Resort Service Rates for the Industrial Group for the period October  
2022 through December 2022**

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”), enclosed please find the Company’s proposed base Last Resort Service (“LRS”) rates for the Residential Group for the period October 1, 2022 through March 31, 2023; the Commercial Group for the period October 1, 2022 through March 31, 2023; and the Industrial Group for the period October 1, 2022 through December 31, 2022. The Company respectfully asks that the Public Utilities Commission (“Commission”) approve the proposed base LRS rates as filed.

Included within this filing is the Joint Pre-Filed Direct Testimony of Jeffrey D. Oliveira and James Ruebenacker and accompanying schedules (“Joint Testimony”) and the Pre-Filed Direct Testimony of Joseph Cavicchi (“Analysis Group Testimony”).

Please be advised that Schedule 5 and Schedule 6 of the Joint Testimony contain confidential and privileged information. Pursuant to 810-RICR-00-00-1.3(H)(3) and R.I. Gen. Laws § 38-2-2(4)(B), the Company respectfully requests that the Commission treat the information redacted in the public version as confidential. In support of this request, the Company has enclosed a Motion for Protective Treatment. In accordance with 810-RICR-00-00-1.3(H)(2), the Company also respectfully requests that the Commission make a preliminary finding that the information redacted in the public version is exempt from the mandatory public disclosure requirements of the Rhode Island Access to Public Records Act (“APRA”).

The proposed base LRS rates have been calculated in compliance with the Company’s Last Resort Service Procurement Plan (“2021 LRS Plan”) which was approved by the

Commission in this Docket No. 4978 at an Open Meeting on July 23, 2020. In part, the proposed base LRS rates are the result of executed power supply contracts (“Transaction Confirmations”) which the Company procured through a Request for Proposal issued on June 10, 2022 (the “RFP”). Specifically, through the RFP, the Company solicited the following: Residential Group - 20% of the LRS supply for the period of October 2022 through March 2024; Commercial Group - 20% of the LRS supply for the period of October 2022 through March 2024; and Industrial Group - 100% of the LRS supply for the period of October 2022 through December 2022. The remaining parts of the proposed base LRS rates are the result of previous solicitations, estimated capacity costs (converted to retail delivery), and estimated spot market purchases.

### **Joint Pre-Filed Direct Testimony of Jeffrey D. Oliveira and James Ruebenacker**

The Joint Testimony provides an overview of the existing 2021 LRS Plan and sets forth the proposed LRS rates to be effective October 1, 2022. In addition, for comparison purposes, the Joint Testimony provides an overview of the procurement of Basic Service in Massachusetts. Finally, the Joint Testimony provides an overview of market prices for the upcoming winter. The Joint Testimony contains seven (7) schedules as described below:

**Schedule 1** – The calculation of the retail LRS rates for the Residential, Commercial, and Industrial Groups for the applicable service period.

**Schedule 2** – The Summary of Rates for Last Resort Service tariff reflecting the proposed Residential Group LRS rate for the period October 2022 through March 2023; the proposed Commercial Group LRS rates for the period October 2022 through March 2023; and the proposed Industrial Group LRS rates for the period October 2022 through December 2022.

**Schedule 3** – The typical bill analysis.

For a 500 kWh residential LRS customer, the proposed base residential LRS rate would result in a monthly bill increase of \$51.95, or 46.7% when compared to the customer’s bill based on currently-effective rates. For the same customer, the proposed base residential LRS rate would result in a monthly bill increase of \$35.99, or 28.5%, when compared to the customer’s bill based on last winter’s rates. As always, the Company encourages customers to explore bill assistance programs and energy efficiency options to help lower costs.<sup>1</sup>

**Schedule 4** – A copy of the RFP issued by the Company on June 10, 2022 to solicit LRS supply for the Residential Group for the period October 2022 through March 2024; for the Commercial Group for the period October 2022

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<sup>1</sup> For more information about bill assistance, customers should contact Rhode Island Energy at 1-800-743-1104. Customers can also visit [RIEnergy.com](http://RIEnergy.com).

through March 2024; and for the Industrial Group for the period October 2022 through December 2022.

**Schedule 5** – A redacted summary of the procurement process identifying the key actions taken to procure LRS for Rhode Island Energy’s customers (“Procurement Summary”).

The Procurement Summary includes 21 pages of exhibits as described below.

- Exhibit 1 – Load Block Descriptions (1 page)
- Exhibit 2 – Indicative Bid Ranking at Wholesale (3 pages)
- Exhibit 3 – Indicative Bid Ranking at Retail (3 pages)
- Exhibit 4 – Estimated Indicative Prices (1 page)
- Exhibit 5 – Final Bid Ranking at Wholesale (3 pages)
- Exhibit 6 – Final Bid Ranking at Retail (3 pages)
- Exhibit 7 – Estimated Final Prices (1 page)
- Exhibit 8 – Summary of Load Block Awards (1 page)
- Exhibit 9 – Bidder Key (1 page)
- Exhibit 10 – Bid Premium Estimates (2 pages)
- Exhibit 11 – Estimated Retail Rates Based on Final Bid Prices (2 pages)

**Schedule 6** – Redacted versions of the executed confidential Transaction Confirmations for the periods October 1, 2022 through March 31, 2024 for the Residential Group; October 1, 2022 through March 31, 2024 for the Commercial Group; and October 1, 2022 through December 31, 2022 for the Industrial Group.

**Schedule 7** – The approved 2021 LRS Plan.

**Pre-Filed Direct Testimony of Joseph Cavicchi**

The Analysis Group Testimony provides a review of the proposed LRS rates filed in this Docket No. 4978 and assesses the changes presented by the proposed LRS rates relative to recent and future wholesale and retail electricity market conditions in New England.

Thank you for your attention to this filing. If you have any questions or concerns, please do not hesitate to contact me at 401-784-4263.

Sincerely,



Andrew S. Marcaccio

Enclosures

cc: Docket No. 4978 Service List

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.



\_\_\_\_\_  
Andrew S. Marcaccio, Esq.

July 21, 2022  
Date

**Docket No. 4978 – Narragansett Electric Co. d/b/a Rhode Island Energy –  
2021 Last Resort Service Procurement Plan  
Service List updated 7/19/2022**

<b>Name/Address</b>	<b>E-mail Distribution</b>	<b>Phone</b>
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	<a href="mailto:Machaela.Seaton@dpuc.ri.gov">Machaela.Seaton@dpuc.ri.gov</a> ;	
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<b>File an original &amp; 9 copies w/:</b> Luly E. Massaro, Commission Clerk John Harrington, Counsel Public Utilities Commission 89 Jefferson Blvd. Warwick, RI 02888	<a href="mailto:Luly.Massaro@puc.ri.gov">Luly.Massaro@puc.ri.gov</a> ;	401-780-2017
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STATE OF RHODE ISLAND  
PUBLIC UTILITIES COMMISSION

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IN RE: 2021 Last Resort Service Procurement Plan	)	
	)	
Proposed Last Resort Service Rates for the Residential Group for the months of October 2022 through March 2023	)	
	)	
Proposed Last Resort Service Rates for the Commercial Group for the months of October 2022 through March 2023	)	Docket No. 4978
	)	
Proposed Last Resort Service Rates for the Industrial Group for the Months of October 2022 through December 2022	)	
	)	

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**MOTION OF THE NARRAGANSETT ELECTRIC COMPANY D/B/A  
RHODE ISLAND ENERGY FOR PROTECTIVE TREATMENT OF  
CONFIDENTIAL INFORMATION**

The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”) hereby respectfully requests that the Public Utilities Commission (“PUC”) grant protection from public disclosure certain confidential information submitted by the Company in the above referenced docket. The reasons for the protective treatment are set forth herein. The Company also requests that, pending entry of that finding, the PUC preliminarily grant the Company’s request for confidential treatment pursuant to 810-RICR-00-00-1.3(H)(2).

The records that are the subject of this Motion that require protective treatment from public disclosure are portions of a Procurement Summary (within Schedule 5 accompanying the Joint Pre-Filed Direct Testimony of Jeffrey D. Oliveira and James Ruebenacker), including 10 exhibits attached to the Procurement Summary (Exhibit Nos. 2-11) and three Transaction Confirmations (within Schedule 6 accompanying the Joint Pre-Filed Direct Testimony of Jeffrey D. Oliveira and James Ruebenacker) (collectively, referred to herein as the “Confidential LRS Procurement Records”) that were filed by the Company on July 21, 2022 as part of the Company’s proposed

Last Resort Service (“LRS”) rates for the Residential Group for the period of October 2022 through March 2023; the Commercial Group for the period of October 2022 through March 2023; and the Industrial Group for the period of October 2022 through December 2022. The Company requests protective treatment of the Confidential LRS Procurement Records in accordance with 810-RICR-00-00-1.3(H) and R.I. Gen. Laws § 38-2-2-(4)(B).

## **I. LEGAL STANDARD**

For matters before the PUC, a claim for protective treatment of information is governed by the policy underlying the Access to Public Records Act (“APRA”), R.I. Gen. Laws § 38-2-1 et seq. See 810-RICR-00-00-1.3(H)(1). Under APRA, any record received or maintained by a state or local governmental agency in connection with the transaction of official business is considered public unless such record falls into one of the exemptions specifically identified by APRA. See R.I. Gen. Laws §§ 38-2-3(a) and 38-2-2(4). Therefore, if a record provided to the PUC falls within one of the designated APRA exemptions, the PUC is authorized to deem such record confidential and withhold it from public disclosure.

## **II. BASIS FOR CONFIDENTIALITY**

The Confidential LRS Procurement Records that are the subject of this Motion are exempt from public disclosure pursuant to R.I. Gen. Laws § 38-2-2(4)(B) as “[t]rade secrets and commercial or financial information obtained from a person, firm, or corporation that 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 is likely either (1) to impair the government’s ability to obtain necessary information in the future; or (2) to cause substantial harm to the competitive position of the person from whom the information was obtained. *Providence Journal v. Convention Center Authority*, 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. In this case, the Company would not customarily release this information to the public. The submission of the Confidential LRS Procurement Records to the PUC is needed to comply with the Company's Last Resort Service Procurement Plan which was approved by the PUC in this Docket No. 4978 at an Open Meeting on July 23, 2020. Accordingly, the Company is providing the Confidential LRS Procurement Records to fulfil its regulatory responsibilities in connection with its energy procurement responsibilities.

In addition, the release of the Confidential LRS Procurement Records is likely to cause substantial harm to the competitive position of the Company. The Confidential LRS Procurement Records contain commercially sensitive market information, the disclosure of which could affect the balance of wholesale markets, as well as the Company's ability to negotiate competitive terms with its wholesale electric suppliers.

Furthermore, this information is the type of information that the PUC has historically recognized as proprietary information.

### **III. CONCLUSION**

For the foregoing reasons, the Company respectfully requests that the PUC grant this motion for protective treatment of the Confidential LRS Procurement Records.

Respectfully submitted,

RHODE ISLAND ENERGY  
By its attorney,



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Andrew S. Marcaccio (#8168)

Rhode Island Energy  
280 Melrose Street  
Providence, RI 02907  
(401) 784-4263

Dated: July 21, 2022

**CERTIFICATE OF SERVICE**

I hereby certify that on July 21, 2022, I delivered a true copy of the foregoing Motion via electronic mail to the parties on the Service List for Docket No. 4978.



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Andrew S. Marcaccio

Testimony of  
Oliveira and Ruebenacker

**PRE-FILED JOINT DIRECT TESTIMONY**

**OF**

**JEFFREY D. OLIVEIRA**

**AND**

**JAMES RUEBENACKER**

**July 21, 2022**

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1 **I. Introduction**

2 **Jeffrey D. Oliveira**

3 **Q. Please state your full name and business address.**

4 A. My name is Jeffrey D. Oliveira and my business address is 280 Melrose Street,  
5 Providence, RI 02907.

6  
7 **Q. Please describe by whom you are employed and in what capacity.**

8 A. I am employed as a Regulatory Programs Specialist by PPL Corporation (“PPL”). My  
9 current duties include leading the revenue requirement analyses and rates modeling that  
10 support regulatory filings, regulatory strategies, and rate cases for PPL’s distribution  
11 operations in Rhode Island, including The Narragansett Electric Company d/b/a Rhode  
12 Island Energy (the “Company”).

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

15 A. In 2000, I earned an associate degree in Business Administration from Bristol  
16 Community College in Fall River, Massachusetts. I was employed by the National Grid  
17 USA Service Company, Inc. (NGSC) and its predecessor companies from 1999-2022.  
18 From 1999 through 2000, I was employed by Fall River Gas Company as a Staff  
19 Accountant. In 2001, after Fall River Gas Company merged with Southern Union  
20 Company, I continued as a Staff Accountant with increased responsibilities. In August of  
21 2006, the Company acquired the Rhode Island operations of Southern Union d/b/a New

1 England Gas Company at which time I joined the NGSC as a Senior Accounting Analyst.  
2 In January 2009, I became a Senior Revenue Requirement Analyst in the Service  
3 Company's Strategy and Regulation Department. In July 2011, I was promoted to Lead  
4 Revenue Requirement Analyst in the New England Revenue Requirements group of the  
5 New England Regulatory Department of the NGSC. On May 25, 2022, ownership of the  
6 Company transferred from National Grid USA ("National Grid") to PPL at which time I  
7 began working in my current position.  
8

9 **Q. Have you previously testified before the Rhode Island Public Utilities Commission**  
10 **("PUC")?**

11 A. Yes. I submitted pre-filed testimony on behalf of the Company in several proceedings as  
12 follows: R.I.P.U.C. Docket No. 5234 (2022 Annual Retail Rate Filing); R.I.P.U.C.  
13 Docket No. 4686 (Joint Petition between National Grid and the Rhode Island Division of  
14 Public Utilities and Carriers ("Division") dated September 25, 2017 ("2017 Joint  
15 Proposal and Settlement") pertaining to the operation of the Storm Contingency Fund as  
16 well as a supplemental request filed February 23, 2022); R.I.P.U.C. Docket No. 5165  
17 (Distribution Adjustment Charge Filing, 2021); R.I.P.U.C. Docket No. 5179 (2021  
18 Electric Pension Adjustment Factor Filing); R.I.P.U.C. Docket No. 5040 (Distribution  
19 Adjustment Charge Filing, 2020); R.I.P.U.C. Docket No. 5054 (2020 Electric Pension  
20 Adjustment Factor Filing); R.I.P.U.C. Docket No. 4955 (Distribution Adjustment Charge  
21 Filing, 2019); R.I.P.U.C. Docket No. 4958 (2019 Electric Pension Adjustment Factor

1 Filing); R.I.P.U.C. Docket No. 4846 (Distribution Adjustment Charge Filing, 2018); and  
2 R.I.P.U.C. Docket No. 4855 (2018 Electric Pension Adjustment Factor Filing). I have  
3 testified before the PUC in support of the Company’s proposed electric and gas pension  
4 adjustment factors. Most recently I submitted pre-filed testimony in the Company’s 2022  
5 Renewable Energy Growth Program Factor filing (R.I.P.U.C. Docket No. 22-04-REG).

6  
7 **Q. Have you testified before any other state regulatory agencies?**

8 A. Yes, I have also submitted pre-filed testimony to the Massachusetts Department of Public  
9 Utilities (“DPU”) on behalf of the Company’s affiliates, Massachusetts Electric Company  
10 and Nantucket Electric Company, each d/b/a National Grid, in annual electric and gas  
11 pension adjustment factor filings.

12  
13 **James Ruebenacker**

14 **Q. Please state your name, place of employment, and business address.**

15 A. My name is James Ruebenacker. I work for NGSC, and my business address is 100 E.  
16 Old Country Road, Hicksville, New York 11801.

17  
18 **Q. Please describe your position and responsibilities at National Grid.**

19 A. I am the Manager of Wholesale Electric Supply, New England for National Grid. In this  
20 role, I manage the procurement of energy, capacity, and ancillary services, portfolio  
21 hedging strategies, and other energy supply-related activities for National Grid’s



1 Massachusetts operating companies.

2

3 **Q. Please describe your involvement with the Company.**

4 A. Prior to the sale of the Company,<sup>1</sup> I managed the Company's procurement of power for  
5 Last Resort Service ("LRS") and transactions of Rhode Island Renewable Energy  
6 Standard ("RES") renewable energy certificates ("RECs"). I will continue to procure  
7 power for LRS and RECs pursuant to the Transition Services Agreement between NGSC,  
8 National Grid, and the Company.

9

10 **Q. Please describe your educational background.**

11 A. I graduated from the University of Notre Dame with a Bachelor of Science degree in Pre-  
12 professional Studies Science-Business Sequence. I graduated with distinction from  
13 New York University's Leonard N. Stern School of Business with a Master of Business  
14 Administration degree.

15

16 **Q. Please describe your professional experience.**

17 A. In 2002, I was hired as a Retail Electric Pricing Analyst at Peoples Energy Services. I  
18 joined National Grid as a Senior Analyst in the Wholesale Electric Supply department in  
19 2009 and became Manager in 2011.

20

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<sup>1</sup> On May 25, 2022, PPL Rhode Island Holdings, LLC acquired 100 percent of the equity interest in The Narragansett Electric Company from National Grid USA.

1 **Q. Have you previously testified before the PUC?**

2 A. Yes, I have testified before the PUC on several occasions involving LRS and the RES  
3 Charge.

4  
5 **Q. Have you testified before any other state regulatory agencies?**

6 A. Yes. I have submitted pre-filed testimony before the DPU in several dockets.  
7

8 **II. Purpose of Testimony**

9 **Q. What is the purpose of your testimony?**

10 A. First, we are proposing the LRS rates effective October 1, 2022 for the PUC's review and  
11 approval. Second, we will provide an overview of the existing 2021 Last Resort Service  
12 Procurement Plan ("2021 LRS Plan"), which the PUC approved in Docket No. 4978.  
13 Third, we will provide an overview of the procurement of Basic Service in  
14 Massachusetts. Finally, we will provide an overview of market prices for the upcoming  
15 winter.

16

17 **Q. What is the basis for the Company's submission of its proposed LRS rates for PUC  
18 approval?**

19 A. Rhode Island General Laws § 39-1-27.3(c) requires the Company to arrange for a last  
20 resort power supply for customers who are not otherwise receiving electric service from a  
21 Non-regulated Power Producer ("NPP") or through Standard Offer Service. Specifically,

1 pursuant to R.I. Gen. Laws § 39-1-27.3(c), the Company must file a supply procurement  
2 plan with the PUC that includes the procurement procedure, the pricing options being  
3 sought, and a proposed term of service for which LRS will be acquired. All such  
4 components of the procurement plan are subject to the PUC's review and approval. Once  
5 approved, the Company shall recover its costs of providing LRS.

6  
7 **Q. Are you sponsoring any schedules in your testimony?**

8 A. Yes. We are sponsoring the following schedules associated with the proposed LRS rates:

9 Schedule 1 – The calculation of the retail LRS rates for the Residential,  
10 Commercial, and Industrial Groups for the applicable service period;

11 Schedule 2 – The Summary of Rates for Last Resort Service tariff reflecting the  
12 proposed Residential Group LRS rate for the period October 2022 through March  
13 2023; the proposed Commercial Group LRS rates for the period October 2022  
14 through March 2023; and the proposed Industrial Group LRS rates for the period  
15 October 2022 through December 2022;

16 Schedule 3 – The typical bill analysis;

17 Schedule 4 – A copy of the Request for Proposals (“RFP”) issued by the  
18 Company on June 10, 2022 to solicit LRS supply for the Residential Group for  
19 the period October 2022 through March 2024; for the Commercial Group for the  
20 period October 2022 through March 2024 and for the Industrial Group for the  
21 period October 2022 through December 2022;

22 Schedule 5 – A redacted summary of the procurement process identifying the key  
23 actions taken to procure LRS for Rhode Island Energy's customers;

24 Schedule 6 – Redacted versions of the executed confidential Transaction  
25 Confirmations for the periods October 1, 2022 through March 31, 2024 for the  
26 Residential Group; October 1, 2022 through March 31, 2024 for the Commercial  
27 Group; and October 1, 2022 through December 31, 2022 for the Industrial Group;  
28 and

29 Schedule 7 – Approved 2021 LRS Plan.

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**III. Proposed LRS Rates**

**Q. What are the LRS rates which the Company is proposing for effect October 1, 2022?**

A. The proposed LRS rates, which are calculated in Schedule 1, are below.

	<u>Proposed LRS Rate</u>
<u>Residential Group</u> (A-16, A-60) October 2022 – March 2023	17.785¢/kWh
<u>Commercial Group– Fixed Price Option</u> (C-06, G-02, S-05, S-06, S-10, S-14) October 2022 – March 2023	18.279¢/kWh
<u>Industrial Group</u> (B-32, G-32, X-01) October 2022	14.397¢/kWh
November 2022	23.801¢/kWh
December 2022	39.974¢/kWh

**Q. Are the proposed rates calculated in the same manner as recently-approved LRS rates approved by the PUC?**

A. Yes, the Company has followed the same approach and calculations in determining the proposed rates as it has used in prior LRS rate filings submitted for PUC approval.

**Q. Please describe the residential and small commercial bill impacts associated with the proposed Residential LRS rate for October 1, 2022.**

1 A. As presented on page 1 of Schedule 3, the impact of the proposed Residential LRS rate  
2 on the monthly bill for a residential customer using 500 kWhs is an increase of \$51.95, or  
3 46.7%. The impact of the proposed Commercial LRS rate on the monthly bill for a small  
4 commercial customer vary based on usage and reflect increases ranging from 40.7% to  
5 51.1% as shown on Schedule 3, Page 4.

6  
7 **IV. 2021 LRS Plan**

8 **Q. Please provide an overview of the procurement of supply under the approved**  
9 **2021 LRS Plan.**

10 A. The 2021 LRS Plan (Docket No. 4978, filed on October 11, 2019, and approved July 23,  
11 2020) segregates customers into three customer groups:

12 (1) Residential Group: This group includes customers who receive service on Basic  
13 Residential Rate A-16 and Low Income Rate A-60;

14 (2) Commercial Group: This group includes customers who receive service on  
15 General C&I Rate G-02, Small C&I Rate C-06, Limited Private Lighting Rate S-  
16 10, Customer-Owned Streetlighting Equipment Rate S-05, Decorative Street and  
17 Area Lighting Service Rate S-06, and General Streetlighting Rate S-14; and

18 (3) Industrial Group: This group includes customers who receive service on Large  
19 Demand Rate G-32, Backup Service Rate B-32, and Electric Propulsion Rate  
20 X-01.

21

1           The 2021 LRS Plan involves acquiring load-following, Full Requirements Service  
2           contracts with different term durations through periodic solicitations. With a Full  
3           Requirements Service contract, the supplier becomes responsible for the energy, ancillary  
4           services, and miscellaneous Independent System Operator-New England (“ISO-NE”)  
5           charges of the particular LRS customer group for a fixed dollar per megawatt-hour  
6           (\$/MWh) price. For this fixed price, the supplier assumes all price and load risks  
7           associated with these market components. The suppliers will pass through the capacity  
8           charges or credits it receives from ISO-NE to the Company without any markup for  
9           margin or risk. Notably, the term “contract” used in this context may in fact be several  
10          “bid blocks” or “segments” that add up to the total load solicited. The smaller bid blocks  
11          are designed to benefit pricing and supplier diversity.

12  
13          The 2021 LRS Plan for the Residential Group and the Commercial Group involves a  
14          combination of Full Requirements Service contracts and ISO-NE spot market purchases.  
15          The Company layers Full Requirements Service contracts for the benefit of diverse  
16          pricing points in a manner that diversifies risk for customers in each customer group.  
17          Each contract for the Residential and Commercial Groups is comprised of six-month bid  
18          blocks. For example, a 24-month contract will include four independent bid blocks.  
19          Dividing the contract in this fashion creates the opportunity to award the bid blocks to a  
20          combination of suppliers, rather than a single supplier, if the overall cost is lower. If a

1 single supplier has the lowest overall cost for each bid block, it will be awarded all four  
2 bid blocks.

3  
4 The 2021 LRS Plan for the Industrial Group involves acquiring a load-following, Full  
5 Requirements Service contract for 100 percent of the load through quarterly solicitations  
6 for three months in duration: January through March, April through June, July through  
7 September, and October through December.

8  
9 Schedule 7 is the approved 2021 LRS Plan, which consists of eight quarterly solicitations  
10 and include all contracts executed in calendar years 2021 and 2022 which include  
11 delivery periods through 2024. Each quarterly solicitation procures LRS for a specific  
12 term and load obligation.

13  
14 In Docket No. 4149 (approved on August 5, 2010), the Company proposed a Residential  
15 Group procurement schedule for 2011 that would allow a transition to a repeating  
16 schedule. The 2016 Standard Offer Service Procurement Plan (“2016 SOS Plan”)<sup>2</sup>  
17 amended the Commercial Group’s schedule to match the Residential Group’s repeating  
18 procurement schedule. Also, in the 2016 SOS Plan, the retail rate periods for the  
19 Residential and Commercial Groups were modified from January through June and July

---

<sup>2</sup> Docket No. 4556.

1 through December to October through March and April through September, effective  
2 October 1, 2016.

3  
4 The Full Requirements Service contracts for the Residential and Commercial Groups are  
5 executed for different percentages of load (15 percent and 20 percent) and four durations:  
6 6 months, 12 months, 18 months, and 24 months. When all Full Requirements Service  
7 contracts have been acquired, each month will have Full Requirements Service contracts,  
8 totaling 90 percent of the Residential and Commercial load, and the remaining 10 percent  
9 of the load would be procured by the Company through ISO-NE spot market purchases.

10  
11 The additional laddering and varying lengths of the Full Requirements Service contracts  
12 allows for mitigation of price volatility because the individual contracts are procured at  
13 different times and are dollar-cost averaged to create a blended supply rate. In a  
14 decreasing electric prices market, the lower-cost most recent transactions will help offset  
15 the higher-cost older transactions. Conversely, in an increasing electric prices market,  
16 the higher-cost most recent transactions will be partially offset by the lower-cost older  
17 transactions. Because it is effective in mitigating price volatility in all market  
18 environments, the Company proposed to continue to employ a laddered and layered Full  
19 Requirements Service procurement approach in the 2023 Last Resort Service  
20 Procurement Plan filed on May 24, 2022, in Docket No. 22-02-EL.

21



1 **Q. Please describe the pricing options available to customers under the 2021 LRS Plan.**

2 A. The Residential Group has two six-month retail rate periods as identified above  
3 (April through September and October through March). The LRS rate applicable to the  
4 Residential Group is a fixed-price rate that represents a weighted average of the actual  
5 monthly contract prices over the six-month period plus an estimate of the costs of any  
6 supply not procured through Full Requirements Service contracts including, but not  
7 limited to, spot market purchases and capacity costs from ISO-NE.

8  
9 Similar to the Residential Group, the Commercial Group has two six-month retail rate  
10 periods of April through September and October through March. There are two rate  
11 options available to customers in the Commercial Group. The first option is referred to  
12 as the “Fixed Price Option.” The Fixed Price Option represents a weighted average of  
13 the actual monthly contract prices over six-month period plus an estimate of the costs of  
14 any supply not procured through Full Requirements Service contracts including, but not  
15 limited to, spot market purchases and capacity costs from ISO-NE. Customers receiving  
16 retail delivery service on Rate C-06 are placed on the Fixed Price Option when initially  
17 requesting LRS from the Company. The second option is referred to as the “Variable  
18 Price Option.” The Variable Price Option represents the actual monthly contract prices  
19 from the applicable winning bids for each month of the same six-month period plus an  
20 estimate of the costs of any supply not procured through Full Requirements Service

1 contracts including, but not limited to, spot market purchases and capacity costs from  
2 ISO-NE. Customers receiving retail delivery service on Rates G-02, S-06, S-10, and  
3 S-14 are placed on the Variable Price Option when initially requesting LRS from the  
4 Company. The rates for each option change at the end of each six-month period.

5  
6 The rates applicable to this Industrial Group are fixed monthly prices, representing the  
7 actual monthly contract prices for each month of the period, or may be based upon  
8 estimates of the cost of any supply not procured through Full Requirements Service  
9 contracts including, but not limited to, capacity costs from ISO-NE.

10  
11 **V. Massachusetts Basic Service**

12 **Q. Please provide an overview of the procurement of Basic Service for residential and**  
13 **commercial customers in Massachusetts.**

14 A. The Massachusetts DPU orders require distribution companies to procure 50 percent of  
15 their Residential and Commercial Customer Groups' Basic Service load requirements  
16 from each of two overlapping 12-month procurements. The distribution companies  
17 stagger the execution dates of their procurements of Basic Service pursuant to DPU  
18 requirements to avoid simultaneous solicitations.

19  
20 **Q. What are the pricing periods and procurement schedules for the Massachusetts**  
21 **distribution companies?**

1 A. Massachusetts Electric Company's and Nantucket Electric Company's, together d/b/a  
2 National Grid's, pricing periods are November through April and May through October  
3 based upon its DPU-assigned procurement schedules initiated in August and February.  
4 Fitchburg Gas and Electric Light Company's, d/b/a Unitil's, pricing periods are  
5 December through May and June through November. NSTAR Electric Company's and  
6 Western Massachusetts Electric Company's pricing periods are January through June and  
7 July through December.

8  
9 National Grid's Basic Service procurements for a particular pricing period typically  
10 involve transactions made at two different points of time. The first 50 percent  
11 procurement for a pricing period is a 12-month contract executed approximately 7.5  
12 months in advance of the pricing period start date. For example, for a pricing period  
13 beginning on November 1, the first 50 percent procurement is typically made in the  
14 middle of March. The second 50 percent procurement for a pricing period is a 12-month  
15 contract executed approximately six weeks in advance of the pricing period start date.  
16 For example, for a pricing period beginning on November 1, the second 50 period  
17 procurement is typically made in the middle of September. The other distribution  
18 companies in Massachusetts typically follow a similar procurement schedule.

19

20 **Q. What are the differences between the procurement for Basic Service and that for**  
21 **Last Resort Service?**

1 A. Basic Service and LRS procurement have some differences. The 2021 LRS Plan requires  
2 that 10 percent of the Residential and Commercial Groups' load is procured in the spot  
3 market, whereas no Residential or Commercial Customer Groups' Basic Service load is  
4 procured in the ISO-NE spot market. The market components included in the Full  
5 Requirement Service contracts are also different for Basic Service and LRS. The Basic  
6 Service Full Requirement Service contracts include energy, capacity, ancillary services,  
7 and miscellaneous ISO-NE charges in the fixed \$/MWh price. The LRS Full  
8 Requirement Service contracts do not include capacity in the fixed \$/MWh price - the  
9 suppliers will pass through the capacity charges and credits it receives from ISO-NE to  
10 the Company without any markup for margin or risk. Because a portion of the load is  
11 procured through the ISO-NE spot market and the capacity charges are passed through  
12 during settlement, LRS rates are calculated with estimated capacity costs, and for the  
13 Residential and Commercial Groups, LRS rates also include estimated costs of providing  
14 10 percent of supply for the pricing period through spot market purchases.  
15  
16 A significant difference between the procurement of Basic Service and LRS is the  
17 laddering and layering of contracts. The LRS Residential and Commercial Groups'  
18 contracts for 90 percent of the load obligation are executed over five RFPs, or five price  
19 points. The sixth price point is provided through the 10 percent procured in the spot  
20 market. The Basic Service Residential and Commercial Customer Groups' contracts for  
21 100 percent of the load obligations are executed over two RFPs, or two price points

1           pursuant to DPU requirements. The DPU requirements for 50 percent procurements for  
2           12-month terms is to comply with the Massachusetts Electric Restructuring Act which  
3           requires the distribution companies' Basic Service rates reflect the market price of  
4           electricity. For both LRS and Basic Service, laddering and layering varying lengths of  
5           the Full Requirements Service contracts allows for mitigation of price volatility because  
6           the individual contracts are procured at different times and are dollar-cost averaged to  
7           create a blended supply rate. However, the 2021 LRS Plan is able to mitigate price  
8           volatility better with its six price points compared to two price points for Basic Service.

9  
10          Another significant difference between the 2021 LRS Plan and Basic Service  
11          procurement is the length of contracts. The term "contract" used in this context may in  
12          fact be several "bid blocks" that add up to the total load solicited. The 2021 LRS Plan for  
13          the Residential and Commercial groups consists of quarterly solicitations for four  
14          different durations and percentages of load (15 percent and 20 percent). The four  
15          contracts would be for six months, 12 months, 18 months, and 24 months. In contrast,  
16          Basic Service in Massachusetts for the Residential and Commercial Customer Groups  
17          consist of two solicitations, each for 50 percent of load for a 12-month term. As  
18          described above, the Basic Service 12-month procurements were implemented to meet  
19          Massachusetts' statute that Basic Service rates reflect the market price of electricity.

20

1 VI. **Market Conditions**

2 Q. **Please provide an explanation of the high winter electric prices.**

3 A. Electric prices are closely correlated to natural gas prices because natural gas generators  
4 are often the marginal resource that sets wholesale electric prices. There has been an  
5 increase in natural gas prices since the spring of 2021. Because the Company procures  
6 LRS in advance, the rising natural gas prices and associated increased electric prices did  
7 not impact the 2021 summer LRS rates, but the increases did have an impact on the  
8 October 2021 through March 2022 LRS pricing period and subsequent pricing periods.

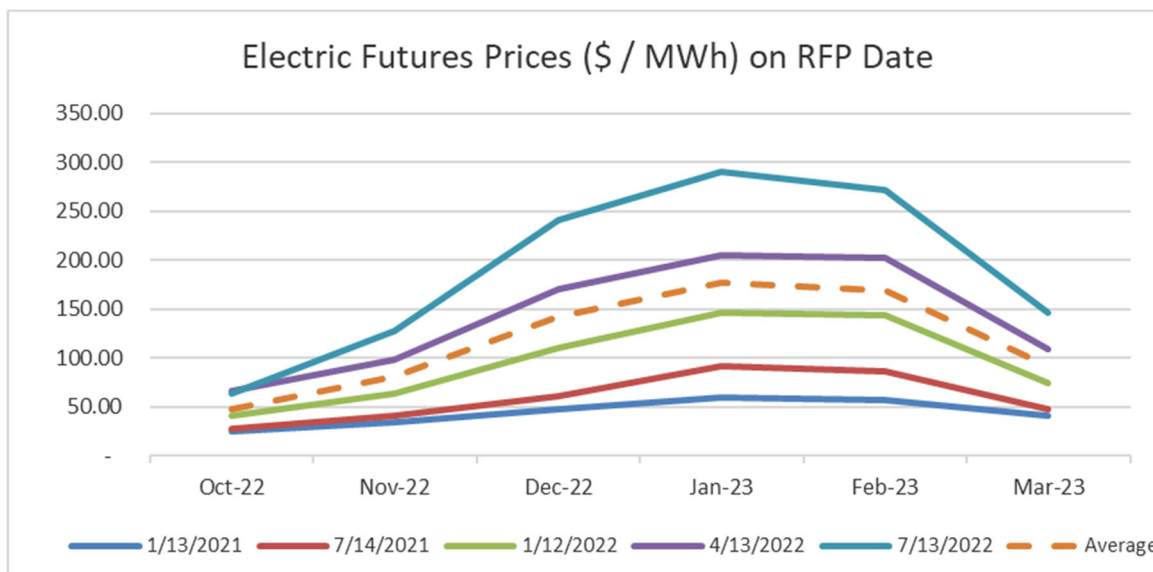
9  
10 Natural gas futures prices had consistently increased throughout 2021 due to market  
11 fundamentals. The natural gas storage season, which begins each April, was low in 2021  
12 in the northeast and other regions in the United States compared to recent years. Also,  
13 there were significant increases in global liquified natural gas (“LNG”) prices, and LNG  
14 often is the stored fuel used by generators when natural gas pipelines are constrained,  
15 thus setting the wholesale electric prices. Additionally, economies had recovered from  
16 the impacts of the COVID-19 pandemic, and natural gas demand increased throughout  
17 the northeast (and worldwide), while natural gas production remained flat. The combined  
18 impacts of increased demand, lower natural gas storage levels, and flat natural gas  
19 production put upward pressure on natural gas prices which resulted in higher electric  
20 prices for the October 2021 through March 2022 pricing period.

21

1 The same market fundamentals that impacted last winter continue to exist for the  
2 upcoming pricing period of October 2022 through March 2023. In addition to those  
3 market fundamentals, beginning in early 2022 natural gas prices began to increase in  
4 response to the war in the Ukraine which reduced expected supply from Russia and  
5 significantly increased demand for LNG globally. Compared to the recently concluded  
6 winter, the increase in LNG demand and continuing market fundamentals from the prior  
7 year resulted in increased natural gas prices for the upcoming winter, and therefore  
8 results in higher electric prices and winter LRS rates.

9  
10 **Q. How did the 2021 LRS Plan perform in this market environment?**

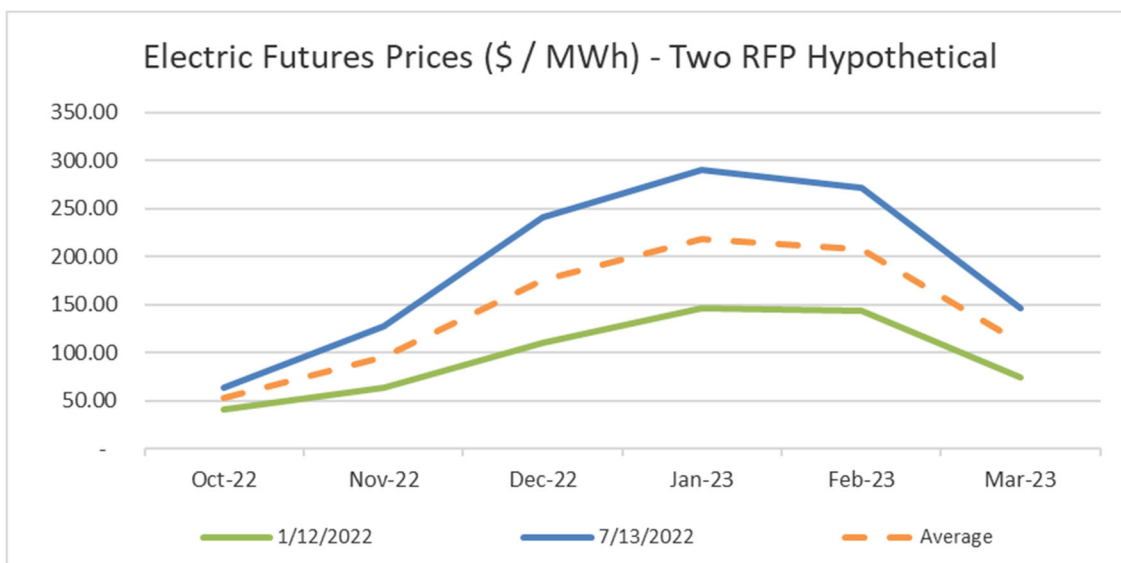
11 A. As described above, the laddering and varying lengths of the Full Requirements Service  
12 contracts allows for mitigation of price volatility because the individual contracts are  
13 procured at different times and are dollar-cost averaged to create a blended supply rate.  
14 In an increasing electric prices market, the higher-cost most recent transactions will be  
15 partially offset by the lower-cost older transactions. This is illustrated in the following  
16 graph:



1  
2 This graph shows the monthly electric futures prices at the time of each RFP, and the  
3 average for each month, for the October 2022 to March 2023 pricing period. The lower-  
4 cost transactions from January and July of 2021 helped offset the recent higher cost  
5 transactions of 2022, resulting in average prices that are \$100 per MWh lower for  
6 December, January, and February from current market prices.

7  
8 The 2021 LRS Plan with its six price points also resulted in lower average monthly  
9 electric futures prices for the October 2022 to March 2023 pricing period compared to a  
10 hypothetical procurement of LRS in two solicitations, each for 50 percent of load for a  
11 12-month term, purchased six months apart.





1  
2 This hypothetical LRS procurement, which is similar to the Basic Service procurement,  
3 utilizes the electric futures prices from the January and July 2022 RFPs for the October  
4 2022 to March 2023 pricing period. The 2021 LRS Plan, with its longer term contracts  
5 and additional price points, resulted in average prices that are \$30-\$40 lower for  
6 December, January, and February compared to this hypothetical procurement.

7  
8 **VII. Conclusion**

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

10 A. Yes.

**INDEX TO SCHEDULES**

Schedule 1	Proposed Last Resort Service Rates
Schedule 2	Summary of Last Resort Service Rates
Schedule 3	Typical Bill Analysis
Schedule 4	Request for Proposals
Schedule 5	Last Resort Service Procurement Summary
Schedule 6	Transaction Confirmations
Schedule 7	Approved 2021 LRS Plan



**The Narragansett Electric Company  
d/b/a Rhode Island Energy**

Last Resort Service Prices (cents per kWh at retail)  
Residential Group: October 2022 through March 2023  
Commercial Group: October 2022 through March 2023  
Industrial Group: October 2022 through December 2022

**Power Supply**  
¢ per kWh

(1)	Contract Month	1	2	3	4	5	6
(2)	Calendar Month	October	November	December	January	February	March
(3)	Year	2022	2022	2022	2023	2023	2023

Customer Group

(4)	Residential (a)	16.100	16.621	17.363	17.935	17.997	16.525
(5)	Commercial Group (a)	15.267	15.982	17.147	17.761	17.650	16.250
(6)	Industrial Group (a)	13.033	22.437	38.610	n/a	n/a	n/a

- (a) Monthly prices calculated as the sum of the average cost of supply including estimated capacity costs (converted to retail delivery) as provided in a confidential submission under separate cover. For Residential and Commercial customer groups, monthly prices also include estimated costs of providing 10% of supply for the period October 2022 through March 2023 through spot market purchases.

**The Narragansett Electric Company**  
**d/b/a Rhode Island Energy**  
Summary of Proposed Last Resort Service Rates

	Residential Group <u>(A-16 and A-60)</u> (a)	Commercial Group <u>(C-06, G-02 and SL)</u> (b)	Industrial Group <u>(B-32, G-32, X-01)</u> (c)
<b><u>Section 1: Variable Last Resort Service Rates, ¢/kWh</u></b>			
(1) October 2022	n/a	16.863	14.397
(2) November 2022	n/a	17.578	23.801
(3) December 2022	n/a	18.743	39.974
(4) January 2023	n/a	19.357	n/a
(5) February 2023	n/a	19.246	n/a
(6) March 2023	n/a	17.846	n/a
<b><u>Section 2: Fixed Last Resort Service Rate, ¢/kWh</u></b>			
(7) October 2022 through March 2023	17.785	18.279	n/a

- 
- (a) Page 3, Line (15) \* 100
  - (b) Page 4, Line (15) \* 100
  - (c) Page 5, Line (5) \* 100

**The Narragansett Electric Company**  
**d/b/a Rhode Island Energy**  
Residential Group Last Resort Service Rate  
(Rates A-16 and A-60 )  
Based on Weighted Average Effective Last Resort Service Prices  
October 2022 through March 2023

**Section 1: Percentage of Residential Customer kWhs Attributable to Last Resort Service**

(1)	Residential Group Last Resort Service kWhs - June 2022	201,539,365
(2)	Total Residential Group kWhs - June 2022	216,361,105
(3)	Percentage of Residential Group Last Resort Service kWhs to Total Residential Customer kWhs	93.15%

**Section 2: Projected Residential Group Last Resort Service kWhs**

	2022 <u>October</u> (a)	2022 <u>November</u> (b)	2022 <u>December</u> (c)	2023 <u>January</u> (d)	2023 <u>February</u> (e)	2023 <u>March</u> (f)	<u>Total</u> (g)
(4)	Projected Total Company Residential Group kWhs	225,800,071	220,378,313	260,291,100	290,976,671	274,811,188	1,534,936,820
(5)	Percentage of Residential Group Last Resort Service kWhs to Total Residential Customer kWhs	<u>93.15%</u>	<u>93.15%</u>	<u>93.15%</u>	<u>93.15%</u>	<u>93.15%</u>	<u>93.15%</u>
(6)	Projected Residential Group Last Resort Service kWhs	210,332,766	205,282,399	242,461,160	271,044,769	255,986,622	1,429,793,649

**Section 3: Weighted Average Residential Group Last Resort Service Charge**

(7)	Projected Residential Group Last Resort Service kWhs	210,332,766	205,282,399	242,461,160	271,044,769	255,986,622	244,685,933	1,429,793,649
(8)	Estimated Residential Group Last Resort Service Price per kWh	<u>\$0.16100</u>	<u>\$0.16621</u>	<u>\$0.17363</u>	<u>\$0.17935</u>	<u>\$0.17997</u>	<u>\$0.16525</u>	
(9)	Projected Residential Group Last Resort Service Cost	\$33,863,575	\$34,119,988	\$42,098,531	\$48,611,879	\$46,069,912	\$40,434,350	<u>\$245,198,235</u>
(10)	Weighted Average Residential Group Base Last Resort Service Charge							\$0.17149
(11)	Weighted Average Last Resort Service Base Rate per kWh							\$0.17149
(12)	Last Resort Service Administrative Cost Factor							\$0.00233
(13)	Last Resort Adjustment Factor							(\$0.00318)
(14)	Renewable Energy Standard Charge							<u>\$0.00721</u>
(15)	Total Estimated Residential Group Last Resort Service Rate per kWh							<u>\$0.17785</u>
(16)	Currently Effective Residential Group Last Resort Service Rate							\$0.07810
(17)	Proposed Increase to Residential Group Last Resort Service Rate							\$0.09975

- (1) Per Company revenue reports (Rates A-16 and A-60) - June 2022
- (2) Per Company revenue reports (Rates A-16 and A-60) - June 2022
- (3) Line (1) ÷ Line (2), rounded to four decimal places
- (4) Per Company forecast for Residential Group rates
- (5) Line (3)
- (6) Line (4) x Line (5)
- (7) Line (6)
- (8) Page 1, Line (4) ÷ 100
- (9) Line (7) x Line (8)

- (10) Line (9), Column (g) ÷ Line (7), Column (g), truncated after 5 decimal places
- (11) Line (10)
- (12) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22
- (13) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22
- (14) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22
- (15) Sum of Lines (11) through (14)
- (16) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22
- (17) Line (15) - Line (16)

**The Narragansett Electric Company**  
**d/b/a Rhode Island Energy**  
Commercial Group Last Resort Service Rates  
(Rates C-06, G-02 and SL)  
Based on Weighted Average Effective Last Resort Service Prices  
October 2022 through March 2023

**Section 1: Percentage of Commercial Group kWhs Attributable to Last Resort Service**

(1)	Commercial Group Last Resort Service kWhs - June 2022	83,147,572
(2)	Total Commercial Group kWhs - June 2022	154,393,182
(3)	Percentage of Commercial Group Last Resort Service kWhs to Total Commercial Customer kWhs	53.85%

**Section 2: Projected Commercial Group Last Resort Service kWhs**

	2022 <u>October</u> (a)	2022 <u>November</u> (b)	2022 <u>December</u> (c)	2023 <u>January</u> (d)	2023 <u>February</u> (e)	2023 <u>March</u> (f)	<u>Total</u> (g)
(4)	Projected Total Company Commercial Group kWhs	160,429,171	154,944,488	160,236,066	164,203,304	157,407,297	953,614,301
(5)	Percentage of Commercial Group Last Resort Service kWhs to Total Commercial Customer kWhs	<u>53.85%</u>	<u>53.85%</u>	<u>53.85%</u>	<u>53.85%</u>	<u>53.85%</u>	<u>53.85%</u>
(6)	Projected Commercial Group Last Resort Service kWhs	86,391,109	83,437,607	86,287,122	88,423,479	84,763,829	513,521,302

**Section 3: Weighted Average Commercial Group Last Resort Service Charge**

(7)	Projected Commercial Group Last Resort Service kWhs	86,391,109	83,437,607	86,287,122	88,423,479	84,763,829	513,521,302
(8)	Estimated Commercial Group Last Resort Service Price per kWh	<u>\$0.15267</u>	<u>\$0.15982</u>	<u>\$0.17147</u>	<u>\$0.17761</u>	<u>\$0.17650</u>	<u>\$0.16250</u>
(9)	Projected Commercial Group Last Resort Service Cost	\$13,189,331	\$13,334,998	\$14,795,653	\$15,704,894	\$14,960,816	<u>\$85,671,142</u>
(10)	Weighted Average Commercial Group Base Last Resort Service Charge						\$0.16683
(11)	Monthly and Weighted Average Last Resort Service Base Price per kWh	<u>\$0.15267</u>	<u>\$0.15982</u>	<u>\$0.17147</u>	<u>\$0.17761</u>	<u>\$0.17650</u>	<u>\$0.16250</u>
(12)	Last Resort Service Administrative Cost Factor	<u>\$0.00210</u>	<u>\$0.00210</u>	<u>\$0.00210</u>	<u>\$0.00210</u>	<u>\$0.00210</u>	<u>\$0.00210</u>
(13)	Last Resort Adjustment Factor	<u>\$0.00665</u>	<u>\$0.00665</u>	<u>\$0.00665</u>	<u>\$0.00665</u>	<u>\$0.00665</u>	<u>\$0.00665</u>
(14)	Renewable Energy Standard Charge	<u>\$0.00721</u>	<u>\$0.00721</u>	<u>\$0.00721</u>	<u>\$0.00721</u>	<u>\$0.00721</u>	<u>\$0.00721</u>
(15)	Total Estimated Last Resort Service Price per kWh	<u>\$0.16863</u>	<u>\$0.17578</u>	<u>\$0.18743</u>	<u>\$0.19357</u>	<u>\$0.19246</u>	<u>\$0.17846</u>
(16)	Currently Effective Commercial Group Last Resort Service Charge						\$0.08047
(17)	Proposed Increase to Commercial Group Last Resort Service Rate						\$0.10232

- (1) Per Company revenue reports (Rates C-06, G-02 and SL) - June 2022  
(2) Per Company revenue reports (Rates C-06, G-02 and SL) - June 2022  
(3) Line (1) ÷ Line (2), rounded to four decimal places  
(4) Per Company forecast for Commercial Group rates  
(5) Line (3)  
(6) Line (4) x Line (5)  
(7) Line (6)  
(8) Page 1, Line (5) ÷ 100  
(9) Line (7) x Line (8)

- (10) Line (9), Column (g) ÷ Line (7), Column (g), truncated after 5 decimal places  
(11) Line (8) for monthly prices and Line (10) for weighted average price  
(12) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22  
(13) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22  
(14) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22  
(15) Sum of Lines (11) through (14)  
(16) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22  
(17) Line (15) Column (g) - Line (16)

**The Narragansett Electric Company**  
**d/b/a Rhode Island Energy**  
Industrial Group Last Resort Service Rates  
(Rates B-32, G-32, and X-01)  
October 2022 through December 2022

	<u>October 2022</u>	<u>November 2022</u>	<u>December 2022</u>
(1) Industrial Group Last Resort Service Rate per kWh	\$0.13033	\$0.22437	\$0.38610
(2) Last Resort Service Administrative Cost Factor	\$0.00268	\$0.00268	\$0.00268
(3) Last Resort Adjustment Factor	\$0.00375	\$0.00375	\$0.00375
(4) Renewable Energy Standard Charge	<u>\$0.00721</u>	<u>\$0.00721</u>	<u>\$0.00721</u>
(5) Total Industrial Group Last Resort Service Rate per kWh	\$0.14397	\$0.23801	\$0.39974

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- (1) Page 1, Line (6) ÷ 100
- (2) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22
- (3) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22
- (4) per Summary of Rates, Last Resort Service, RIPUC No. 2096, effective 7/1/22
- (5) sum of Lines (1) through (4)





THE NARRAGANSETT ELECTRIC COMPANY  
Summary of Rates  
Last Resort Service

	Last Resort Service Base Charge	Last Resort Service Adjustment	Last Resort Service Admin. Cost Factor	Renewable Energy Standard Charge	Total Commodity Charges
	A	B	C	D	E
<u>Residential Group</u> A-16, A-60					
October 1, 2022	\$0.17149	(\$0.00318)	\$0.00233	\$0.00721	\$0.17785
November 1, 2022	\$0.17149	(\$0.00318)	\$0.00233	\$0.00721	\$0.17785
December 1, 2022	\$0.17149	(\$0.00318)	\$0.00233	\$0.00721	\$0.17785
January 1, 2023	\$0.17149	(\$0.00318)	\$0.00233	\$0.00721	\$0.17785
February 1, 2023	\$0.17149	(\$0.00318)	\$0.00233	\$0.00721	\$0.17785
March 1, 2023	\$0.17149	(\$0.00318)	\$0.00233	\$0.00721	\$0.17785
<i>Effective Date of Last Rate Change:</i>	10/01/22	04/01/22	04/01/22	04/01/22	10/01/22
<u>Commercial Group</u> C-06, G-02, S-05, S-06, S-10, S-14 (1)					
Variable Price Option:					
October 1, 2022	\$0.15267	\$0.00665	\$0.00210	\$0.00721	\$0.16863
November 1, 2022	\$0.15982	\$0.00665	\$0.00210	\$0.00721	\$0.17578
December 1, 2022	\$0.17147	\$0.00665	\$0.00210	\$0.00721	\$0.18743
January 1, 2023	\$0.17761	\$0.00665	\$0.00210	\$0.00721	\$0.19357
February 1, 2023	\$0.17650	\$0.00665	\$0.00210	\$0.00721	\$0.19246
March 1, 2023	\$0.16250	\$0.00665	\$0.00210	\$0.00721	\$0.17846
<i>Effective Date of Last Rate Change:</i>	10/01/22	04/01/22	04/01/22	04/01/22	10/01/22
Fixed Price Option:                      C-06, G-02, S-05, S-06, S-10, S-14					
October 1, 2022	\$0.16683	\$0.00665	\$0.00210	\$0.00721	\$0.18279
November 1, 2022	\$0.16683	\$0.00665	\$0.00210	\$0.00721	\$0.18279
December 1, 2022	\$0.16683	\$0.00665	\$0.00210	\$0.00721	\$0.18279
January 1, 2023	\$0.16683	\$0.00665	\$0.00210	\$0.00721	\$0.18279
February 1, 2023	\$0.16683	\$0.00665	\$0.00210	\$0.00721	\$0.18279
March 1, 2023	\$0.16683	\$0.00665	\$0.00210	\$0.00721	\$0.18279
<i>Effective Date of Last Rate Change:</i>	10/01/22	04/01/22	04/01/22	04/01/22	10/01/22
<u>Industrial Group</u> B-32, G-32, X-01					
October 1, 2022	\$0.13033	\$0.00375	\$0.00268	\$0.00721	\$0.14397
November 1, 2022	\$0.22437	\$0.00375	\$0.00268	\$0.00721	\$0.23801
December 1, 2022	\$0.38610	\$0.00375	\$0.00268	\$0.00721	\$0.39974
<i>Effective Date of Last Rate Change:</i>	10/01/22	04/01/22	04/01/22	04/01/22	10/01/22

Taxes and other rate clauses apply as usual and will appear on customer bills as applicable.

- A Base charges in compliance with the Last Resort Service 2022 Procurement Plan
- B per RIPUC No. 2237, Last Resort Service Adjustment Provision
- C per RIPUC No. 2237, Last Resort Service Adjustment Provision
- D The Renewable Standard Energy Charge is collected from LRS customers for the purpose of acquiring a portion of Rhode Island's energy supply from renewable energy resources, as required by R.I. General Laws section 39-26-1.
- E Column A + Column B + Column C + Column D

(1) The Fixed Price Option will be the customary option for customers served under rate C-06. The Variable Price Option will be the customary option for customers served under rates G-02, S-05, S-06, S-10 and S-14.

Effective: 10/1/2022  
(Replacing R.I.P.U.C. No. 2096 effective 7/1/22)  
Issued: 7/21/2022



**THE NARRAGANSETT ELECTRIC COMPANY  
d/b/a RHODE ISLAND ENERGY  
R.I.P.U.C. DOCKET NO. 4978  
LAST RESORT SERVICE RATE FILING  
WITNESSES: OLIVEIRA AND RUEBENACKER  
SCHEDULES**

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Schedule 3  
Typical Bill Analysis

The Narragansett Electric Company  
Calculation of Monthly Typical Bill  
Total Bill Impact of Proposed  
Rates Applicable to A-16 Rate Customers

Monthly kWh (a)	Rates Effective July 1, 2022			Proposed Rates Effective October 1, 2022			\$ Increase (Decrease)			Increase (Decrease) % of Total Bill			Percentage of Customers (t)		
	Delivery Services (b)	Supply Services (c)	GET (d)	Delivery Services (f)	Supply Services (g)	GET (h)	Delivery Services (i) = (f) - (b)	Supply Services (k) = (g) - (c)	GET (l) = (h) - (d)	Delivery Services (m) = (i) - (b)	Supply Services (o) = (k) - (c)	GET (p) = (l) - (d)		Total (q) = (m) / (e)	
150	\$26.77	\$11.72	\$1.60	\$26.77	\$26.68	\$2.23	\$0.00	\$14.96	\$0.63	\$0.00	0.0%	37.3%	1.6%	38.9%	30.7%
300	\$44.29	\$23.43	\$2.82	\$44.29	\$53.36	\$4.07	\$0.00	\$29.93	\$1.25	\$0.00	0.0%	42.4%	1.8%	44.2%	12.9%
400	\$55.97	\$31.24	\$3.63	\$55.97	\$71.14	\$5.30	\$0.00	\$39.90	\$1.67	\$0.00	0.0%	43.9%	1.8%	45.8%	11.6%
500	\$67.65	\$39.05	\$4.45	\$67.65	\$88.93	\$6.52	\$0.00	\$49.88	\$2.07	\$0.00	0.0%	44.9%	1.9%	46.7%	9.6%
600	\$79.32	\$46.86	\$5.26	\$79.32	\$106.71	\$7.75	\$0.00	\$59.85	\$2.49	\$0.00	0.0%	45.5%	1.9%	47.4%	7.7%
700	\$91.00	\$54.67	\$6.07	\$91.00	\$124.50	\$8.98	\$0.00	\$69.83	\$2.91	\$0.00	0.0%	46.0%	1.9%	47.9%	19.0%
1,200	\$149.40	\$93.72	\$10.13	\$149.40	\$213.42	\$15.12	\$0.00	\$119.70	\$4.99	\$0.00	0.0%	47.3%	2.0%	49.2%	6.8%
2,000	\$242.83	\$156.20	\$16.63	\$242.83	\$355.70	\$24.94	\$0.00	\$199.50	\$8.31	\$0.00	0.0%	48.0%	2.0%	50.0%	2.3%

Rates Effective July 1, 2022

Proposed Rates Effective October 1, 2022

Line Item on Bill

(1) Distribution Customer Charge	(s)	\$6.00	(t)	\$6.00	Customer Charge
(2) LIHEAP Enhancement Charge		\$0.79		\$0.79	LIHEAP Enhancement Charge
(3) Renewable Energy Growth Program Charge		\$2.46		\$2.46	RE Growth Program
(4) Distribution Charge (per kWh)		\$0.04580		\$0.04580	
(5) Operating & Maintenance Expense Charge		\$0.00211		\$0.00211	
(6) Operating & Maintenance Expense Reconciliation Factor		(\$0.00010)		(\$0.00010)	
(7) CapEx Factor Charge		\$0.00639		\$0.00639	
(8) CapEx Reconciliation Factor		(\$0.00069)		(\$0.00069)	
(9) Revenue Decoupling Adjustment Factor		(\$0.00003)		(\$0.00003)	Distribution Energy Charge
(10) Pension Adjustment Factor		(\$0.00006)		(\$0.00006)	
(11) Storm Fund Replenishment Factor		\$0.00788		\$0.00788	
(12) Arraerage Management Adjustment Factor		\$0.00007		\$0.00007	
(13) Performance Incentive Factor		\$0.00012		\$0.00012	
(14) Low Income Discount Recovery Factor		\$0.00238		\$0.00238	
(15) Long-term Contracting for Renewable Energy Charge		(\$0.00131)		(\$0.00131)	Renewable Energy Distribution Charge
(16) Net Metering Charge		\$0.00488		\$0.00488	
(17) Base Transmission Charge		\$0.03524		\$0.03524	
(18) Transmission Adjustment Factor		\$0.00095		\$0.00095	Transmission Charge
(19) Transmission Uncollectible Factor		\$0.00046		\$0.00046	
(20) Base Transition Charge		\$0.00000		\$0.00000	Transition Charge
(21) Transition Adjustment		\$0.00018		\$0.00018	
(22) Energy Efficiency Program Charge		\$0.01252		\$0.01252	Energy Efficiency Programs
(23) Last Resort Service Base Charge		\$0.07174		\$0.17149	
(24) LRS Adjustment Factor		(\$0.00318)		(\$0.00318)	
(25) LRS Administrative Cost Adjustment Factor		\$0.00233		\$0.00233	Supply Services Energy Charge
(26) Renewable Energy Standard Charge		\$0.00721		\$0.00721	
Line Item on Bill					
(27) Customer Charge		\$6.00		\$6.00	
(28) LIHEAP Enhancement Charge		\$0.79		\$0.79	
(29) RE Growth Program		\$2.46		\$2.46	
(30) Transmission Charge		\$0.03665		\$0.03665	
(31) Distribution Energy Charge		\$0.06387		\$0.06387	
(32) Transition Charge		\$0.00018		\$0.00018	
(33) Energy Efficiency Programs		\$0.01252		\$0.01252	
(34) Renewable Energy Distribution Charge		\$0.00357		\$0.00357	
(35) Supply Services Energy Charge		\$0.07810		\$0.17785	

Column (s): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022  
Column (t): Line (23) per Schedule 1, Page 3, Line (10). All other rates per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022

The Narragansett Electric Company  
Calculation of Monthly Typical Bill  
Total Bill Impact of Proposed  
Rates Applicable to A-60 Rate Customer

Monthly kWh	Rates Effective July 1, 2022				Proposed Rates Effective October 1, 2022				\$ Increase (Decrease)				Increase (Decrease) % of Total Bill			Percentage of Customers			
	Delivery Services (b)	Supply Services (c)	Low Income Discount (d) = [(b)+(c)] x .25	Total GET (f)	Delivery Services (h)	Supply Services (i)	Low Income Discount (j) = [(h)+(i)] x .25	Total GET (l)	Delivery Services (n) = [(h)+(j)] - (m)	Supply Services (o) = (i) - (k)	Low Income Discount (p) = (l) - (m)	Total GET (q) = (n) + (p)	Delivery Services (r) = (n)/(g)	Supply Services (s) = (o)/(g)	Low Income Discount (t) = (p)/(g)		Total GET (u) = (r)/(g)	(v)	
150	\$26.41	\$11.72	(\$9.53)	\$28.60	\$1.19	\$29.79	(\$13.27)	\$39.82	\$1.66	\$41.48	(\$17.74)	\$14.96	\$0.47	\$11.69	-12.6%	50.2%	1.6%	39.2%	32.1%
300	\$43.57	\$23.43	(\$16.75)	\$50.25	\$2.09	\$52.34	(\$24.23)	\$72.70	\$3.03	\$75.73	(\$29.88)	\$29.93	\$0.94	\$23.39	-14.3%	57.2%	1.8%	44.7%	15.4%
400	\$55.01	\$31.24	(\$21.56)	\$64.69	\$2.70	\$67.39	(\$31.54)	\$94.61	\$3.94	\$98.55	(\$39.98)	\$39.90	\$1.24	\$31.16	-14.8%	59.2%	1.8%	46.2%	12.5%
500	\$66.46	\$39.05	(\$26.38)	\$79.13	\$3.30	\$82.43	(\$38.88)	\$116.54	\$4.86	\$121.40	(\$46.46)	\$46.88	\$1.56	\$38.97	-15.1%	60.5%	1.9%	47.3%	9.6%
600	\$77.90	\$46.86	(\$31.19)	\$93.57	\$3.90	\$97.47	(\$46.15)	\$138.46	\$5.77	\$144.23	(\$54.65)	\$54.77	\$1.87	\$46.76	-15.3%	61.4%	1.9%	48.0%	7.2%
700	\$89.34	\$54.67	(\$36.00)	\$108.01	\$4.50	\$112.51	(\$63.46)	\$160.38	\$6.68	\$167.06	(\$63.46)	\$63.83	\$2.18	\$54.55	-15.5%	62.1%	1.9%	48.5%	16.4%
1,200	\$146.54	\$93.72	(\$60.07)	\$180.19	\$7.51	\$187.70	(\$89.99)	\$269.97	\$11.25	\$281.22	(\$89.99)	\$119.70	\$3.74	\$93.52	-15.9%	63.8%	2.0%	49.8%	5.2%
2,000	\$238.07	\$156.20	(\$98.57)	\$295.70	\$12.32	\$308.02	(\$148.44)	\$445.33	\$18.56	\$463.89	(\$148.44)	\$199.50	\$6.24	\$155.87	-16.2%	64.8%	2.0%	50.6%	1.6%

Rates Effective July 1, 2022 (v)

Proposed Rates Effective October 1, 2022 (x)

(1) Distribution Customer Charge	\$6.00	\$6.00
(2) LIHEAP Enhancement Charge	\$0.79	\$0.79
(3) Renewable Energy Growth Program Charge	\$2.46	\$2.46
(4) Distribution Charge (per kWh)	\$0.04580	\$0.04580
(5) Operating & Maintenance Expense Charge	\$0.00211	\$0.00211
(6) Operating & Maintenance Expense Reconciliation Factor	(\$0.00010)	(\$0.00010)
(7) Capital Factor Charge	\$0.00639	\$0.00639
(8) Capital Reconciliation Factor	(\$0.00069)	(\$0.00069)
(9) Revenue Decoupling Adjustment Factor	(\$0.00065)	(\$0.00065)
(10) Pension Adjustment Factor	(\$0.00066)	(\$0.00066)
(11) Storm Fund Replenishment Factor	\$0.00738	\$0.00738
(12) Average Management Adjustment Factor	\$0.00007	\$0.00007
(13) Performance Incentive Factor	\$0.00112	\$0.00112
(14) Low Income Discount Recovery Factor	\$0.00012	\$0.00012
(15) Low Income Discount for Renewable Energy Charge	(\$0.00131)	(\$0.00131)
(16) New Metering Charge	\$0.00488	\$0.00488
(17) Base Transition Charge	\$0.03524	\$0.03524
(18) Transition Adjustment Factor	\$0.00095	\$0.00095
(19) Transmission Uncollectible Factor	\$0.00046	\$0.00046
(20) Base Transition Charge	\$0.00000	\$0.00000
(21) Transition Adjustment	\$0.00018	\$0.00018
(22) Energy Efficiency Program Charge	\$0.01252	\$0.01252
(23) Last Resort Service Base Charge	\$0.00714	\$0.00714
(24) LRS Adjustment Factor	(\$0.00318)	(\$0.00318)
(25) LRS Administrative Cost Adjustment Factor	\$0.00233	\$0.00233
(26) Renewable Energy Standard Charge	\$0.00721	\$0.00721
Line Item on Bill		
(27) Customer Charge	\$6.00	\$6.00
(28) LIHEAP Enhancement Charge	\$0.79	\$0.79
(29) RE Growth Program	\$2.46	\$2.46
(30) Transmission Charge	\$0.03665	\$0.03665
(31) Distribution Energy Charge	\$0.06149	\$0.06149
(32) Transition Charge	\$0.00018	\$0.00018
(33) Energy Efficiency Program	\$0.01252	\$0.01252
(34) Renewable Energy Distribution Charge	\$0.00557	\$0.00557
(35) Supply Services Energy Charge	\$0.07810	\$0.07810
(36) Discount Percentage	25%	25%

Line Item on Bill  
Customer Charge  
LIHEAP Enhancement Charge  
RE Growth Program  
Distribution Energy Charge  
Renewable Energy Distribution Charge  
Transmission Charge  
Transition Charge  
Energy Efficiency Programs  
Supply Services Energy Charge

Column (v): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022.  
Column (x): Line (23) per Schedule 1, Page 3, Line (10), All other rates per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022.

The Narragansett Electric Company  
Calculation of Monthly Typical Bill  
Total Bill Impact of Proposal  
Rates Applicable to A-60 Rate Customer

Monthly kWh	Rates Effective July 1, 2022				Proposed Rates Effective October 1, 2022				\$ Increase (Decrease)				Increase (Decrease) % of Total Bill		Percentage of Customers			
	Delivery Services (b)	Supply Services (c)	Low Income Discount (d) = [(b)+(c)] x .30	Total GET (f) = (b) + (c) + (d)	Delivery Services (h)	Supply Services (i)	Low Income Discount (j) = [(h)+(i)] x .30	Total GET (l) = (h) + (i) + (j)	Delivery Services (n) = [(h)+(i)] - (k)	Supply Services (o) = (i) - (j)	Low Income Discount (p) = (j) - (k)	Total GET (r) = (n) + (o) + (p)	Delivery Services (t) = (n)/(g)	Supply Services (u) = (o)/(g)		Total GET (v) = (t) + (u)	(w)	
150	\$26.41	\$11.72	(\$11.44)	\$26.69	\$11.11	(\$11.44)	\$26.69	\$37.16	\$15.55	(\$4.49)	\$14.96	\$0.44	\$10.91	-16.2%	53.8%	1.6%	39.2%	32.1%
300	\$43.57	\$23.43	(\$20.10)	\$46.90	\$1.95	(\$20.10)	\$48.85	\$67.85	\$2.83	(\$8.98)	\$29.93	\$0.88	\$21.83	-18.4%	61.3%	1.8%	44.7%	15.4%
400	\$55.01	\$31.24	(\$25.88)	\$60.37	\$2.52	(\$25.88)	\$62.89	\$86.30	\$3.68	(\$11.97)	\$39.90	\$1.16	\$29.09	-19.0%	63.4%	1.8%	46.3%	12.5%
500	\$66.46	\$39.05	(\$31.65)	\$73.86	\$3.08	(\$31.65)	\$76.94	\$108.77	\$4.53	(\$14.97)	\$49.88	\$1.45	\$36.36	-19.5%	64.8%	1.9%	47.3%	9.6%
600	\$77.90	\$46.86	(\$37.43)	\$87.33	\$3.64	(\$37.43)	\$90.97	\$129.23	\$5.38	(\$17.95)	\$59.85	\$1.74	\$43.64	-19.7%	65.8%	1.9%	48.0%	7.2%
700	\$89.34	\$54.67	(\$43.20)	\$100.81	\$4.20	(\$43.20)	\$105.01	\$149.69	\$6.24	(\$20.95)	\$69.83	\$2.04	\$50.92	-20.0%	66.8%	1.9%	48.5%	16.4%
1,200	\$146.54	\$93.72	(\$72.08)	\$168.18	\$7.01	(\$72.08)	\$175.19	\$251.97	\$10.50	(\$35.91)	\$119.70	\$3.49	\$87.28	-20.5%	68.3%	2.0%	49.8%	5.2%
2,000	\$238.07	\$156.20	(\$118.28)	\$275.99	\$11.50	(\$118.28)	\$287.49	\$415.64	\$17.32	(\$59.85)	\$199.50	\$5.82	\$145.47	-20.8%	69.4%	2.0%	50.6%	1.6%

Rates Effective July 1, 2022 (v)

Proposed Rates Effective October 1, 2022 (x)

(1) Distribution Customer Charge	\$6.00	\$6.00
(2) LIHEAP Enhancement Charge	\$0.79	\$0.79
(3) Renewable Energy Growth Program Charge	\$2.46	\$2.46
(4) Distribution Charge (per kWh)	\$0.04580	\$0.04580
(5) Operating & Maintenance Expense Charge	\$0.00211	\$0.00211
(6) Operating & Maintenance Expense Reconciliation Factor	(\$0.00010)	(\$0.00010)
(7) Capital Factor Charge	\$0.00639	\$0.00639
(8) Capital Reconciliation Factor	(\$0.00069)	(\$0.00069)
(9) Revenue Decoupling Adjustment Factor	(\$0.00005)	(\$0.00005)
(10) Pension Adjustment Factor	(\$0.00006)	(\$0.00006)
(11) Storm Fund Replenishment Factor	\$0.00738	\$0.00738
(12) Average Management Adjustment Factor	\$0.00007	\$0.00007
(13) Performance Incentive Factor	\$0.00012	\$0.00012
(14) Low Income Discount Recovery Factor	\$0.00012	\$0.00012
(15) Net Metering Credit for Renewable Energy Charge	(\$0.00131)	(\$0.00131)
(16) Net Metering Charge	\$0.00488	\$0.00488
(17) Base Transition Charge	\$0.03524	\$0.03524
(18) Transition Adjustment Factor	\$0.00095	\$0.00095
(19) Transmission Uncollectible Factor	\$0.00046	\$0.00046
(20) Base Transition Charge	\$0.00000	\$0.00000
(21) Transition Adjustment	\$0.00018	\$0.00018
(22) Energy Efficiency Program Charge	\$0.01252	\$0.01252
(23) Last Resort Service Base Charge	\$0.00714	\$0.00714
(24) LRS Adjustment Factor	(\$0.00318)	(\$0.00318)
(25) LRS Administrative Cost Adjustment Factor	\$0.00233	\$0.00233
(26) Renewable Energy Standard Charge	\$0.00721	\$0.00721

Line Item on Bill

(27) Customer Charge	\$6.00	\$6.00
(28) LIHEAP Enhancement Charge	\$0.79	\$0.79
(29) RE Growth Program	\$2.46	\$2.46
(30) Transmission Charge	\$0.03665	\$0.03665
(31) Distribution Energy Charge	\$0.06149	\$0.06149
(32) Transition Charge	\$0.00018	\$0.00018
(33) Energy Efficiency Program	\$0.01252	\$0.01252
(34) Renewable Energy Distribution Charge	\$0.00557	\$0.00557
(35) Supply Services Energy Charge	\$0.07810	\$0.07810
(36) Discount Percentage	30%	30%

Column (v): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022.  
Column (x): Line (23) per Schedule 1, Page 3, Line (10). All other rates per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022.

The Narragansett Electric Company  
Calculation of Monthly Typical Bill  
Total Bill Impact of Proposed  
Rates Applicable to C-06 Rate Customers

Monthly kWh (a)	Rates Effective July 1, 2022			Proposed Rates Effective October 1, 2022			\$ Increase (Decrease)			% of Total Bill			Percentage of Customers (r)		
	Delivery Services (b)	Supply Services (c)	GET (d)	Delivery Services (f)	Supply Services (g)	GET (h)	Delivery Services (i) = (f) - (b)	Supply Services (k) = (g) - (c)	GET (l) = (h) - (d)	Delivery Services (m) = (i) + (k) + (l)	Supply Services (n) = (j) + (e)	GET (p) = (l) / (e)		Total (q) = (m) / (e)	
250	\$42.72	\$20.12	\$2.62	\$42.72	\$45.70	\$3.68	\$0.00	\$25.58	\$1.06	\$26.64	0.0%	39.1%	1.6%	40.7%	56.3%
500	\$70.87	\$40.24	\$4.63	\$70.87	\$91.40	\$6.76	\$0.00	\$51.16	\$2.13	\$53.29	0.0%	44.2%	1.8%	46.0%	16.9%
1,000	\$127.16	\$80.47	\$8.65	\$127.16	\$182.79	\$12.91	\$0.00	\$102.32	\$4.26	\$106.58	0.0%	47.3%	2.0%	49.3%	8.1%
1,500	\$183.46	\$120.71	\$12.67	\$183.46	\$274.19	\$19.07	\$0.00	\$153.48	\$6.40	\$159.88	0.0%	48.4%	2.0%	50.5%	5.0%
2,000	\$239.75	\$160.94	\$16.70	\$239.75	\$365.58	\$25.22	\$0.00	\$204.64	\$8.52	\$213.16	0.0%	49.0%	2.0%	51.1%	13.6%

Rates Effective July 1, 2022 (s)

Proposed Rates Effective October 1, 2022 (t)

Line Item on Bill	Amount
(1) Distribution Customer Charge	\$10.00
(2) LIHEAP Enhancement Charge	\$0.79
(3) Renewable Energy Growth Program Charge	\$3.78
(4) Distribution Charge (per kWh)	\$0.0482
(5) Operating & Maintenance Expense Charge	\$0.00211
(6) Operating & Maintenance Expense Reconciliation Factor	(\$0.00010)
(7) CapEx Factor Charge	\$0.00543
(8) CapEx Reconciliation Factor	\$0.00013
(9) Revenue Decoupling Adjustment Factor	(\$0.00003)
(10) Pension Adjustment Factor	(\$0.00006)
(11) Storm Fund Replenishment Factor	\$0.00788
(12) Arraige Management Adjustment Factor	\$0.00007
(13) Performance Incentive Factor	\$0.00012
(14) Low Income Discount Recovery Factor	\$0.00238
(15) Long-term Contracting for Renewable Energy Charge	(\$0.00131)
(16) Net Metering Charge	\$0.00488
(17) Base Transmission Charge	\$0.03540
(18) Transmission Adjustment Factor	(\$0.00219)
(19) Transmission Uncollectible Factor	\$0.00036
(20) Base Transition Charge	\$0.00000
(21) Transition Adjustment	\$0.00018
(22) Energy Efficiency Program Charge	\$0.01252
(23) Last Resort Service Base Charge	\$0.06451
(24) LRS Adjustment Factor	\$0.00665
(25) LRS Administrative Cost Adjustment Factor	\$0.00210
(26) Renewable Energy Standard Charge	\$0.00721
Line Item on Bill	
(27) Customer Charge	\$10.00
(28) LIHEAP Enhancement Charge	\$0.79
(29) RE Growth Program	\$3.78
(30) Transmission Charge	\$0.03357
(31) Distribution Energy Charge	\$0.06275
(32) Transition Charge	\$0.00018
(33) Energy Efficiency Programs	\$0.01252
(34) Renewable Energy Distribution Charge	\$0.00357
(35) Supply Services Energy Charge	\$0.08047
Customer Charge	\$10.00
LIHEAP Enhancement Charge	\$0.79
RE Growth Program	\$3.78
Distribution Energy Charge	\$0.06275
Transition Charge	\$0.00018
Energy Efficiency Programs	\$0.01252
Supply Services Energy Charge	\$0.00357
Renewable Energy Distribution Charge	\$0.18279
Transmission Charge	\$0.03540
Transition Charge	\$0.00018
Energy Efficiency Programs	\$0.01252
Supply Services Energy Charge	\$0.0665
Supply Services Energy Charge	\$0.00210
Supply Services Energy Charge	\$0.00721

Column (s): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022  
Column (t): Line (23) per Schedule 1, Page 4, Line (10). All other rates per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022



The Narragansett Electric Company  
Calculation of Monthly Typical Bill  
Total Bill Impact of Proposed  
Rates Applicable to G-02 Rate Customers

kW	Monthly Power Hours Use	Rates Effective July 1, 2022				Proposed Rates Effective October 1, 2022				\$ Increase (Decrease)				Increase (Decrease) % of Total Bill							
		Delivery Services (b)	Supply Services (c)	GET (d)	Total (e) = (a) + (b) + (c)	Delivery Services (f)	Supply Services (g)	GET (h)	Total (i) = (f) + (g) + (h)	Delivery Services (j) = (f) - (b)	Supply Services (k) = (g) - (c)	GET (l) = (h) - (d)	Total (m) = (j) + (k) + (l)	Delivery Services (n) = (j) / (c)	Supply Services (o) = (k) / (c)	GET (p) = (l) / (c)	Total (q) = (m) / (c)				
20	200	\$541.61	\$321.88	\$35.98	\$899.47	\$541.61	\$731.16	\$53.03	\$1,325.80	\$0.00	\$731.16	\$53.03	\$1,325.80	\$0.00	\$409.28	\$17.05	\$426.33	1.9%	45.5%	2.2%	47.4%
50	200	\$1,206.53	\$804.70	\$83.80	\$2,095.03	\$1,206.53	\$1,827.90	\$126.43	\$3,160.86	\$0.00	\$1,827.90	\$126.43	\$3,160.86	\$0.00	\$1,023.20	\$42.63	\$1,065.83	0.0%	48.8%	2.0%	50.9%
100	200	\$2,314.73	\$1,609.40	\$163.51	\$4,087.64	\$2,314.73	\$3,655.80	\$248.77	\$6,219.30	\$0.00	\$3,655.80	\$248.77	\$6,219.30	\$0.00	\$2,046.40	\$85.26	\$2,131.66	0.0%	50.1%	2.1%	52.1%
150	200	\$3,422.93	\$2,414.10	\$243.21	\$6,080.24	\$3,422.93	\$5,483.70	\$371.11	\$9,277.74	\$0.00	\$5,483.70	\$371.11	\$9,277.74	\$0.00	\$3,069.60	\$127.90	\$3,197.50	0.0%	50.5%	2.1%	52.6%
20	300	\$627.75	\$482.82	\$46.27	\$1,156.84	\$627.75	\$1,096.74	\$71.85	\$1,796.34	\$0.00	\$1,096.74	\$71.85	\$1,796.34	\$0.00	\$613.92	\$25.58	\$639.50	0.0%	53.1%	2.2%	55.3%
50	300	\$1,421.88	\$1,207.05	\$109.54	\$2,738.47	\$1,421.88	\$2,741.85	\$173.49	\$4,337.22	\$0.00	\$2,741.85	\$173.49	\$4,337.22	\$0.00	\$1,534.80	\$63.95	\$1,598.75	0.0%	56.0%	2.3%	58.4%
100	300	\$2,745.43	\$2,414.10	\$214.98	\$5,374.51	\$2,745.43	\$5,483.70	\$342.88	\$8,572.01	\$0.00	\$5,483.70	\$342.88	\$8,572.01	\$0.00	\$3,069.60	\$127.90	\$3,197.50	0.0%	57.1%	2.4%	59.5%
150	300	\$4,065.98	\$3,621.15	\$320.42	\$8,010.55	\$4,065.98	\$8,225.55	\$512.27	\$12,806.80	\$0.00	\$8,225.55	\$512.27	\$12,806.80	\$0.00	\$4,604.40	\$191.85	\$4,796.25	0.0%	57.5%	2.4%	59.9%
20	400	\$713.89	\$643.76	\$56.57	\$1,414.22	\$713.89	\$1,462.32	\$90.68	\$2,266.89	\$0.00	\$1,462.32	\$90.68	\$2,266.89	\$0.00	\$818.56	\$34.11	\$852.67	0.0%	57.9%	2.4%	60.3%
50	400	\$1,637.23	\$1,609.40	\$135.28	\$3,381.91	\$1,637.23	\$3,655.80	\$220.54	\$5,513.57	\$0.00	\$3,655.80	\$220.54	\$5,513.57	\$0.00	\$2,046.40	\$85.26	\$2,131.66	0.0%	60.5%	2.5%	63.0%
100	400	\$3,176.13	\$3,218.80	\$266.46	\$6,661.39	\$3,176.13	\$7,311.60	\$436.99	\$10,924.72	\$0.00	\$7,311.60	\$436.99	\$10,924.72	\$0.00	\$4,092.80	\$170.53	\$4,263.33	0.0%	61.4%	2.6%	64.0%
150	400	\$4,715.03	\$4,828.20	\$397.63	\$9,940.86	\$4,715.03	\$10,967.40	\$653.43	\$16,335.86	\$0.00	\$10,967.40	\$653.43	\$16,335.86	\$0.00	\$6,139.20	\$255.80	\$6,395.00	0.0%	61.8%	2.6%	64.3%
20	500	\$800.03	\$804.70	\$66.86	\$1,671.59	\$800.03	\$1,827.90	\$109.50	\$2,737.43	\$0.00	\$1,827.90	\$109.50	\$2,737.43	\$0.00	\$1,023.20	\$42.64	\$1,065.84	0.0%	61.2%	2.6%	63.8%
50	500	\$1,852.58	\$2,011.75	\$161.01	\$4,025.34	\$1,852.58	\$4,569.75	\$267.60	\$6,689.93	\$0.00	\$4,569.75	\$267.60	\$6,689.93	\$0.00	\$2,558.00	\$106.59	\$2,664.59	0.0%	63.5%	2.6%	66.2%
100	500	\$3,606.83	\$4,023.50	\$317.93	\$7,948.26	\$3,606.83	\$9,139.50	\$531.10	\$13,277.43	\$0.00	\$9,139.50	\$531.10	\$13,277.43	\$0.00	\$5,116.00	\$213.17	\$5,329.17	0.0%	64.4%	2.7%	67.0%
150	500	\$5,361.08	\$6,035.25	\$474.85	\$11,871.18	\$5,361.08	\$13,709.25	\$794.60	\$19,864.93	\$0.00	\$13,709.25	\$794.60	\$19,864.93	\$0.00	\$7,674.00	\$319.75	\$7,993.75	0.0%	64.6%	2.7%	67.3%
20	600	\$866.17	\$965.64	\$77.16	\$1,928.97	\$866.17	\$2,193.48	\$128.32	\$3,207.97	\$0.00	\$2,193.48	\$128.32	\$3,207.97	\$0.00	\$1,227.84	\$51.16	\$1,279.00	0.0%	63.7%	2.7%	66.3%
50	600	\$2,067.93	\$2,414.10	\$186.75	\$4,668.78	\$2,067.93	\$5,483.70	\$314.65	\$7,866.28	\$0.00	\$5,483.70	\$314.65	\$7,866.28	\$0.00	\$3,069.60	\$127.90	\$3,197.50	0.0%	65.7%	2.7%	68.5%
100	600	\$4,037.53	\$4,828.20	\$369.41	\$9,235.14	\$4,037.53	\$10,967.40	\$625.21	\$15,630.14	\$0.00	\$10,967.40	\$625.21	\$15,630.14	\$0.00	\$6,139.20	\$255.80	\$6,395.00	0.0%	66.5%	2.8%	69.2%
150	600	\$6,007.13	\$7,242.30	\$522.06	\$13,801.49	\$6,007.13	\$16,451.10	\$935.76	\$23,393.99	\$0.00	\$16,451.10	\$935.76	\$23,393.99	\$0.00	\$9,208.80	\$383.70	\$9,592.50	0.0%	66.7%	2.8%	69.5%

Line Item on Bill

Proposed Rates Effective October 1, 2022

Rates Effective July 1, 2022

Line Item on Bill	Proposed Rates Effective October 1, 2022	Rates Effective July 1, 2022
(1) Distribution Customer Charge	\$145.00	\$145.00
(2) LIHEAP Enhancement Charge	\$0.79	\$0.79
(3) Renewable Energy Growth Program Charge	\$38.34	\$38.34
(4) Base Distribution Demand Charge (per kW > 10kW)	\$6.90	\$6.90
(5) CapEx Factor Demand Charge (per kW > 10kW)	\$1.68	\$1.68
(6) Distribution Charge (per kWh)	\$0.00476	\$0.00476
(7) Operating & Maintenance Expense Charge	\$0.00183	\$0.00183
(8) Operating & Maintenance Expense Reconciliation Factor	(0.00010)	(0.00010)
(9) CapEx Reconciliation Factor	(0.00012)	(0.00012)
(10) Revenue Decoupling Adjustment Factor	(0.00003)	(0.00003)
(11) Pension Adjustment Factor	(0.00006)	(0.00006)
(12) Storm Fund Replenishment Factor	\$0.00788	\$0.00788
(13) Arrage Management Adjustment Factor	\$0.00007	\$0.00007
(14) Performance Incentive Factor	\$0.00012	\$0.00012
(15) Low Income Discount Recovery Factor	\$0.00238	\$0.00238
(16) Long-term Contracting for Renewable Energy Charge	(0.00131)	(0.00131)
(17) Net Metering Charge	\$0.00488	\$0.00488
(18) Transmission Demand Charge	\$4.97	\$4.97
(19) Base Transmission Charge	\$0.01342	\$0.01342
(20) Transmission Adjustment Factor	(0.000371)	(0.000371)
(21) Transmission Uncollectible Factor	\$0.00036	\$0.00036
(22) Base Transition Charge	\$0.00000	\$0.00000
(23) Transition Adjustment	\$0.00018	\$0.00018
(24) Energy Efficiency Program Charge	\$0.01252	\$0.01252
(25) Last Resort Service Base Charge	\$0.06451	\$0.06451
(26) LRS Adjustment Factor	\$0.00665	\$0.00665
(27) LRS Administrative Cost Adjustment Factor	\$0.00210	\$0.00210
(28) Renewable Energy Standard Charge	\$0.00721	\$0.00721
Line Item on Bill		
(29) Customer Charge	\$145.00	\$145.00
(31) LIHEAP Enhancement Charge	\$0.79	\$0.79
(30) RE Growth Program	\$38.34	\$38.34
(32) Transmission Adjustment	\$0.01007	\$0.01007
(33) Distribution Energy Charge	\$0.01673	\$0.01673
(34) Distribution Demand Charge	\$8.58	\$8.58
(35) Transmission Demand Charge	\$4.97	\$4.97
(34) Transition Charge	\$0.00018	\$0.00018
(35) Energy Efficiency Programs	\$0.01252	\$0.01252
(36) Renewable Energy Distribution Charge	\$0.00357	\$0.00357
(37) Supply Services Energy Charge	\$0.18279	\$0.18279

Column (f): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022  
Column (g): Line (25) per Schedule 1, Page-4, Line (10). All other rates per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095 effective 7/1/2022, and Summary of Rates Last Resort Service tariff, R.I.P.U.C. No. 2096, effective 7/1/2022

The Narragansett Electric Company  
 Calculation of Monthly Typical Bill  
 Rates Applicable to G-12 Rate Customers

kW	Monthly Power Hours Use (a)	Rates Effective July 1, 2022				Proposed Rates Effective October 1, 2022				Supply (Increase/Decrease) % of Total Bill							
		Delivery Services (b)	Supply Services (c)	GET (d)	Total (e)=(a)+(b)+(c)+(d)	Delivery Services (f)	Supply Services (g)	GET (h)	Total (i)=(f)+(g)+(h)	Delivery Services (j)=(f)-(b)	Supply Services (k)=(g)-(c)	GET (l)=(h)-(d)	Total (m)=(i)-(e)	Supply (n)=(j)-(b) (o)=(k)-(c) (p)=(l)-(d)	% of Total Bill (q)=(n)/(m)		
200	200	\$4,241.75	\$5,101.20	\$389.29	\$9,732.24	\$4,241.75	\$5,042.93	\$611.03	\$9,544.71	\$0.00	\$5,231.73	\$831.52	\$11,273.24	0.0%	54.7%	2.3%	57.0%
750	200	\$15,868.75	\$19,129.50	\$1,458.26	\$36,456.51	\$15,868.75	\$19,086.00	\$2,898.78	\$37,853.53	\$0.00	\$19,956.50	\$831.52	\$39,685.02	0.0%	54.7%	2.3%	57.0%
1,000	200	\$31,173.75	\$38,530.00	\$2,916.52	\$72,620.27	\$31,173.75	\$38,478.99	\$5,737.26	\$75,390.03	\$0.00	\$39,913.00	\$1,663.04	\$81,576.04	0.0%	54.8%	2.3%	57.0%
2,500	200	\$52,863.75	\$63,765.00	\$4,859.53	\$121,488.28	\$52,863.75	\$63,286.67	\$9,713.27	\$125,863.69	\$0.00	\$65,321.67	\$3,547.74	\$132,713.69	0.0%	54.8%	2.3%	57.0%
7,500	200	\$105,727.50	\$127,530.00	\$9,718.49	\$242,975.99	\$105,727.50	\$126,962.34	\$19,436.96	\$251,126.80	\$0.00	\$130,343.33	\$7,290.41	\$268,467.13	0.0%	54.8%	2.3%	57.0%
10,000	200	\$141,000.00	\$171,412.50	\$13,287.32	\$325,699.77	\$141,000.00	\$170,846.13	\$26,573.35	\$338,420.48	\$0.00	\$178,260.00	\$11,085.94	\$355,705.42	0.0%	54.8%	2.3%	57.0%
20,000	200	\$282,000.00	\$342,825.00	\$26,574.64	\$651,350.99	\$282,000.00	\$341,293.33	\$53,146.33	\$676,639.66	\$0.00	\$352,173.33	\$22,371.89	\$729,011.55	0.0%	54.8%	2.3%	57.0%
750	300	\$22,500.00	\$27,625.00	\$1,998.82	\$52,123.82	\$22,500.00	\$27,570.00	\$3,930.00	\$53,999.00	\$0.00	\$28,914.35	\$1,247.28	\$57,182.63	0.0%	59.9%	2.5%	62.4%
1,000	300	\$30,000.00	\$37,500.00	\$2,665.15	\$70,165.15	\$30,000.00	\$37,412.50	\$5,332.50	\$74,757.50	\$0.00	\$39,913.00	\$2,994.57	\$80,664.07	0.0%	59.9%	2.5%	62.4%
1,500	300	\$45,000.00	\$56,250.00	\$3,997.67	\$105,247.67	\$45,000.00	\$56,163.75	\$8,006.25	\$119,176.25	\$0.00	\$59,869.50	\$4,944.57	\$129,121.07	0.0%	59.9%	2.5%	62.4%
2,000	300	\$60,000.00	\$75,000.00	\$5,332.50	\$140,332.50	\$60,000.00	\$74,875.00	\$11,167.50	\$156,012.50	\$0.00	\$89,782.50	\$8,315.21	\$174,327.71	0.0%	59.9%	2.5%	62.4%
2,500	300	\$75,000.00	\$93,750.00	\$6,667.50	\$175,417.50	\$75,000.00	\$93,600.00	\$14,800.00	\$193,400.00	\$0.00	\$124,687.50	\$12,122.50	\$205,522.50	0.0%	59.9%	2.5%	62.4%
3,000	300	\$90,000.00	\$112,500.00	\$8,002.50	\$210,502.50	\$90,000.00	\$112,412.50	\$17,617.50	\$230,030.00	\$0.00	\$159,812.50	\$15,447.25	\$245,477.25	0.0%	59.9%	2.5%	62.4%
3,500	300	\$105,000.00	\$131,250.00	\$9,337.50	\$246,587.50	\$105,000.00	\$131,162.50	\$20,655.00	\$276,922.50	\$0.00	\$199,130.00	\$18,630.42	\$295,552.42	0.0%	59.9%	2.5%	62.4%
4,000	300	\$120,000.00	\$150,000.00	\$10,667.50	\$270,667.50	\$120,000.00	\$150,000.00	\$23,999.99	\$300,000.00	\$0.00	\$238,260.00	\$22,740.00	\$322,740.00	0.0%	59.9%	2.5%	62.4%
4,500	300	\$135,000.00	\$168,750.00	\$12,002.50	\$303,752.50	\$135,000.00	\$168,750.00	\$28,000.00	\$333,750.00	\$0.00	\$286,913.75	\$27,836.25	\$361,586.25	0.0%	59.9%	2.5%	62.4%
5,000	300	\$150,000.00	\$187,500.00	\$13,332.50	\$337,832.50	\$150,000.00	\$187,500.00	\$32,333.33	\$370,333.33	\$0.00	\$316,333.33	\$34,000.00	\$404,333.33	0.0%	59.9%	2.5%	62.4%
5,500	300	\$165,000.00	\$206,250.00	\$14,667.50	\$376,917.50	\$165,000.00	\$206,250.00	\$36,667.50	\$408,917.50	\$0.00	\$344,667.50	\$37,250.00	\$441,917.50	0.0%	59.9%	2.5%	62.4%
6,000	300	\$180,000.00	\$225,000.00	\$16,002.50	\$411,002.50	\$180,000.00	\$225,000.00	\$40,999.99	\$450,000.00	\$0.00	\$378,260.00	\$40,740.00	\$488,000.00	0.0%	59.9%	2.5%	62.4%
6,500	300	\$195,000.00	\$243,750.00	\$17,337.50	\$448,072.50	\$195,000.00	\$243,750.00	\$45,333.33	\$493,433.33	\$0.00	\$416,333.33	\$44,100.00	\$537,433.33	0.0%	59.9%	2.5%	62.4%
7,000	300	\$210,000.00	\$262,500.00	\$18,667.50	\$486,167.50	\$210,000.00	\$262,500.00	\$49,667.50	\$535,832.50	\$0.00	\$464,667.50	\$47,466.67	\$582,134.17	0.0%	59.9%	2.5%	62.4%
7,500	300	\$225,000.00	\$281,250.00	\$20,002.50	\$524,252.50	\$225,000.00	\$281,250.00	\$53,999.99	\$578,500.00	\$0.00	\$512,000.00	\$51,500.00	\$629,500.00	0.0%	59.9%	2.5%	62.4%
8,000	300	\$240,000.00	\$300,000.00	\$21,332.50	\$565,332.50	\$240,000.00	\$300,000.00	\$58,333.33	\$623,333.33	\$0.00	\$550,000.00	\$55,333.33	\$678,333.33	0.0%	59.9%	2.5%	62.4%
8,500	300	\$255,000.00	\$318,750.00	\$22,667.50	\$604,417.50	\$255,000.00	\$318,750.00	\$62,667.50	\$667,417.50	\$0.00	\$588,260.00	\$59,157.50	\$726,577.50	0.0%	59.9%	2.5%	62.4%
9,000	300	\$270,000.00	\$337,500.00	\$24,002.50	\$643,502.50	\$270,000.00	\$337,500.00	\$67,000.00	\$710,500.00	\$0.00	\$626,000.00	\$63,500.00	\$774,500.00	0.0%	59.9%	2.5%	62.4%
9,500	300	\$285,000.00	\$356,250.00	\$25,337.50	\$682,587.50	\$285,000.00	\$356,250.00	\$71,333.33	\$753,916.67	\$0.00	\$664,667.50	\$66,666.67	\$820,634.17	0.0%	59.9%	2.5%	62.4%
10,000	300	\$300,000.00	\$375,000.00	\$26,667.50	\$722,667.50	\$300,000.00	\$375,000.00	\$75,667.50	\$798,335.00	\$0.00	\$702,000.00	\$70,333.33	\$868,666.67	0.0%	59.9%	2.5%	62.4%
10,000	400	\$300,000.00	\$375,000.00	\$26,667.50	\$722,667.50	\$300,000.00	\$375,000.00	\$75,667.50	\$798,335.00	\$0.00	\$702,000.00	\$70,333.33	\$868,666.67	0.0%	62.8%	2.6%	65.4%
10,000	500	\$300,000.00	\$450,000.00	\$35,000.00	\$785,000.00	\$300,000.00	\$450,000.00	\$100,000.00	\$850,000.00	\$0.00	\$750,000.00	\$100,000.00	\$950,000.00	0.0%	62.8%	2.6%	65.4%
10,000	600	\$300,000.00	\$525,000.00	\$43,332.50	\$873,332.50	\$300,000.00	\$525,000.00	\$133,333.33	\$938,333.33	\$0.00	\$816,667.50	\$121,666.67	\$1,038,334.17	0.0%	62.8%	2.6%	65.4%
10,000	750	\$300,000.00	\$600,000.00	\$51,667.50	\$951,667.50	\$300,000.00	\$600,000.00	\$166,667.50	\$1,031,667.50	\$0.00	\$890,000.00	\$141,666.67	\$1,171,666.67	0.0%	62.8%	2.6%	65.4%
10,000	900	\$300,000.00	\$675,000.00	\$60,002.50	\$1,035,002.50	\$300,000.00	\$675,000.00	\$200,000.00	\$1,125,000.00	\$0.00	\$968,260.00	\$156,740.00	\$1,284,000.00	0.0%	62.8%	2.6%	65.4%
10,000	1,000	\$300,000.00	\$750,000.00	\$68,337.50	\$1,128,337.50	\$300,000.00	\$750,000.00	\$233,333.33	\$1,233,333.33	\$0.00	\$1,046,667.50	\$166,666.67	\$1,383,334.17	0.0%	62.8%	2.6%	65.4%
10,000	1,200	\$300,000.00	\$825,000.00	\$76,667.50	\$1,201,667.50	\$300,000.00	\$825,000.00	\$266,667.50	\$1,331,667.50	\$0.00	\$1,120,000.00	\$181,666.67	\$1,481,666.67	0.0%	62.8%	2.6%	65.4%
10,000	1,400	\$300,000.00	\$900,000.00	\$85,002.50	\$1,285,002.50	\$300,000.00	\$900,000.00	\$300,000.00	\$1,440,000.00	\$0.00	\$1,200,000.00	\$190,000.00	\$1,590,000.00	0.0%	62.8%	2.6%	65.4%
10,000	1,600	\$300,000.00	\$975,000.00	\$93,337.50	\$1,368,337.50	\$300,000.00	\$975,000.00	\$333,333.33	\$1,538,333.33	\$0.00	\$1,280,000.00	\$200,000.00	\$1,680,000.00	0.0%	62.8%	2.6%	65.4%
10,000	1,800	\$300,000.00	\$1,050,000.00	\$101,667.50	\$1,451,667.50	\$300,000.00	\$1,050,000.00	\$366,667.50	\$1,648,335.00	\$0.00	\$1,360,000.00	\$210,000.00	\$1,770,000.00	0.0%	62.8%	2.6%	65.4%
10,000	2,000	\$300,000.00	\$1,125,000.00	\$110,002.50	\$1,531,002.50	\$300,000.00	\$1,125,000.00	\$400,000.00	\$1,755,000.00	\$0.00	\$1,440,000.00	\$220,000.00	\$1,870,000.00	0.0%	62.8%	2.6%	65.4%
10,000	2,200	\$300,000.00	\$1,200,000.00	\$118,337.50	\$1,610,337.50	\$300,000.00	\$1,200,000.00	\$433,333.33	\$1,833,333.33	\$0.00	\$1,520,000.00	\$230,000.00	\$1,963,333.33	0.0%	62.8%	2.6%	65.4%
10,000	2,400	\$300,000.00	\$1,275,000.00	\$126,667.50	\$1,689,667.50	\$300,000.00	\$1,275,000.00	\$466,667.50	\$1,956,335.00	\$0.00	\$1,600,000.00	\$240,000.00	\$2,036,335.00	0.0%	62.8%	2.6%	65.4%
10,000	2,600	\$300,000.00	\$1,350,000.00	\$135,002.50	\$1,768,002.50	\$300,000.00	\$1,350,000.00	\$500,000.00	\$2,048,000.00	\$0.00	\$1,680,000.00	\$250,000.00	\$2,118,000.00	0.0%	62.8%	2.6%	65.4%
10,000	2,800	\$300,000.00	\$1,425,000.00	\$143,337.50	\$1,847,337.50	\$300,000.00	\$1,425,000.00	\$533,333.33	\$2,141,667.50	\$0.00	\$1,760,000.00	\$260,000.00	\$2,196,667.50	0.0%	62.8%	2.6%	65.4%
10,000	3,000	\$300,000.00	\$1,500,000.00	\$151,667.50	\$1,926,667.50	\$300,000.00	\$1,500,000.00	\$566,667.50	\$2,238,335.00	\$0.00	\$1,840,000.00	\$270,000.00	\$2,258,000.00	0.0%	62.8%	2.6%	65.4%
10,000	3,200	\$300,000.00	\$1,575,000.00	\$160,002.50	\$2,006,002.50	\$300,000.00	\$1,575,000.00	\$600,000.00	\$2,338,000.00	\$0.00	\$1,920,000.00	\$280,000.00	\$2,318,000.00	0.0%	62.8%	2.6%	65.4%
10,000	3,400	\$300,000.00	\$1,650,000.00	\$168,337.50	\$2,085,337.50	\$300,000.00	\$1,650,000.00	\$633,333.33	\$2,431,667.50	\$0.00	\$2,000,000.00	\$290,000.00	\$2,391,667.50	0.0%	62.8%	2.6%	65.4%
10,000	3,600	\$300,000.00	\$1,725,000.00	\$176,667.50	\$2,160,667.50	\$300,000.00	\$1,725,000.00	\$666,667.50	\$2,527,335.00	\$0.00	\$2,080,000.00	\$300,000.00	\$2,440,000.00	0.0%	62.8%	2.6%	65.4%
10,000	3,800	\$300,000.00	\$1,800,000.00	\$185,002.50	\$2,240,002.50	\$300,000.00	\$1,800,000.00	\$700,000.00	\$2,620,000.00	\$0.00	\$2,160,000.00	\$310,000.00	\$2,490,000.00	0.0%	62.8%	2.6%	65.4%
10,000	4,000	\$30															



**THE NARRAGANSETT ELECTRIC COMPANY  
d/b/a RHODE ISLAND ENERGY  
R.I.P.U.C. DOCKET NO. 4978  
LAST RESORT SERVICE RATE FILING  
WITNESSES: OLIVEIRA AND RUEBENACKER  
SCHEDULES**

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Schedule 4  
Request for Proposals

## **Request for Power Supply Proposals to Provide the Following Services:**

Last Resort Service  
for the Industrial Group  
in Rhode Island for the Period:

October 1, 2022 – December 31, 2022

Last Resort Service  
for the Commercial Group  
in Rhode Island for the Period:

October 1, 2022 – March 31, 2024

Last Resort Service  
for the Residential Group  
in Rhode Island for the Period:

October 1, 2022 – March 31, 2024

**JUNE 10, 2022**

## **REQUEST FOR POWER SUPPLY PROPOSALS**

### **1. Overview**

#### **1.1 Background**

The Rhode Island Utility Restructuring Act (URA)<sup>1</sup> provides for competition in the electric utility industry by extending competition in the wholesale power supply markets to retail customers through the provision of retail access to all customers.

The URA provides access to the competitive retail electricity market for all retail customers of The Narragansett Electric Company (Narragansett or NECO) as of January 1, 1998. In 2006, the Rhode Island legislature extended Standard Offer Service (SOS) from the original termination date of December 31, 2009 until December 31, 2020. Narragansett was required to provide SOS to those customers who were not receiving generation service from a non-regulated power producer (also known as a competitive supplier) through December 31, 2020. Narragansett is also required to provide Last Resort Service (LRS) to customers who are not receiving generation service from either SOS or a competitive supplier.

#### **1.2 Transition Service Agreement**

In 2021, National Grid USA (National Grid) announced that it had entered into an agreement with PPL Energy Holdings, LLC (PPL), pursuant to which PPL will acquire National Grid's electric and gas distribution business in Rhode Island through the acquisition of National Grid's wholly-owned subsidiary, Narragansett. Upon the closing of this transaction, PPL acquired the outstanding shares of common stock of Narragansett, and Narragansett will continue as a subsidiary of PPL. The Transaction closed on May 25, 2022.

Pursuant to the grant of agency authority by Narragansett to National Grid USA Service Company, Inc. (referred to herein as the Service Provider), the Service Provider is designated to act as Narragansett's agent under the Transition Services Agreement (TSA) between the Service Provider, National Grid and Narragansett in connection with physical and financial energy transactions, including the solicitation and evaluation of this Request for Proposals (RFP), and the purchase, confirmation, billing and administration of the transactions resulting from this RFP.

#### **1.3 Standard Offer Service and Last Resort Service**

Beginning on the retail access date, Narragansett's retail customers in Rhode Island had received generation service from either their choice of competitive suppliers or from Narragansett through Standard Offer Service or Last Resort Service. Beginning on January 1, 2010, all Narragansett customers not taking service from a competitive

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<sup>1</sup>R.I. Gen. Laws § 39-1-27.3.

supplier began taking Standard Offer Service<sup>2</sup>. Narragansett's requirement to provide generation service for customers through SOS concluded at the end of 2020, at which point it would provide generation service through Last Resort Service to those customers who are not taking service from a competitive supplier. Going forward, Narragansett will use the terminology Last Resort Service in its procurements and in its retail rates.

Customers taking Last Resort Service will be in one of three separate groups: Residential, Commercial, and Industrial. This RFP is to procure service for the following groups:

- Residential Group (as defined below) for 20% of the load for the period October 1, 2022 through March 31, 2024;
- Commercial Group (as defined below) for 20% of the load for the period October 1, 2022 through March 31, 2024;
- Industrial Group (as defined below) for 100% of the load for the period October 1, 2022 through December 31, 2022.

Narragansett is hereby seeking proposals from qualified power suppliers to supply firm, load-following power to meet these Last Resort Service requirements. It is the intent of Narragansett and supplier(s) that the resulting transactions shall meet the Commodity Futures Trading Commission's criteria for the forward contract exclusion, including that the parties intend to physically settle the transactions, and are, therefore, not subject to swap regulation.

**Service Provider, in consultation with or at the request of the PUC or the Rhode Island Division of Public Utilities and Carriers (Division), reserves the right to issue additional instructions or requests for additional information, to extend the due date, to modify any provision in this RFP or any appendix thereto, or to withdraw this RFP.**

#### 1.4 Rhode Island Customer Groups

For the purposes of this solicitation, the Rhode Island Residential, Commercial, and Industrial Groups are defined as follows:

Customer Group	Rate Class
Residential	A-16 and A-60
Commercial	G-02, C-06, S-06, S-10, S-14
Industrial	G-32, B-32, X-01

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<sup>2</sup> On September 30, 2009, the Rhode Island Public Utilities Commission (PUC) approved Narragansett's April 29, 2009 filing (and revised on July 10, 2009) to replace the previous Standard Offer Service with a new Standard Offer Service. The new Standard Offer Service also included any Last Resort Service customers. Thus, in a change from the former Standard Offer Service, customers who chose to take service from a competitive supplier after January 1, 2010 would be permitted to return to Standard Offer Service if they were no longer receiving service from a competitive supplier.

## 2. Description of Services

### 2.1 Description

Appendix A contains an overview of the services covered by this Request for Proposal. The Appendix provides:

- A brief description of Last Resort Service;
- The eligibility requirements for a customer to obtain or leave Last Resort Service.

### 2.2 Expected Loads

Narragansett is unable to predict the amount of load that will be required to meet the needs of any customer group. Narragansett's customers are free to leave Last Resort Service at any time to take service from competitive suppliers. The ability of customers to enroll or return to Last Resort Service is described in Appendix A.

To assist suppliers with determining the potential load requirements, Narragansett provides the following information on a Power Procurement Website:

- Aggregate reconciled historical wholesale hourly loads for the Standard Offer Service customer groups (since January 1, 2007). These hourly loads are applicable to the new Last Resort Service that started January 1, 2021.
- Aggregate historical wholesale hourly load data for previous Last Resort Service (through January 2010).
- Aggregate historical wholesale hourly load data for previous Standard Offer Service.
- Municipal Aggregation customer count and historical retail load information (since June 2020).
- Class average load shapes at the retail meter point.
- Historical customer counts, as of the last billing day in each month, by distribution company, SMD Load Zone (since March 1, 2003) and rate class. These counts represent the number of active accounts in each rate class as of the last billing day in each month.
- Historical customer counts for customers taking service from a competitive supplier, as of the last billing day in each month, by rate class.
- ICAP tags as of the last day of the month for each load asset.
- Average winning load block prices from previous RFPs.

Please use the following link to access the site:

<http://www.nationalgridus.com/energysupply/>



Click on “Data” at the upper right of the screen to access Load data, Customer Count data, Class Average Load Shapes and ICAP Tags. This site is open to anyone with the above link. No user ID or password is required to access the data on the site.

### 2.3 Load Blocks

Narragansett’s total Last Resort Service requirements covered by this RFP are broken down into the following eight load blocks:

Load Block	Customer Group	SMD Load Zone	Load Share	Type of Service	Period
<b>A1</b>	Industrial	RI	50%	Last Resort Service	10/01/2022 – 12/31/2022
<b>A2</b>	Industrial	RI	50%	Last Resort Service	10/01/2022 – 12/31/2022
<b>B</b>	Residential	RI	20%	Last Resort Service	10/01/2022 – 03/31/2023
<b>C</b>	Residential	RI	20%	Last Resort Service	04/01/2023 – 09/30/2023
<b>D</b>	Residential	RI	20%	Last Resort Service	10/01/2023 – 03/31/2024
<b>E</b>	Commercial	RI	20%	Last Resort Service	10/01/2022 – 03/31/2023
<b>F</b>	Commercial	RI	20%	Last Resort Service	04/01/2023 – 09/30/2023
<b>G</b>	Commercial	RI	20%	Last Resort Service	10/01/2023 – 03/31/2024

A supplier may bid on any number of load blocks that it wishes to serve. A Respondent wishing to serve the entire load for a particular customer group should submit a bid for each load block of that customer group. Respondents may not limit the amount of service that may be purchased for a given load block. Proposals that contain limits on the amount of service provided will be rejected<sup>3</sup>.

The amount of load for each load block to be supplied by the winning Supplier(s) will be determined in accordance with the procedure contained in Article 6 of the Master Power Agreement, a copy of which is provided in Appendix B.

### 2.4 Rhode Island Retail Customer Rates

During the term of service covered by this RFP, Narragansett intends to establish retail rates for generation service for Last Resort Service customers in Rhode Island. The Last Resort Service rates will reflect Narragansett’s purchase costs for such service due to commitments made as a result of this and previous RFPs.

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<sup>3</sup> For example, a Respondent offering to supply Block A load must agree to supply 100% of the needs of that load block during every month of the Period. The Respondent may not offer to serve Block A provided that the amount of service purchased does not exceed [specified value] MW in any hour.

**3. General Provisions**

**3.1 Terms and Conditions**

The winning Supplier(s) will be selected to provide Last Resort Service to the applicable customer groups/load blocks during the term covered by this RFP. Last Resort Service will be provided by such Supplier(s) to Narragansett in accordance with the terms and conditions of the Master Power Agreement. A copy of the Master Power Agreement for Rhode Island is provided in Appendix B. All Respondents must have an updated executed Master Power Agreement(s) prior to the indicative bid date.

The winning Supplier(s) will be required to execute the applicable confirmation(s) within two (2) business days of being notified that it has been selected as the winning Supplier.

Under Article 7 of the Master Power Agreement, failure of the winning supplier to deliver Requirements would constitute an event of default under the agreement, allowing Narragansett to terminate and recover liquidated damages from the supplier.

**3.2 Proposal Process and Submission Dates**

The following table outlines the key dates associated with this procurement process.

<b>Process Step</b>	<b>Date</b>
Company Issues Request for Proposal	June 10, 2022
Submit Respondent Proposal Information	June 24, 2022 – 5pm EPT
Submit Indicative Pricing	July 6, 2022 – 10am EPT
Submit Final Pricing	July 13, 2022 – 10am EPT
Company Notifies Winning Bidders	July 13, 2022 – 1pm
Winning Bidders and Company execute Confirmations	No later than two business days after Final Pricing
Service Begins	October 1, 2022

One (1) copy of a Respondent’s Proposal Information and proposed agreement modifications must be submitted by e-mail or mailed to the following address:

James Calandra  
Wholesale Electric Supply  
National Grid  
100 East Old Country Road  
Hicksville, NY 11801  
(516) 545-5433  
e-mail: ElectricSupply@nationalgrid.com

Service Provider is conducting the procurement process in three steps. The first step is for Respondents to provide Service Provider with their background and financial information by 5:00 p.m. Eastern Prevailing Time (EPT) on June 24, 2022. Upon receipt,

Service Provider will evaluate each Respondent's qualifications and will notify any Respondent that does not qualify by at least one business day before Indicative Pricing is due.

Service Provider will not evaluate any indicative or final pricing if the Respondent does not have an executed Master Power Agreement. The Master Power Agreement must be executed prior to submitting indicative pricing.

The second step in this process is for Respondents to provide indicative pricing information by 10:00 a.m. EPT on July 6, 2022 at the above address. Service Provider will evaluate the indicative pricing as described above, and if required, Service Provider may seek clarifications from Respondents. Service Provider will file an indicative pricing summary with the PUC.

The third step is as follows: Respondents to provide final pricing information by 10:00 a.m. EPT on July 13, 2022 at the above address. Service Provider requests final pricing be valid until 1:00 p.m. Service Provider intends to evaluate the final pricing and select a Supplier(s) that day by that time. Final pricing shall be binding until execution of a confirmation. Respondents should specify the manner in which they will accept a binding acceptance of their offer by Service Provider prior to receipt of an executed agreement (letter of intent or e-mail) or they will be deemed to be bound by Service Provider's acceptance communicated in any of the preceding manners. Service Provider will file a final pricing summary with the PUC.

At any time, Service Provider, at its sole discretion, reserves the right to issue additional instructions or requests for additional information, to extend the due date, to modify any provision in this RFP or any appendix thereto and to withdraw this RFP.

### 3.3 Contact Person/Questions

All questions regarding this Request for Proposal should be directed to James Calandra at the address provided above.

## 4. Service Features

### 4.1 Commencement Date of Supply

Service from the winning Supplier(s) to Narragansett shall begin as of HE 0100 EPT on the date specified in the table found in Section 2.3 – Load Blocks.

Service from Narragansett to individual customers who are currently taking Last Resort Service in each customer group as of the Commencement Date, if any, will continue with the winning Supplier(s) providing such service to Narragansett as of the Commencement Date.

Service from Narragansett to individual customers taking Last Resort Service as of the Commencement Date shall begin on the customer’s meter reading date following notification/determination that a customer will be commencing Last Resort Service or such other date designated by Narragansett consistent with Narragansett’s Tariff for Off Cycle Meter Read for Switch of Supplier R.I.P.U.C. No. 2242 in Rhode Island.

Narragansett’s procedures provide for customers to be switched from one service option to another (e.g., from Last Resort Service to a competitive supplier, from one competitive supplier to another competitive supplier, from a competitive supplier to Last Resort Service) on their normal cycle meter reading dates. However, there may be circumstances (e.g., default of a competitive supplier) that might require a customer to be switched to Last Resort Service “off-cycle”. In such case, the customer will be switched to Last Resort Service on a date designated by Narragansett consistent with Narragansett’s Tariff for Off Cycle Meter Read for Switch of Supplier R.I.P.U.C. No. 2242 in Rhode Island.

4.2 Termination Date of Supply

Service from the winning Supplier(s) to Narragansett shall terminate at HE 2400 EPT on the dates specified in the table found in Section 2.3 – Load Blocks.

Individual customers taking Last Resort Service from Narragansett may terminate the service at any time. Terminations may include, but not be limited to, (i) a customer’s taking competitive service from a competitive supplier, (ii) disconnection of service by Narragansett in accordance with regulations and procedures approved by the PUC, or (iii) closing of a customer’s account. Narragansett’s procedures provide for customers electing to terminate such service to be switched to their successor service on their normal cycle meter reading date following the date that Narragansett receives notification of such switch. However, there may be circumstances which might require a customer to be terminated “off-cycle”. In such a case, the customer will be terminated from Last Resort Service on a date to be determined by Narragansett.

4.3 Delivery Points

The Supplier(s) of Last Resort Service will be responsible for delivering power to the nodes/zones representing the actual locations of the Last Resort Service loads. The Supplier(s) of each of the services will be responsible for any PTF losses allocated by the ISO related to the services. The locations of the applicable Last Resort Service load assets are as follows:

<b>Company</b>	<b>SMD Load Zone</b>	<b>Load Asset</b>	<b>Load Asset Name</b>	<b>Load Block</b>
NECo	RI	37765	NECO INDUSTRIAL SO LOAD_4005	A1, A2
NECo	RI	37763	NECO RESIDENTIAL SO LOAD_4005	B – D
NECo	RI	37764	NECO COMMERCIAL SO LOAD_4005	E - G

#### 4.4 Form of Service

The Supplier(s) of each load block shall be responsible for meeting the specified service requirements for all of Narragansett's customers in a specific load block. These service requirements include the generation and/or market procurement and delivery to the delivery point(s) of the portion of the electric capacity, energy and ancillary services required to meet the needs of Narragansett's ultimate customers taking such service. Narragansett will implement the transfer of these responsibilities to the Supplier(s) by updating the asset registration for each of the above Load Assets. Narragansett will assign to the Supplier(s) the applicable Ownership Share for each Load Asset. Once a Supplier's obligation terminates, Narragansett will terminate the Supplier's Ownership Share of a Load Asset.

The Supplier(s) shall be responsible for all obligations, requirements, and costs associated with the Supplier(s) having the Load Asset Ownership Share which shall include but not be limited to the day-ahead load obligations and real-time load obligations at the nodes/zones of each Load Asset. A more complete description of a Supplier(s)'s responsibilities can be found in the Master Power Agreement in Appendix B of this RFP.

The Supplier(s) shall be responsible for all decisions and data submissions associated with any bids into the market system to manage these obligations. The Supplier(s) shall be responsible for all components of any Locational Marginal Prices the Supplier must pay in delivery of the services. These components include, but are not limited to, the day-ahead and real-time energy, marginal losses, and congestion charges. As the supplier of such services, the Supplier(s) will be responsible for all present or future requirements and associated costs (to the extent such charges are not imposed on Narragansett as a transmission charge by NEPOOL or the ISO) associated with the services and any other requirements, market products, expenses or charges imposed by NEPOOL or the ISO, as they may be in effect from time to time.

The Supplier(s) will also be responsible for all transmission and distribution losses associated with delivery of the electricity from the delivery point to the Last Resort Service customer's meter. A description of the estimation process for determining supplier hourly load can be found in Appendix A of the Master Power Agreement, found in Appendix B of this RFP.

Narragansett will make arrangements with the ISO for transmission service over the PTF and non-PTF, from and after the Delivery Point to the Customers' meters. Narragansett will be billed by the ISO and the applicable Participating Transmission Owner(s) for these services. Narragansett will pay these bills and collect the costs, along with Narragansett's distribution costs, from its retail customers through its retail delivery service tariffs. Any other transmission or distribution costs will be the Supplier(s)' responsibility.

## 5. Proposal Requirements

### 5.1 Format of Proposal

The information required by Service Provider to evaluate each proposal is identified in Appendix C. Respondents may simply complete the forms provided in Appendix C in any legible fashion and return them to James Calandra as provided in Section 3.2. In addition, proposals should contain explanatory, descriptive and/or supporting materials as necessary.

### 5.2 Proposed Pricing

Respondents must specify the price at which they will provide Last Resort Service for each load block on which they are bidding to serve. Purchases will be made on an “as-delivered” energy basis with prices stated on a fixed \$/MWh basis. Such prices shall exclude any ISO capacity charges and credits. Such prices may vary by calendar month and by load block, but must be uniform for the entire calendar month or period, as specified, and cover the entire term of this Request for Proposals.

Prices which contain demand components, minimum purchase requirements or which vary by time-of-use within a calendar month will be rejected. Other than capacity market charges and credits, prices which exclude one or more market costs (e.g. uplift costs, etc.) will be rejected.

Service Provider intends to pay a Supplier(s) based on the billing determinants as defined in the Master Power Agreement. These billing determinants are the loads as reported to and settled by the ISO, which include transmission and distribution losses, and exclude any PTF losses allocated to the Supplier by the ISO during the settlement. Service Provider intends to pay a Supplier(s) the net of the actual ISO capacity charges and credits associated with the Supplier(s) having the Load Asset Ownership Share.

Service Provider is seeking the following pricing:

- **All-Inclusive Bids:** For each load block (A1 through G), a price which includes all costs except capacity market charges and credits. Should Service Provider select this option, (1) Suppliers would be responsible for all costs except capacity market charges and credits, (2) Service Provider would pay Suppliers for the net of the actual ISO capacity charges and credits, and (3) Suppliers would not be responsible for complying with the Renewable Energy Standard component.

### 5.3 Terms and Conditions

Service will be provided pursuant to the terms of the Master Power Agreement.

#### 5.4 New England Market Participation

Each Respondent must indicate whether it has an executed and accepted Market Participant Service Agreement with ISO New England or if it plans to execute an agreement and, if so, at what point it is in the application process and the time frame for completing the process. Respondents must also provide evidence of agreements with a Market Participant if Respondent will have another Market Participant be responsible for its market settlement obligations.

#### 5.5 Competitive Supplier Registration

The service provided by the Supplier(s) of Last Resort Service to Narragansett is a wholesale transaction between the Supplier(s) and Narragansett; therefore, the Supplier(s) do not have to be licensed or registered suppliers with any state regulatory commission.

#### 5.6 Regulatory Approvals

The Supplier(s) of the services covered by this Request for Proposal must obtain and maintain all necessary regulatory approvals required to enable it to provide the applicable service. Such approvals must be obtained prior to October 1, 2022, April 1, 2023, or October 1, 2023, as applicable.

### **6. Retail Customer Relationships**

#### 6.1 Customer Billing

All customers taking Last Resort Service covered by this RFP will be retail customers of Narragansett. As the retail provider of such service, Narragansett will bill customers for the Last Resort Service provided.

#### 6.2 Notification of Enrollments and Terminations

Narragansett will provide electronic notification to the Supplier(s) of Last Resort Service customer enrollments and terminations within a customer group. Enrollment information will include account number, rate class and commencement date of service. Termination information will include account number, rate class and termination date of service. Such notifications shall only be provided when a Supplier establishes a Windows or Unix file server with capability of sending and receiving File Transfer Protocol (FTP), files with Pretty Good Privacy (PGP), Encryption/Decryption, and (ii) verifies its ability to transfer files to and receive files from Narragansett at least fourteen (14) days prior to the day on which a Supplier desires to commence electronic receipt.

### 6.3 Customer Service

Narragansett, as the retail provider of Last Resort Service, will provide customer service to all customers receiving Last Resort Service.

## 7. Selection Process

The criteria to be used in evaluating proposals will be the lowest evaluated bid price by load block. If there are identical lowest final bid prices, the winning bidder will be determined by selecting the bidder with the lowest final bid price for the estimated highest volume month.

## 8. Credit Requirements

In order to protect Narragansett's Last Resort Service customers from the risk of Supplier(s) default, a winning Supplier(s) must be able to demonstrate it has the financial resources to perform during the term of the agreement. As reflected in the attached Master Power Agreement (Appendix B to this RFP), Service Provider will require Supplier(s) to provide some form of security when entering into a Confirmation. The security arrangement will be based on the expected volume of load for the load block and a mark-to-market margining clause. As forward market prices change, the Supplier(s) will be required to post security for those incremental changes. Additionally, Suppliers that are rated at or below BBB-/Baa3 will be required to post an Independent Amount equal to 10% of the notional value of each load block awarded. The Supplier(s) shall provide security in one of the following forms:

- Unsecured line of credit for a rated counterparty
- Parental Guaranty
- Letter of Credit
- Cash deposit with Service Provider

Respondents that are rated by a major credit rating agency must provide the ratings assigned by such agencies. Respondents that are not rated by a major credit rating agency must provide the following information to enable Service Provider to evaluate a Respondent's financial strength:

- Respondent's organizational history
- Date of establishment
- Initial (if founded within the last ten years) and current capitalization
- Certified financial statements, including balance sheets and statements of income and cash flow with respect to the two previous fiscal years and the most recent interim period
- Forms 10-K and 10-Q, submitted to the United States Securities and Exchange Commission for the two previous fiscal years, if applicable;



- Short-term and long-term debt ratings from Moody's Investor Service or Standard & Poor's Corporation
- Corporate affiliates or joint venture partners including any details regarding financial limitations between partners or affiliates.

If a Respondent has provided this information to Service Provider or an affiliate in a response to a previous RFP, then the Respondent needs only to identify the date and to whom the information was submitted and update the previously provided information.

Service Provider agrees that it will treat the information it receives from Respondents in a confidential manner and will not, except as required by law or regulatory authority, disclose such information to any third party or use such information for any purpose other than in connection with this RFP.

## **9. General Requirements**

Service Provider may withdraw and terminate this RFP at any time without any liability. Service Provider reserves the right to accept or reject, in whole or in part, any and all proposals. Service Provider will not be responsible to any Respondent or any other party for failure to execute a Master Power Agreement or Confirmation.

Service Provider shall reject proposals submitted in response to this RFP that are incomplete, or do not conform to the requirements of the RFP, or are submitted beyond the deadline for submission. All proposals submitted by Respondents in response to the RFP will become the exclusive property of Narragansett.

Service Provider will post the average winning bid price of each load block on the Power Procurement Website within 90 days of final pricing.

Each Respondent certifies, by its submission of a bid, that it is bidding independently and that it has no knowledge of any proposal being submitted by another Respondent in response to this RFP. Each Respondent further certifies that, by its submission of a bid, it has not disclosed and will not disclose prior to any award hereunder any information relating to its proposal which could have an effect on whether another party submits a proposal to this RFP or on the contents of such proposal that another bidder would be willing to submit in response to this RFP. Such information includes, but is not limited to: the fact that the bidder is submitting a proposal in response to this RFP, the bidder's bids, the bidder's quantities of each product bid, the bidder's estimation of the value of a product, the bidder's estimation of the risks associated with supplying a product, and the bidder's preference for bidding on one or several products.

If any information provided by the Respondent changes or fails to remain valid, it is the sole responsibility of the Respondent to notify Service Provider of such change. Failing to do so may result in disqualification of the Respondent and its proposal for the solicitation.

Respondents shall, at their own cost and expense, defend, indemnify and hold harmless Service Provider and Narragansett, their parents, subsidiaries and affiliates and their officers, directors, trustees, employees, shareholders, executors, administrators, successors and assigns against any and all manner of past, present, or future claims, demands, disputes, controversies, complaints, suits, actions proceeding or allegations of any kind which in any manner relate to arise out of, or result from any false statements or misrepresentations, intentional or unintentional, in its proposal, or breach of any covenant by the Respondent set forth herein.

**APPENDIX A**

**DESCRIPTION OF SERVICES**

<b>The Narragansett Electric Company</b>	
<b>Last Resort Service</b>	
Description	Electric Service provided to retail customers who are not taking service from a competitive supplier.
Eligibility Requirements	<p>Service to customers can be initiated by:</p> <ul style="list-style-type: none"> <li>a) A customer notifying Narragansett that it wishes to terminate service from its competitive supplier and commence Last Resort Service.</li> <li>b) A competitive supplier notifying Narragansett that it is terminating service to a customer.</li> <li>c) A competitive supplier ceasing to provide service to a customer without notifying Narragansett.</li> <li>d) A customer moves into Narragansett’s service territory and does not affirmatively choose a competitive supplier.</li> </ul>
Aggregate Number of Customers Taking Service and Historical Load Profiles	<p>Note: Historic customer count data and historical hourly load profiles are available at the Power Procurement Website:</p> <p style="text-align: center;"><a href="http://www.nationalgridus.com/energysupply/">http://www.nationalgridus.com/energysupply/</a></p>

**APPENDIX B**

**MASTER POWER AGREEMENT**

**APPENDIX C**

**REQUIRED PROPOSAL INFORMATION**

**RESPONDENT:** \_\_\_\_\_

**1. General Information**

Name of Respondent	
Principal contact person < Name < Title < Company < Mailing address < Telephone number (office) < Telephone number (cell) < Fax number < E-mail address	
Secondary contact person (if any) < Name < Title < Company < Mailing address < Telephone number (office) < Telephone number (cell) < Fax number < E-mail address	
Legal form of business organization of Respondent (e.g., sole proprietorship, partnership, limited partnership, joint venture, or corporation)	
State(s) of incorporation, residency and organization Indicate whether Respondent is in good standing in all states in which Respondent is authorized to do business and, if not, which states and the reason it is not.	
If Respondent is a partnership, the names of all general and limited partners.  If Respondent is a limited liability company, the names of all direct owners.	
Description of Respondent and all affiliated entities and joint ventures transacting business in the energy sector	

**RESPONDENT:** \_\_\_\_\_

**2. Financial Information**

Current debt rating for Respondent (include ratings and names of rating agencies).	
Date Respondent's last fiscal year ended.	
Total revenue for Respondent for the most recent fiscal year.	
Total net income for Respondent for the most recent fiscal year.	
Total assets for Respondent as of the close of the previous fiscal year.	
Copy of the Respondent's most recent balance sheet, income statement and cash flow statement.	
Copy of the Respondent's most recent audited balance sheet, income statement and cash flow statement.	

**3. Defaults and Adverse Situations**

<p>Describe, in detail, any situation in which Respondent (either individually or as part of a consortium, joint venture or other group), or an affiliate of Respondent, defaulted or was deemed to be in noncompliance of its contractual obligations to transact business in the energy sector within the past five years including, without limitation, to purchase or deliver energy, capacity or other market products at retail or wholesale, or for the purchase or sale of electricity or natural gas, and including any financing agreements or financing provisions of any agreement.</p> <p>Explain the situation, its outcome and all other relevant facts associated with the event.</p> <p>If there was litigation, provide the case caption, index number and court.</p> <p>Identify the name, title and telephone number of the principal manager of the customer/client who asserted the event of default or noncompliance.</p>	
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**RESPONDENT:** \_\_\_\_\_

<p>Has Respondent, or any affiliate of Respondent, in the last five years, (a) consented to the appointment of, or was taken in possession by, a receiver, trustee, custodian or liquidator of a substantial part of its assets, (b) filed a bankruptcy petition in any bankruptcy court proceeding, (c) answered, consented or sought relief under any bankruptcy or similar law or failed to obtain a dismissal of an involuntary petition, (d) admitted in writing of its inability to pay its debts when due, (e) made a general assignment for the benefit of creditors, (f) was the subject of an involuntary proceeding seeking to adjudicate that Party bankrupt or insolvent, (g) sought reorganization, arrangement, adjustment, or composition of it or its debt under any law relating to bankruptcy, insolvency or reorganization or relief of debtors.</p>	
<p>Describe any facts presently known to Respondent that might adversely affect its ability to provide the service(s) bid herein as provided for in the RFP</p>	

**4. NEPOOL AND POWER SUPPLY EXPERIENCE**

<p>Is Respondent a member of NEPOOL?</p>	
<p>Does Respondent have an executed and accepted Market Participant Service Agreement with ISO New England?</p>	
<p>Name of Market Participant if Respondent will have another Market Participant be responsible for its market settlement obligations .</p>	
<p>Describe Respondent’s experience and record of performance in the areas of power marketing, brokering, sales, and/or contracting, for the last five years within NEPOOL and/or the New England region.</p>	
<p>Provide three references (name, title and contact information) who have contracted with the Respondent for similar load following services within the last 2 years.</p>	

**RESPONDENT:** \_\_\_\_\_

**5. CONFLICTS OF INTEREST**

<p>Briefly describe any known conflicts of interest between bidder or an affiliate of bidder and Narragansett (Buyer), Service Provider or any affiliates of the foregoing.</p>	
<p>Enumerate any litigation, claims or complaints asserted by bidder or an affiliate of bidder, against Buyer, Service Provider, or an affiliate of any of the foregoing.</p>	
<p>Enumerate any litigation, claims or complaints asserted against bidder or an affiliate of bidder by Buyer, Service Provider, or an affiliate of any of the foregoing.</p>	

**6. SCOPE OF BID AND TERMS OF SALE**

<p>Will Respondent execute a contract substantially similar to the Master Power Agreement contained in Appendix B?</p> <p>Explain any proposed modifications.</p>	
<p>List all regulatory approvals required before service can commence.</p>	

**RESPONDENT:** \_\_\_\_\_

**7. Proposed Pricing**

(Respondent required to submit bidding spreadsheet included on procurement website)

**Last Resort Service**

Bid Block	SMD ZONE	Customer Group	Percent	Period		Monthly Pricing - \$/MWh (all inclusive w/o RES Compliance)						
				From	To	Oct-22	Nov-22	Dec-22				
A1	RI	Industrial	50%	1-Oct-22	31-Dec-22							
						Oct-22	Nov-22	Dec-22				
A2	RI	Industrial	50%	1-Oct-22	31-Dec-22							
						Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	
B	RI	Residential	20%	1-Oct-22	31-Mar-23							
						Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	
C	RI	Residential	20%	1-Apr-23	30-Sep-23							
						Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
D	RI	Residential	20%	1-Oct-23	31-Mar-24							
						Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	
E	RI	Commercial	20%	1-Oct-22	31-Mar-23							
						Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	
F	RI	Commercial	20%	1-Apr-23	30-Sep-23							
						Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
G	RI	Commercial	20%	1-Oct-23	31-Mar-24							

**Note:** All bids rounded to 2 decimal places.  
If not bidding in a block, enter zero or leave blank.  
Please specify any bid limitations in the following section:

Request for Power Supply Proposals  
June 10, 2022



**THE NARRAGANSETT ELECTRIC COMPANY  
d/b/a RHODE ISLAND ENERGY  
R.I.P.U.C. DOCKET NO. 4978  
LAST RESORT SERVICE RATE FILING  
WITNESSES: OLIVEIRA AND RUEBENACKER  
SCHEDULES**

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Schedule 5  
Last Resort Service Procurement Summary

**REDACTED DOCUMENT**

# **THE NARRAGANSETT ELECTRIC COMPANY**

## **LAST RESORT SERVICE PROCUREMENT SUMMARY**

FOR THE PERIOD  
OCTOBER 2022 – MARCH 2024

### **1. RFP Issued**

The Narragansett Electric Company (Narragansett) issued its Request for Power Supply Proposals (RFP) on June 10, 2022 directly to approximately 25 suppliers for the service period October 2022 through March 2024.

The RFP was posted on an energy supply website and also posted on the S&P Global Energy Markets website. As a result, the RFP had wide distribution throughout the New England energy supply marketplace.

This procurement was conducted in accordance with the Last Resort Service (LRS) Procurement Plan approved by the Rhode Island Public Utilities Commission in Docket 4978 (approved July 23, 2020). The Last Resort Service Procurement Plan provides generation service, previously known as Standard Offer Service, to customers not taking service from a competitive supplier. This procurement is consistent with prior procurements conducted by Narragansett.

Narragansett's RFP requested all-inclusive pricing for the following:

- 100% of the Rhode Island Industrial Group Last Resort Service requirements for the period October 2022 through December 2022;
- 20% of the Rhode Island Commercial Group Last Resort Service requirements for the period October 2022 through March 2024;
- 20% of the Rhode Island Residential Group Last Resort Service requirements for the period October 2022 through March 2024.

These requirements were divided into eight distinct load blocks. A description of each load block is provided in Exhibit 1.

### **2. Key RFP Dates**

- The RFP was issued on June 10, 2022.
- Supplier information was received on June 24, 2022.
- Indicative bids were received on July 6, 2022.
- Final bids were received on July 13, 2022.

**REDACTED DOCUMENT**

**3. Contract Submissions**

All bidders had executed Master Power Agreements with Narragansett before final bids and no contract revisions were necessary with the winning bidders. Narragansett was able to resolve all outstanding issues with the bidders prior to receipt of bids and executed agreements that did not shift risks or obligations to its customers from those contained in its proposed agreements.

**4. Indicative Bids**

Indicative bids were received on July 6, 2022 from [REDACTED] bidders.

The indicative bids were evaluated and ranked (see Exhibits 2 and 3). Indicative pricing was used only to determine current market prices, to prepare an initial ranking of bids and to identify any bidding anomalies. The Rhode Island retail prices in Exhibit 3 were calculated by adjusting the wholesale contract prices in Exhibit 2 by the ratio of wholesale purchases to retail deliveries as calculated in Exhibit 3.

The lowest indicative bids for each load block were compared to Narragansett’s estimate of expected indicative bids. Our methodology calculates the expected bid prices from the historical relationship of the bid prices to all market components that comprise the bid price (see Exhibit 4). This method utilizes a detailed on-peak & off-peak calculation and incorporates the energy and ancillary services bid components.

**5. Award of Final Bids**

Final bids were received on July 13, 2022 from [REDACTED] bidders.

The final bids were evaluated and ranked (see Exhibits 5 and 6). The retail prices for Rhode Island in Exhibit 6 were calculated by adjusting the wholesale prices in Exhibit 5 by the ratio of wholesale purchases to retail deliveries as calculated in Exhibit 6.

A summary of the number of conforming bids per block is provided in the following table:

Block	# of Bids
A1	[REDACTED]
A2	[REDACTED]
B	[REDACTED]
C	[REDACTED]
D	[REDACTED]
E	[REDACTED]
F	[REDACTED]
G	[REDACTED]

**REDACTED DOCUMENT**

The lowest final bids for each load block were compared to Narragansett's estimate of expected bids based on the methodology described above (see Indicative Bids). The calculations of these expected prices can be found in Exhibit 7.

The RFP's competitive bidding process identified the winning bids for the eight blocks as shown in Exhibit 8. Exhibit 8 also provides the basis for the award. Exhibit 9 provides a bidder key to help identify bidders.

Exhibit 10 provides a bid premium estimate for all winning bids. The bid premium estimate is the difference between the Winning Bid Costs and the Market Component Costs. This difference includes:

- basis differential (the difference between the RI zonal price and hub price)
- volume risk premium - a premium associated with Est. MWh, On Peak % (loadshape), etc.
- migration risk premium
- price risk premium - premium associated with Ancillary Services costs, unexpected uplift costs, & electricity costs
- load shaping premium
- credit costs
- supplier margin

## **6. Description of Wholesale Markets Conditions**

Electric futures provide an estimate of the energy component of the Last Resort Service winning bid prices. Electric futures are provided daily as monthly on-peak and off-peak prices. The expected retail rates for the Industrial Group are based on the wholesale bids that were awarded supply in this RFP for October to December 2022. The electric futures prices have increased for this rate period from the July to September 2022 period that was procured in the last RFP on April 13, 2022. On that day, the average electric futures on peak price for the July to September 2022 term was \$88.85 and it increased to \$154.50 for this new rate period of October to December 2022. Also, the average electric futures off peak price for the July to September 2022 term was \$61.50 and it increased to \$134.57 for this new rate period of October to December 2022.



**REDACTED DOCUMENT**

Below is a comparison of the “round the clock” (“RTC”) electric futures prices for the Residential and Commercial Groups for the April to September 2022 rate period and the October 2022 to March 2023 rate period.

	Residential RTC \$ / MWH	Commercial RTC \$ / MWH		Residential RTC \$ / MWH	Commercial RTC \$ / MWH
Apr-22	39.11	39.83	Oct-22	48.12	48.81
May-22	30.74	31.40	Nov-22	80.92	81.87
Jun-22	32.82	33.58	Dec-22	142.35	143.38
Jul-22	40.25	41.18	Jan-23	177.49	179.24
Aug-22	38.72	39.45	Feb-23	169.29	170.76
Sep-22	31.49	32.12	Mar-23	92.50	93.17
Average	35.52	36.26	Average	118.44	119.54

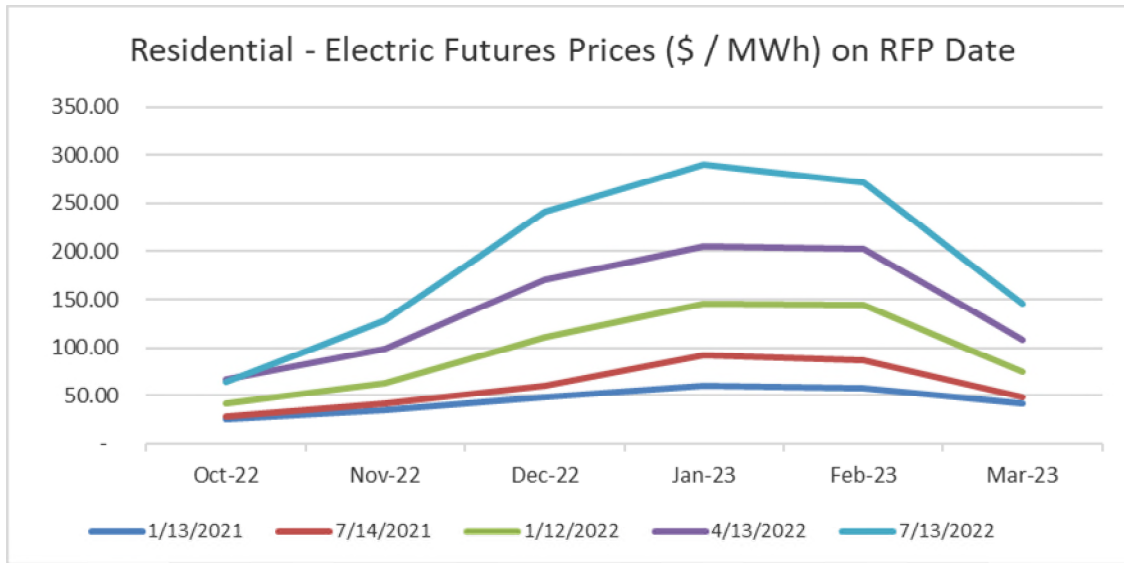
The RTC prices above are calculated for each month and group by utilizing the published on-peak and off-peak futures prices as of each RFP date, the estimated load procured in each RFP, and an estimate of the on-peak and off-peak usage for each group. The Residential and Commercial RTC prices consist of electric futures prices for multiple RFPs and an estimate for the 10% spot market purchases for both rate periods.

The table above demonstrates that futures prices increased for the Residential and the Commercial Group for the October 2022 to March 2023 rate period compared to the previous period. A straight average of the Residential RTC prices shows an increase from \$35.52 to \$118.44, a 233% increase. A straight average of the Commercial RTC prices shows an increase from \$36.26 to \$119.54, a 230% increase.

Additionally, the electric futures prices increased from the indicative bid date of July 6, 2022 to the final price date of July 13, 2022 for the October 2022 to March 2023 period. The average on peak price increased from \$190.78 to \$202.48, a 6.1% increase, and the average off peak price increased from \$165.94 to \$178.49, a 7.6% increase.

**REDACTED DOCUMENT**

Finally, the electric futures prices included in this RFP for the October 2022 to March 2023 period are higher than the electric futures prices for this period that was procured in prior RFPs. The graph below compares the monthly electric futures prices at the time of each RFP for the October 2022 to March 2023 period and highlights the increase in prices over time. The electric futures prices for the July 13, 2022 RFP are significantly higher than the previous four RFPs.



Capacity costs are no longer included in the Last Resort Service bids, but they are included in final LRS rates. For Capacity Commitment Periods through May 2022, the final capacity costs were predominantly determined using the Net Regional Clearing Price which was calculated after a month had occurred. Starting June 2022, the final capacity costs will be primarily determined by the Forward Capacity Auction (FCA) Charge Rate. Among other factors, the FCA Charge Rate includes the clearing prices determined in the FCA for new and existing resources. Additional credits and costs, such as from Annual Reconfiguration Auctions, will also be included in the final capacity costs. The FCA capacity clearing prices and payment rates peaked in the ninth capacity commitment period and have decreased in subsequent auctions.

Capacity Commitment Period	(\$/kW-month)	
	New Resource	Existing Resource
June 1, 2016 to May 31, 2017 (FCA 7)	3.150	2.744
June 1, 2017 to May 31, 2018 (FCA 8)	15.000	7.025
June 1, 2018 to May 31, 2019 (FCA 9)	17.728	11.080
June 1, 2019 to May 31, 2020 (FCA10)	7.030	7.030
June 1, 2020 to May 31, 2021 (FCA11)	5.297	5.297
June 1, 2021 to May 31, 2022 (FCA12)	4.631	4.631
June 1, 2022 to May 31, 2023 (FCA 13)	3.800	3.800
June 1, 2023 to May 31, 2024 (FCA 14)	2.001	2.001
June 1, 2024 to May 31, 2025 (FCA 15)	3.980	3.980
June 1, 2025 to May 31, 2026 (FCA 16)	2.639	2.639

**REDACTED DOCUMENT**

## 7. Retail Rate

A summary of the final and estimated retail rates (excluding retail adders<sup>1</sup> and an estimate for the 10% spot market purchases) for blocks A1 through G is provided in Exhibit 11. The expected retail rates for the Industrial Group were based on the wholesale bids that were awarded supply and capacity cost estimates.

The expected retail rates for the Residential and the Commercial Groups include capacity cost estimates and will be blended with an estimate for the 10% spot market purchases to determine the final retail rates for the October 2022 to March 2023 period. The estimated retail rates for the April 2023 to March 2024 period will be blended with future RFPs and an estimate for the 10% spot market purchases to determine the final retail rates for those periods.

For the Residential and Commercial Groups, this is:

- the fifth (final) transaction to provide power to serve LRS customers for the October 2022 to March 2023 period, and
- the third transaction for the April 2023 to September 2023 period, and
- the second transaction for the October 2023 to March 2024 period.

The Rhode Island retail rates were calculated by adjusting the wholesale contract prices using the ratio of wholesale kWh purchases to retail kWh deliveries as calculated in Exhibit 6.

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<sup>1</sup> Adjustment Factor, the Administrative Cost Factor, and the Renewable Energy Standard charge.  
Page 6 of 27

**REDACTED DOCUMENT**

**EXHIBIT 1**  
**LOAD BLOCK DESCRIPTIONS**

<b>Load Block</b>	<b>Group</b>	<b>SMD Load Zone</b>	<b>Load Share</b>	<b>Type of Service</b>	<b>Period</b>
<b>A1</b>	Industrial	RI	50%	Last Resort Service	10/01/2022 – 12/31/2022
<b>A2</b>	Industrial	RI	50%	Last Resort Service	10/01/2022 – 12/31/2022
<b>B</b>	Residential	RI	20%	Last Resort Service	10/01/2022 – 03/31/2023
<b>C</b>	Residential	RI	20%	Last Resort Service	04/01/2023 – 09/30/2023
<b>D</b>	Residential	RI	20%	Last Resort Service	10/01/2023 – 03/31/2024
<b>E</b>	Commercial	RI	20%	Last Resort Service	10/01/2022 – 03/31/2023
<b>F</b>	Commercial	RI	20%	Last Resort Service	04/01/2023 – 09/30/2023
<b>G</b>	Commercial	RI	20%	Last Resort Service	10/01/2023 – 03/31/2024



**THE NARRAGANSETT ELECTRIC COMPANY  
d/b/a RHODE ISLAND ENERGY  
R.I.P.U.C. DOCKET NO. 4978  
LAST RESORT SERVICE RATE FILING  
WITNESSES: OLIVEIRA AND RUEBENACKER  
SCHEDULES**

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Schedule 6  
Transaction Confirmations

**REDACTED DOCUMENT**

**EXECUTION COPY**

**MASTER POWER AGREEMENT  
FORM OF CONFIRMATION**

This Confirmation shall confirm the Transaction agreed to on, and effective as of **July 13, 2022** between **THE NARRAGANSETT ELECTRIC COMPANY**, a Rhode Island corporation (“Buyer”) and [REDACTED] (“Seller”) regarding the sale/purchase of Last Resort Service specified herein under the terms and conditions under the Master Power Agreement, dated October 7, 2021 (the “Master Power Agreement”) between Buyer and Seller, as specified and modified herein. It is the intent of Buyer and Seller that the Transaction shall meet the Commodity Futures Trading Commission's criteria for the forward contract exclusion, including that the Parties intend to physically settle the Transaction, and is therefore not subject to swap regulation. Terms used but not defined herein shall have the meanings ascribed to them in the Master Power Agreement.

**1. Last Resort Service Requirements Matrix**

Award Block	Customer Group	Load Zone	Load Responsibility	Commencement Date	Conclusion Date
A1	Industrial	RI	50%	10/01/22	12/31/22

[REDACTED]

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

**3. Load Asset Designation within the ISO Settlement Market System**

Award Block	Customer Group	Load Zone	Load Asset Number	Load Asset Name
A1	Industrial	RI	37765	NECO INDUSTRIAL SO LOAD_4005

**4. RES Requirement**

RES Requirement shall mean, for each calendar month during the term of this Transaction, zero.





**REDACTED DOCUMENT**

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**8. Confidentiality**

Articles 2 and 7 of this Confirmation are Confidential Terms within the meaning of Article 23 of the Master Power Agreement.

**9. Ratification of the Terms and Conditions of the Agreement**

(a) Except as expressly amended or waived by this Confirmation, the terms, conditions, covenants, agreements, warranties and representations contained in the Master Power Agreement are in all respects ratified, confirmed and remade as of the date hereof and, except as amended or waived hereby, shall continue in full force and effect.

(b) Nothing in this Confirmation shall, or shall be construed to, alter or amend any other Confirmation.

**10. Counterparts**

This Confirmation may be executed in counterparts, all of which together shall constitute one and the same instrument.

This Confirmation constitutes part of and is subject to the terms and provisions of such Master Power Agreement.

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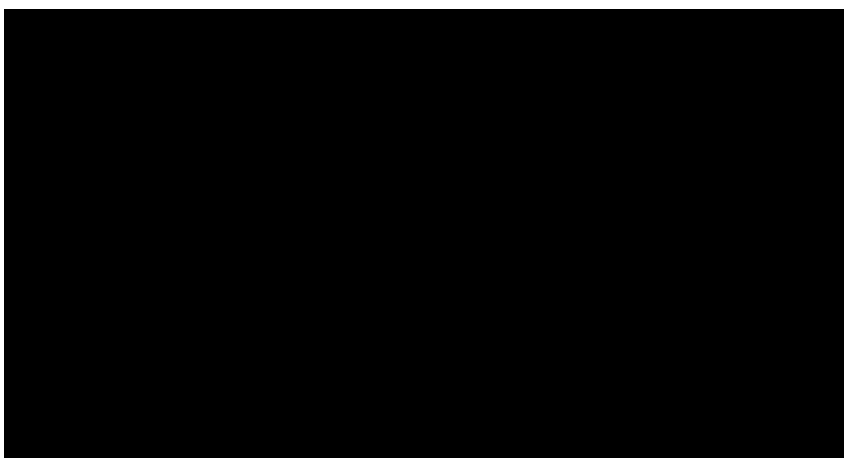
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**THE NARRAGANSETT ELECTRIC COMPANY**

---

Name: David J. Bonenberger  
Title: President



**REDACTED DOCUMENT**

**EXECUTION COPY**

**MASTER POWER AGREEMENT  
CONFIRMATION**

This Confirmation shall confirm the Transaction agreed to on, and effective as of, **July 13, 2022** between **THE NARRAGANSETT ELECTRIC COMPANY**, a Rhode Island corporation (“Buyer”) and [REDACTED]

[REDACTED] (“Seller”) regarding the

sale/purchase of Last Resort Service specified herein under the terms and conditions under the Master Power Agreement, dated June 16, 2009 (the “Master Power Agreement”) between Buyer and Seller, as specified and modified herein. It is the intent of Buyer and Seller that the Transaction shall meet the Commodity Futures Trading Commission's criteria for the forward contract exclusion, including that the Parties intend to physically settle the Transaction, and is therefore not subject to swap regulation. Terms used but not defined herein shall have the meanings ascribed to them in the Master Power Agreement.

**1. Last Resort Service Requirements Matrix**

Award Block	Customer Group	Load Zone	Load Responsibility	Commencement Date	Conclusion Date
A1	Industrial	RI	50%	10/01/22	12/31/22

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

**3. Load Asset Designation within the ISO Settlement Market System**

Award Block	Customer Group	Load Zone	Load Asset Number	Load Asset Name
A1	Industrial	RI	37765	NECO INDUSTRIAL SO LOAD_4005

**REDACTED DOCUMENT**

**4. RES Requirement**

RES Requirement shall mean, for each calendar month during the term of this Transaction, zero.

**5. Amount Payable**

The amount payable by the Buyer to Seller in a month shall be:

- (i) The product of (a) the Delivered Energy for Last Resort Service to the Industrial Customer Group in a month and (b) Industrial Contract Rate in the month, plus
- (ii) The Capacity Charges for the Industrial Customer Group in the month.

**6. Modifications to the Master Power Agreement**

None.

**7. Security**

**A. Calculation of Exposure**

Exposure shall be calculated in accordance with Paragraph 3 of the CSA, subject to the conditions and definitions below.

**Seller Independent Amount** means zero.

**Expected Daily Load** means the average daily load based upon one year of available actual loads for a given month for the Industrial Customer Group as specified in the following table:

<b>Award Block</b>	<b>Customer Group</b>	<b>Load Zone</b>	<b>October 2022</b>	<b>November 2022</b>	<b>December 2022</b>
A1	Industrial	RI	295	315	330

**Adjustment Factor** is 0.95.

**REDACTED DOCUMENT**

**Reference New England Internal Hub Price** means the prices as specified in the following table:

<b>ISO New England Internal Hub Price</b>	<b>October 2022</b>	<b>November 2022</b>	<b>December 2022</b>
Off-Peak	58.20	115.75	229.75
Peak	69.50	140.00	254.00
Reference New England Internal Hub Price**	63.30	127.05	240.70

\*\*The Reference New England Internal Hub price shall be calculated as ((Peak Price x number of Peak Hours in the Month) + (Off-Peak Price x number of Off-Peak Hours in the Month))/(Total Hours in the Month)), as applicable.

## **B. Delivery of Collateral**

Within five (5) Business Days after the execution of this Confirmation, Seller shall provide Collateral in accordance with Paragraph 3(a) of the Credit Support Annex of the Master Power Agreement, and in any of the forms specified in Paragraph 6 of the Credit Support Annex of the Master Power Agreement.

## **8. Confidentiality**

Article 2 of this Confirmation is Confidential Terms within the meaning of Article 23 of the Master Power Agreement.

## **9. Ratification of the Terms and Conditions of the Agreement**

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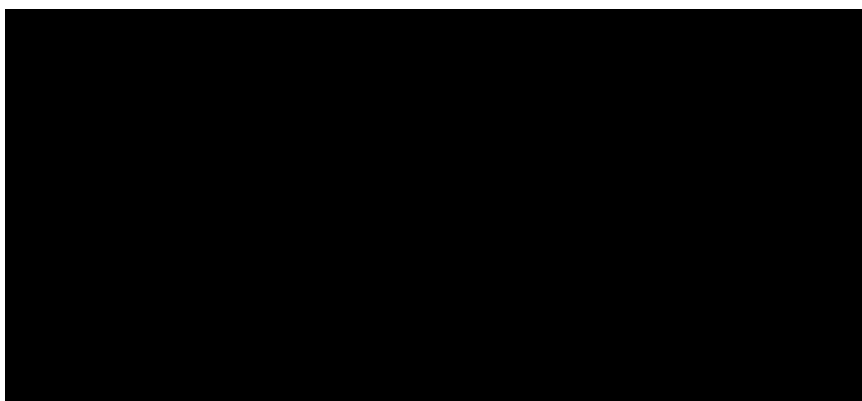
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**THE NARRAGANSETT ELECTRIC COMPANY**

---

Name: David J. Bonenberger  
Title: President





**REDACTED DOCUMENT**

### 3. Load Asset Designation within the ISO Settlement Market System

<b>Award Block</b>	<b>Customer Group</b>	<b>Load Zone</b>	<b>Load Asset Number</b>	<b>Load Asset Name</b>
B	Residential	RI	37763	NECO RESIDENTIAL SO LOAD_4005
C	Residential	RI	37763	NECO RESIDENTIAL SO LOAD_4005
D	Residential	RI	37763	NECO RESIDENTIAL SO LOAD_4005
E	Commercial	RI	37764	NECO COMMERCIAL SO LOAD_4005
F	Commercial	RI	37764	NECO COMMERCIAL SO LOAD_4005
G	Commercial	RI	37764	NECO COMMERCIAL SO LOAD_4005

### 4. RES Requirement

RES Requirement shall mean, for each calendar month during the term of this Transaction, zero.

### 5. Amount Payable

The amount payable by the Buyer to Seller in a month shall be:

- (i) The product of (a) the Delivered Energy for Last Resort Service to the Residential Customer Group in a month and (b) the Residential Contract Rate in the month, plus
- (ii) The Capacity Charges for the Residential Customer Group in the month, plus
- (iii) The product of (a) the Delivered Energy for Last Resort Service to the Commercial Customer Group in a month and (b) the Commercial Contract Rate in the month, plus
- (iv) The Capacity Charges for the Commercial Customer Group in the month.

### 6. Modifications to the Master Power Agreement

None.

### 7. Security

#### 7.1 Calculation of Exposure

Exposure shall be calculated in accordance with Paragraph 3 of the CSA, subject to the conditions and definitions below.

**Seller Independent Amount** means zero.



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**Expected Daily Load** means the average daily load based upon two years of available actual loads for a given month for the Residential and Commercial Customer Groups, as specified in the following tables:

Award Block	Customer Group	Load Zone	October 2022	November 2022	December 2022	January 2023	February 2023	March 2023
B	Residential	RI	1352	1476	1748	1836	1722	1522
E	Commercial	RI	464	472	504	532	564	498

Award Block	Customer Group	Load Zone	April 2023	May 2023	June 2023	July 2023	August 2023	September 2023
C	Residential	RI	1280	1358	1798	2372	2414	1668
F	Commercial	RI	458	466	552	602	616	532

Award Block	Customer Group	Load Zone	October 2023	November 2023	December 2023	January 2024	February 2024	March 2024
D	Residential	RI	1352	1476	1748	1836	1722	1522
G	Commercial	RI	464	472	504	532	564	498

**Adjustment Factor** is 0.95.

**Reference New England Internal Hub Price** means the prices as specified in the following tables:

ISO New England Internal Hub Price	October 2022	November 2022	December 2022	January 2023	February 2023	March 2023
Off-Peak	58.20	115.75	229.75	268.09	257.66	141.50
Peak	69.50	140.00	254.00	316.08	285.32	150.00
Reference New England Internal Hub Price**	63.30	127.05	240.70	289.76	270.83	145.71

ISO New England Internal Hub Price	April 2023	May 2023	June 2023	July 2023	August 2023	September 2023
Off-Peak	59.25	40.00	41.25	50.99	48.51	39.75
Peak	71.50	51.25	54.00	66.94	62.56	48.25
Reference New England Internal Hub Price**	64.69	45.32	47.48	57.85	55.46	43.53

**REDACTED DOCUMENT**

<b>ISO New England Internal Hub Price</b>	<b>October 2023</b>	<b>November 2023</b>	<b>December 2023</b>	<b>January 2024</b>	<b>February 2024</b>	<b>March 2024</b>
Off-Peak	40.50	81.50	133.00	173.56	166.44	87.00
Peak	48.15	90.00	151.50	213.30	206.70	102.50
Reference New England Internal Hub Price**	44.12	85.46	140.96	192.36	185.88	94.01

\*\*The Reference New England Internal Hub price shall be calculated as ((Peak Price x number of Peak Hours in the Month) + (Off-Peak Price x number of Off-Peak Hours in the Month))/(Total Hours in the Month)), as applicable.

## **7.2 Delivery of Collateral**

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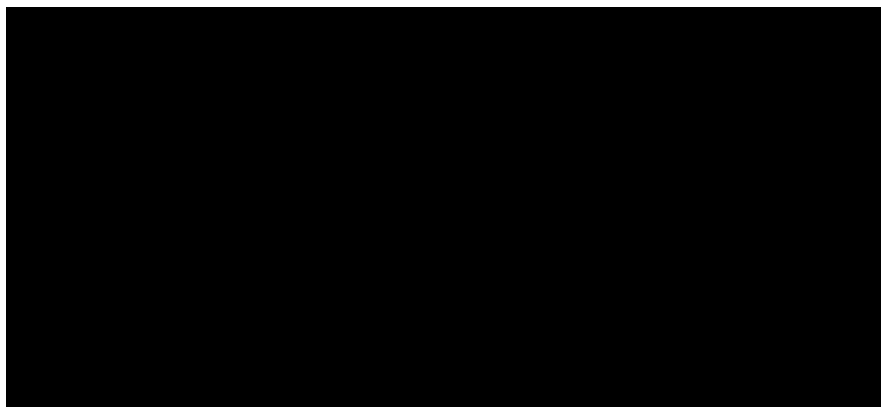
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Name: David J. Bonenberger  
Title: President





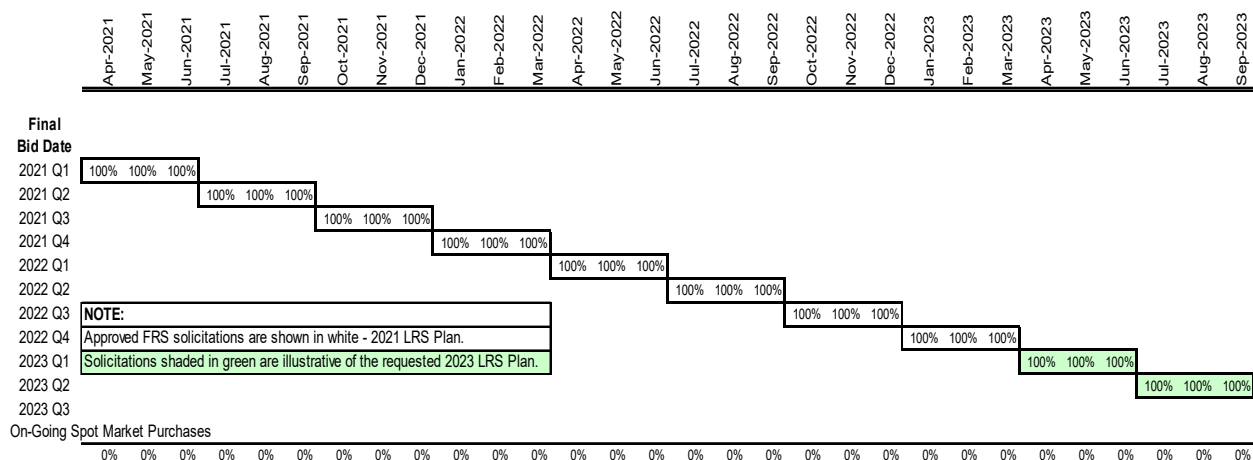
**THE NARRAGANSETT ELECTRIC COMPANY  
d/b/a RHODE ISLAND ENERGY  
R.I.P.U.C. DOCKET NO. 4978  
LAST RESORT SERVICE RATE FILING  
WITNESSES: OLIVEIRA AND RUEBENACKER  
SCHEDULES**

---

Schedule 7  
Approved 2021 LRS Plan



**Industrial Solicitations**



**NOTE:**  
Approved FRS solicitations are shown in white - 2021 LRS Plan.  
Solicitations shaded in green are illustrative of the requested 2023 LRS Plan.

Testimony of  
A. Joseph Cavicchi



**PRE-FILED DIRECT TESTIMONY  
OF  
A. JOSEPH CAVICCHI**

**July 21, 2022**

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1 **I. Introduction**

2 **Q. Mr. Cavicchi, please state your name and business address.**

3 A. My name is A. Joseph Cavicchi. My business address is 111 Huntington Avenue,  
4 Boston, MA 02199.

5

6 **Q. On whose behalf are you testifying in this matter?**

7 A. The Narragansett Electric Company, d/b/a Rhode Island Energy (the “Company” or  
8 “RIE”).

9

10 **Q. By whom are you employed and in what capacity?**

11 A. I am employed by Analysis Group as a Vice President.

12

13 **Q. Please summarize your professional and educational background.**

14 A. I provide economic analysis and expert testimony in various state and federal regulatory  
15 proceedings related to electricity markets. In particular, I work with clients on a variety  
16 of state regulatory and Federal Energy Regulatory Commission (“FERC”) proceedings,  
17 and often file testimony and affidavits supported by economic analyses. Throughout my  
18 career I have been directly involved with corporations, private and public institutions, and  
19 state and federal regulatory authorities in connection with the economics of the electricity  
20 industry. For the past 25 years I have been working almost exclusively on the regulatory  
21 economics of the electricity industry, and, in particular, performing economic analyses of

1 wholesale electricity markets. I hold Masters degrees in Technology and Policy and in  
2 Environmental Engineering from the Massachusetts Institute of Technology and Tufts  
3 University, respectively.

4  
5 **Q. Have you ever testified before the Rhode Island Public Utilities Commission**  
6 **(“PUC”) or any other regulatory body?**

7 A. Yes. I have previously testified on power supply procurement plans in Pennsylvania and  
8 Ohio. In addition, I have testified on several occasions regarding wholesale electricity  
9 market competitiveness and design issues at FERC. I have also testified on qualifying  
10 facility pricing policy and wholesale market design policy in the state of California.  
11 Finally, I have written articles on electricity industry structure and issues associated with  
12 procuring wholesale electricity supplies for delivery to retail customers. Additional detail  
13 regarding my credentials and experience can be found in my *curriculum vitae*, which is  
14 attached as **Appendix A** to this testimony.

15  
16 **II. Purpose of Testimony**

17 **Q. What is the purpose of your testimony?**

18 A. I was asked by the Company to review the proposed Last Resort Service (“LRS”) rates  
19 filed in this proceeding and assess the changes presented by the proposed LRS rates  
20 relative to recent and future wholesale and retail electricity market conditions in New  
21 England.

1 **III. LRS Supply**

2 **A. LRS Overview**

3 **Q. What is LRS?**

4 A. LRS is the commodity component of electricity service provided to utility customers that  
5 do not receive their electric supply service from a competitive retail supplier referred to  
6 as a non-regulated power producer in Rhode Island. LRS is composed primarily of the  
7 wholesale electricity supply procured and delivered by a utility to its residential,  
8 commercial, and industrial customers. The total LRS rate typically includes the cost of  
9 the electric energy, capacity, ancillary services, renewable energy certificates (“RECs,”  
10 which are procured separately to comply with renewable energy standards as applicable)  
11 and other miscellaneous expenses.

12

13 **Q. Is LRS common in states that have introduced retail competition?**

14 A. Yes. All states that have introduced retail competition require the provision of electric  
15 service for customers that do not choose an alternative retail supplier. LRS is identified  
16 using a number of different names—default, basic, provider of last resort, standard offer,  
17 etc. However, regardless of the name, the provision of LRS requires utilities to issue  
18 wholesale power supply solicitations to obtain the power supply components necessary to  
19 service customers that do not shop for their electric supply.

20

1 **Q. How is LRS supply acquired?**

2 A. LRS is acquired through a combination of competitive wholesale electric supply  
3 solicitations and, in some instances, wholesale electricity spot market purchases. The  
4 most significant portion of the cost of LRS is the electric energy to serve customers'  
5 loads. Moreover, the price of the energy component of the LRS supply is the most  
6 volatile input. Thus, LRS wholesale energy supply procurement is carried out using a  
7 number of solicitations designed to track wholesale market price changes while  
8 minimizing significant rate volatility. Depending upon the overall procurement structure,  
9 other supply components can be purchased simultaneously, or separately. Notably, the  
10 market prices of the other components of the LRS supply are not as volatile and the risk  
11 that cost changes will result in rate volatility is low.

12

13 **Q. How does the LRS procurement structure reduce LRS rate volatility?**

14 A. To reduce abrupt pricing changes, LRS energy procurement structures specify varied  
15 power supply contract terms, procurement dates, and retail customer supply obligation  
16 percentages to avoid situations where all contracts expire at the same time. For example,  
17 electricity supply for non-shopping residential or small commercial customers can be  
18 split up into a number of blocks (or "tranches" defined by seller percentage supply  
19 obligations). The contract terms for the supply products can vary (e.g., 6-month, 12-  
20 month, etc.) and the procurement timing can be defined to renew contracts as little as  
21 once per year to as many as a few times per year. Numerous permutations can be

1 envisioned with each resulting in rates changes that will be more or less volatile. These  
2 procurement structures are often referred to as “laddered” and these types of structures  
3 are used in practically all states with retail competition.<sup>1</sup>  
4

5 **Q. What factors are taken into account when defining procurement laddering**  
6 **structures?**

7 A. Laddering seeks to strike a balance between ensuring reasonably frequent, low-volatility  
8 price adjustments for non-shopping customers and providing an opportunity for non-  
9 shopping customers to seek service from competitive retail suppliers.<sup>2</sup> In other words,  
10 laddering typically intends to limit customer exposure to unacceptable price volatility, but  
11 not produce LRS rates that are not regularly updating as power market conditions  
12 change.<sup>3</sup> The common objective is for non-shopping customers to still have an  
13 opportunity to shop when competitive retail suppliers can provide a better or more  
14 specialized retail offer. However, shopping should not be encouraged by establishing a  
15 volatile LRS rate that can be especially disruptive to residential and small commercial  
16 customers.  
17

---

<sup>1</sup> It is important to note that laddered structures are used primarily for residential and small commercial customers. LRS for larger non-shopping customer loads is renewed quarterly or may also simply be priced based on hourly wholesale electricity spot market prices.

<sup>2</sup> Laddering can also allow for LRS supplier diversity and minimize the impact of supplier financial difficulties.

<sup>3</sup> Alignment of the procurement approach with state legislation and regulatory policy may also be an important consideration.

1 **Q. Are some laddering structures definitively better than others?**

2 A. No. LRS power supply mixtures can vary considerably and still achieve the same  
3 objectives. There will always be times when the LRS pricing under one supply approach  
4 appears better than another, or when LRS pricing better aligns with changing market  
5 conditions. However, these observations do not readily allow one to conclude  
6 definitively that one approach is better than another.

7

8 **B. LRS Supply Products**

9 **Q. What is the most common energy supply product used for LRS?**

10 A. Based on my experience, the most common energy supply product is a full-requirements,  
11 load-following supply product.

12

13 **Q. Please describe a full-requirements, load-following supply product.**

14 A. A full-requirements, load-following electricity supply product obligates a wholesale  
15 electricity seller to supply a fixed-percentage (tranche) of LRS during every hour of a  
16 product's term. By assuming this obligation, sellers are responsible for managing the  
17 acquisition of energy, capacity, ancillary services, and other related products (net of  
18 transmission and distribution losses) to meet LRS hourly loads. The pricing for a full-  
19 requirements, load-following product is specified based on the type of LRS load being  
20 supplied. However, the pricing is typically fixed for the term of the product and does not



1 vary regardless of the number of LRS customers being served.<sup>4</sup> Fixed-price, full-  
2 requirements, load-following electricity supply products are standard for LRS.

3  
4 **Q. How do fixed-price, full-requirements, load-following electricity supply products**  
5 **facilitate the delivery of LRS?**

6 A. Fixed-price, full-requirements, load-following products allow the utility to directly pass  
7 through the costs of the energy supply because the price does not vary as customer load  
8 changes. Thus, suppliers plan for and manage load changes due to weather, LRS  
9 customers switching to competitive retail suppliers, economy-wide changes, etc.<sup>5</sup> The  
10 utility simply uses the supply product prices as inputs into LRS rates and the costs  
11 associated with these products is directly passed through to customers.

12  
13 **Q. Does a fixed-price, full-requirements, load-following electricity supply product**  
14 **cover all the costs incurred by the utility to provide LRS?**

15 A. No, not always. For example, LRS often requires that the utility obtain RECs to comply  
16 with renewable energy standard requirements. RECs can be procured separately, and the  
17 costs passed through to customers either as a component built into the LRS rate or, as in  
18 Rhode Island, through a separate factor that is included on customer bills and added to

---

<sup>4</sup> There are full-requirements, load-following supply products that are priced based on wholesale electricity market hourly prices. These products are often used as LRS for large electricity consumers that rarely use LRS.

<sup>5</sup> Wholesale suppliers specialize in managing these risks and compete to provide the lowest prices in LRS solicitations.

1 the base LRS rate. However, a significant portion of the LRS rate is comprised of the  
2 fixed-price, full-requirements, load-following electricity supply products.

3  
4 **Q. Do fixed-price, full-requirements, load-following electricity supply products capture**  
5 **wholesale electricity market conditions?**

6 A. Yes. Wholesale suppliers rely on wholesale futures/forwards markets to manage the  
7 costs of LRS supply obligations and hedge against possible shifts in fuel and power  
8 markets during a product delivery term. LRS suppliers project the expected hourly loads  
9 that will be served in a tranche of supply obligation and put in place “hedged” that fix the  
10 cost of energy the supplier must serve as a result of an LRS auction award. Thus, at the  
11 time of an LRS solicitation, the costs of locking in market prices for future supply to  
12 serve LRS customers is a key determinant of the LRS supply costs. LRS supplier prices  
13 rise and fall as wholesale futures/forward markets respond to changes in expected future  
14 market supply/demand balances (i.e., electricity and fuel markets).

15  
16 **C. The Company’s LRS Product Mixture**

17 **Q. Does the Company rely on a laddered LRS product mixture?**

18 A. Yes, for its residential and commercial customer groups.<sup>6</sup> The Company obtains 90% of  
19 its LRS energy supply for the residential and commercial customer groups using

---

<sup>6</sup> The Company also procures three months of fixed-price, full-requirements, load-following electricity supply for its industrial customer group on a quarterly basis, resulting in three monthly fixed prices. See Direct Testimony of Jeffrey D. Oliveira and James Ruebenacker, RIPUC Docket No. 4978, July 21, 2022.

1 quarterly procurements and contract terms of 6-, 12-, 18- and 24-months (20%, 20%,  
2 20%, and 30% respectively).<sup>7</sup> In addition, the Company obtains 10% of its LRS energy  
3 supply from the ISO New England wholesale electricity spot market.<sup>8</sup> The Company's  
4 total LRS supply services energy rate combines the cost of these laddered energy supply  
5 components (including losses) with generation capacity, RECs, and administrative costs.<sup>9</sup>

6  
7 **Q. How often are the residential and commercial LRS rates updated?**

8 A. The residential and commercial LRS rates are updated biannually with prices being set  
9 separately for the months October - March (Fall/Winter) and April-September  
10 (Spring/Summer) (See Figure 1). As Figure 1 shows, the Company's rates rise in the  
11 Fall/Winter months consistent with the seasonal variation in New England's wholesale  
12 electricity and natural gas prices. In the Spring/Summer months, the Company's rates  
13 decline as wholesale electricity and natural gas market prices typically decline. Finally,  
14 Figure 1 shows the noticeable increase in the Company's upcoming Fall/Winter prices as  
15 wholesale market futures/forward prices have risen considerably over the last several  
16 months (See **Section IV**, below).

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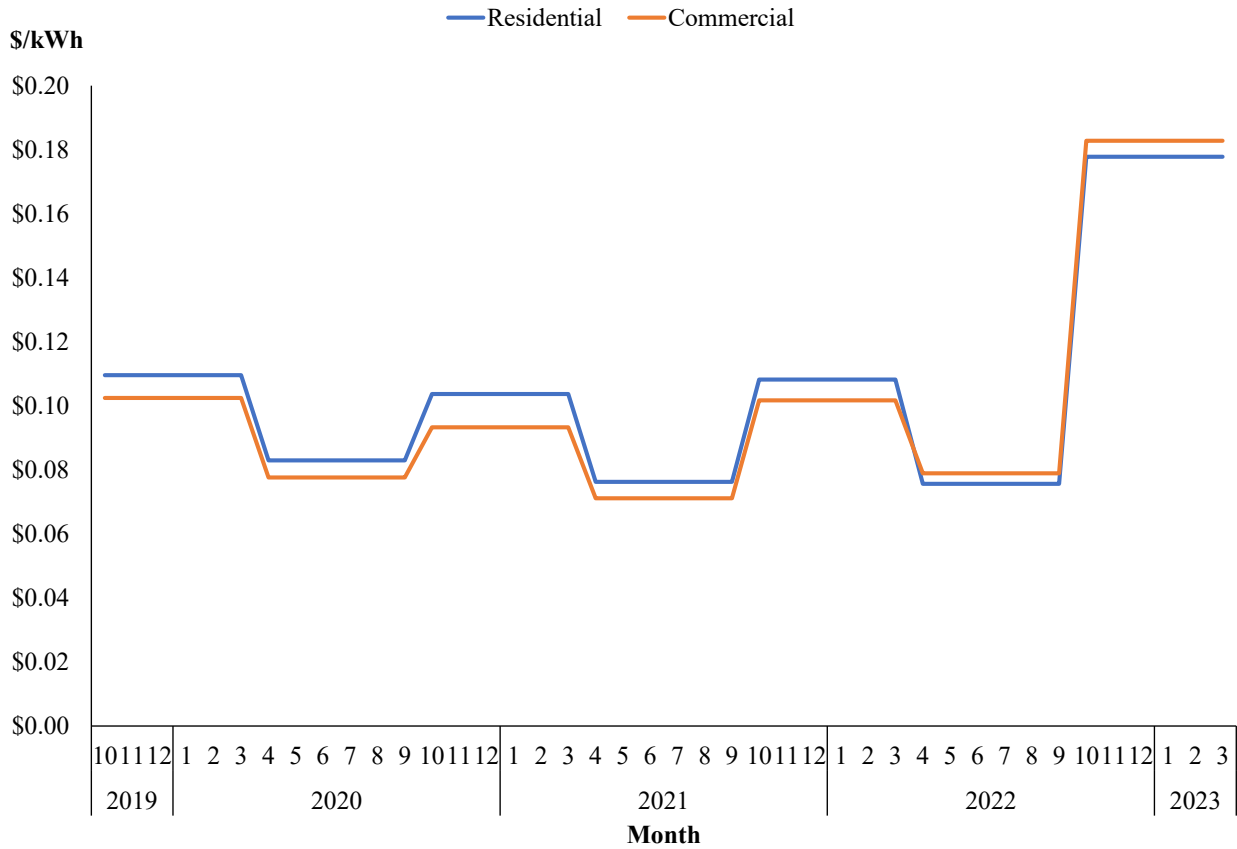
<sup>7</sup> See Schedule 7 — Approved 2021 LRS Plan, Direct Testimony of Jeffrey D. Oliveira and James Ruebenacker, RIPUC Docket No. 4978, July 21, 2022, for a graphical schedule of the Company's laddered procurement.

<sup>8</sup> Id.

<sup>9</sup> Id. at Schedule 1.

1  
2

**Figure 1: The Company’s Residential and Commercial Seasonal LRS Rates<sup>10</sup>  
October 2019 – March 2023**



3

<sup>10</sup> “Last Resort Service (LRS) Rates for All Customers,” National Grid, available at [https://www.nationalgridus.com/media/pdfs/billing-payments/electric-rates/rhode-island/sos-rates-all\\_customers.pdf](https://www.nationalgridus.com/media/pdfs/billing-payments/electric-rates/rhode-island/sos-rates-all_customers.pdf); “Proposed Last Resort Service Rates for the Residential Group for the months of April 2022 through September 2022,” National Grid, RIPUC Docket No. 4978, January 19, 2022, available at <https://ripuc.ri.gov/sites/g/files/xkgbur841/files/eventsactions/docket/4978-NGrid-LRS-Rates-Residential%2C-Commercial%2C-Industrial-%28April-2022%29%28R%29%28PUC-1-19-22%29.pdf>; “Proposed Last Resort Service Rate for the Residential Group for the Months of October 2022 through March 2023,” Narragansett Electric Company d/b/a Rhode Island Energy, RIPUC Docket No. 4978, July 21, 2022.

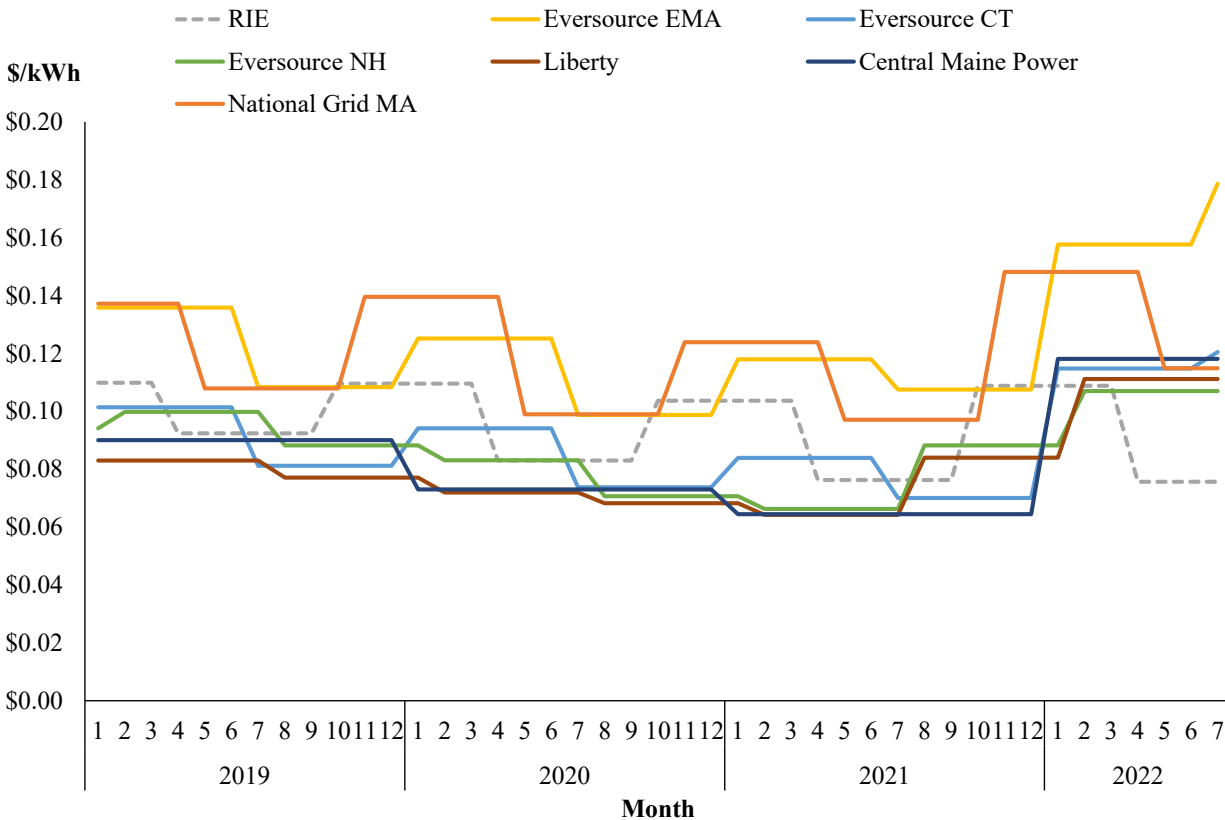
1 **Q. Have you examined how the Company's LRS rates compare to other New England**  
2 **utilities?**

3 A. Yes. Figure 2 compares the Company's LRS rates to other selected New England  
4 utilities' rates.<sup>11</sup> Figure 2 shows that the Company's LRS rates are in line with the rates  
5 of other New England utilities. The Company's rates exhibit relative stability and did not  
6 experience the steep increases in prices during 2022 that resulted at some other utilities.  
7 However, recent increases in wholesale electricity and natural gas prices have now driven  
8 up the Company's upcoming Fall/Winter LRS rates.

---

<sup>11</sup> Figure 2's rate comparisons do not account for the different product mixtures used in the various utilities' LRS or the utility's geographic location. The comparison provides an example of how different procurement mixtures can result in comparable LRS rates.

1 **Figure 2: Selected New England Utility Residential Customer Fixed Price Electricity**  
2 **Rates<sup>12</sup>**  
3 **January 2019 – July 2022**



4

<sup>12</sup> “Last Resort Service (LRS) Rates for All Customers,” National Grid, available at [https://www.nationalgridus.com/media/pdfs/billing-payments/electric-rates/rhode-island/sos-rates-all\\_customers.pdf](https://www.nationalgridus.com/media/pdfs/billing-payments/electric-rates/rhode-island/sos-rates-all_customers.pdf); “Proposed Last Resort Service Rates for the Residential Group for the months of April 2022 through September 2022,” National Grid, RIPUC Docket No. 4978, January 19, 2022, available at <https://ripuc.ri.gov/sites/g/files/xkgbur841/files/eventsactions/docket/4978-NGrid-LRS-Rates-Residential%2C-Commercial%2C-Industrial-%28April-2022%29%28R%29%28PUC-1-19-22%29.pdf>; “Electric Supply Rates Archive,” Eversource Eastern Massachusetts, available at <https://www.eversource.com/content/ema-c/residential/account-billing/manage-bill/about-your-bill/rates-tariffs/electric-supply-rates/electric-supply-rates-archive>; “Administrative Proceeding to Review The Connecticut Light and Power Company d/b/a Eversource Energy’s Standard Service and Supplier of Last Resort Service 2022 Procurement Results and Rates,” PURA Docket No. 22-01-01; “Administrative Proceeding to Review The Connecticut Light and Power Company d/b/a Eversource Energy’s Standard Service and Supplier of Last Resort Service 2021 Procurement Results and Rates,” PURA Docket No. 21-01-01; “Administrative Proceeding to Review The Connecticut Light and Power Company’s Standard Service and Supplier of Last Resort Service 2020 Procurement Results and Rates,” PURA Docket No. 20-

1 **IV. New England Wholesale Electricity and Natural Gas Markets Drive LRS Rates**

2 **Q. Is the increase in the Company’s LRS rates starting in October 2022 consistent with**  
3 **recent changes in wholesale electricity and natural gas spot prices?**

4 A. Yes. Figure 3 shows the spot prices for on-peak and off-peak wholesale electricity at ISO  
5 New England’s Internal Hub and the spot price of natural gas at Algonquin City Gates  
6 from January 2020 to June 2022.<sup>13</sup> As shown in the figure, since July 2021, when the  
7 Company’s LRS rates were set for October 2021 to March 2022, the prices of natural gas  
8 and wholesale electricity have increased. In particular, summer on-peak wholesale  
9 electricity spot prices in ISO New England increased from approximately \$40/MWh in  
10 July 2021 to more than \$70/MWh in June 2022. Similarly, the summer spot price of  
11 natural gas at Algonquin City Gates increased from approximately \$3/mmBtu in July  
12 2021 to approximately \$7/mmBtu in June 2022. Moreover, relative to spot prices during  
13 the 2020-21 winter season, the maximum monthly average spot price for on-peak  
14 wholesale electricity in ISO New England increased by about \$80/MWh to more than

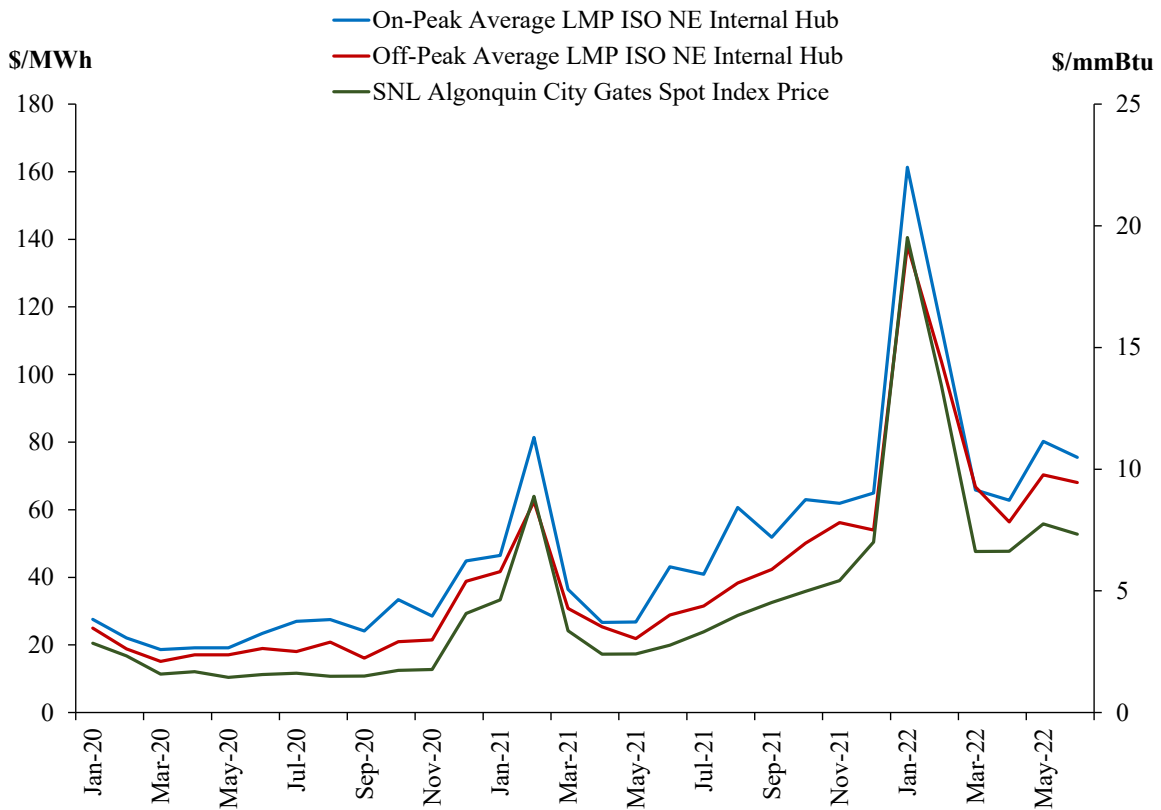
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01-01; “Administrative Proceeding to Review The Connecticut Light and Power Company's Standard Service and Supplier of Last Resort Service 2019 Procurement Results and Rates,” PURA Docket No.19-01-01; “2021 Energy Service Solicitation,” Eversource NH, NHPUC Docket No. 21-077; “2020 Energy Service Solicitation,” Eversource NH, NHPUC Docket No. 20-054; “Petition for Approval of Energy Service Solicitation and Resulting Rates,” Eversource NH, NHPUC Docket No. 19-082; “Petition Requesting Approval of Energy Service Solicitation and Resulting Rates,” Eversource NH, NHPUC Docket No. 18-002; “Rates and Tariffs Archive,” Liberty Utilities NH, available at <https://new-hampshire.libertyutilities.com/bath/residential/rates-and-tariffs/archive-electrical.html#navbar-rates-and-tariffs-residential>; “Standard Offer Rates for Residential and Small Commercial Customers,” Central Maine Power, available at <https://www.maine.gov/mpuc/regulated-utilities/electricity/standard-offer-rates/cmp>; “Basic Service Rates for Customers on the following Residential rate classes: Regular Residential (R-1), Residential Low Income (R-2),” National Grid MA, available at <https://www.nationalgridus.com/media/pdfs/billing-payments/electric-rates/ma/resitable.pdf>.

<sup>13</sup> Algonquin City-Gates is the nearest natural gas trading hub to Rhode Island. *See, e.g.*, “Northeast Natural Gas Market Assessment,” FERC, July 2022, p. 1.

1           \$160/MWh during the 2021-22 winter season, and the maximum monthly average spot  
2           price for natural gas at Algonquin City Gates increased by about \$11/mmBtu to nearly  
3           \$20/mmBtu during the 2021-22 winter season.

4           **Figure 3: Spot Prices for On-Peak and Off-Peak Wholesale Electricity and Natural Gas<sup>14</sup>**  
5           **January 2020 – June 2022**



6           **Note:** The prices shown are monthly averages.

7           **Q.     Why are natural gas prices relevant to wholesale electricity prices?**

<sup>14</sup> “SNL Algon Gates Spot Natural Gas Index,” S&P Global Market Intelligence; “Day-Ahead and Real-Time Monthly LMP Index Report,” ISO New England.

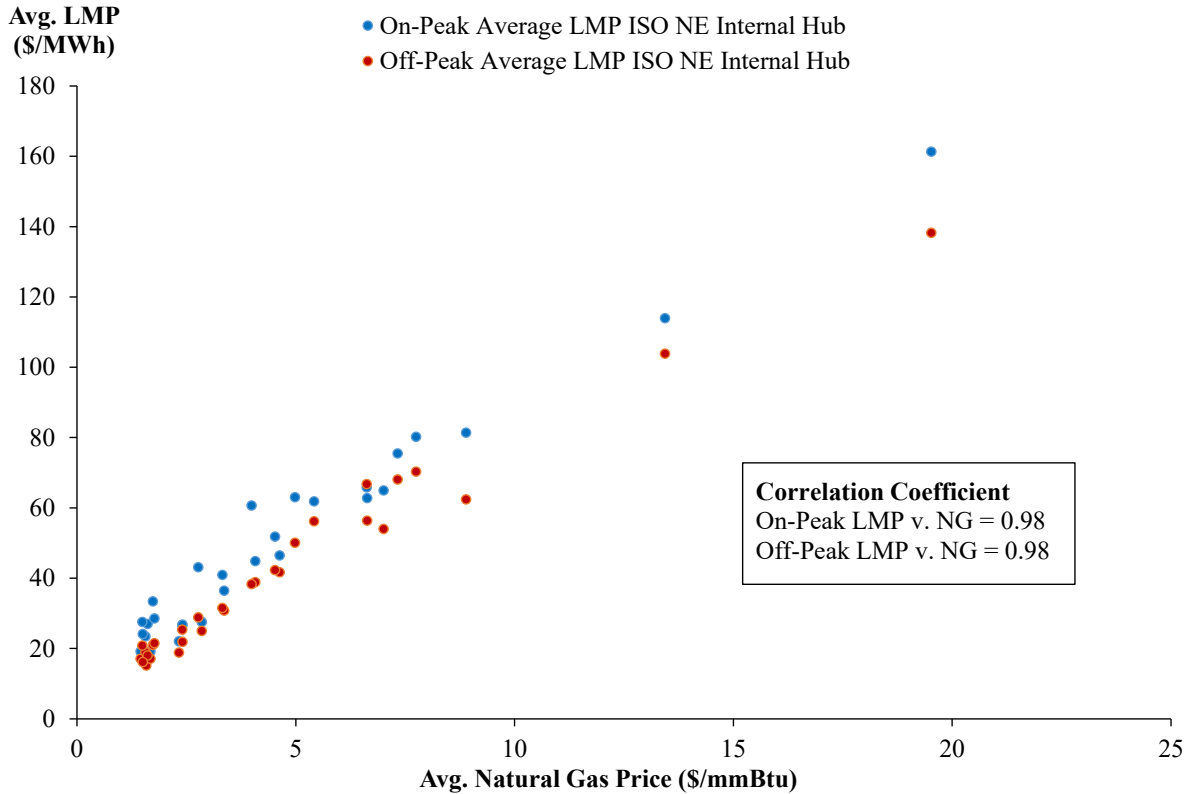


1 A. Natural gas is typically the marginal fuel in New England, that is, natural gas is typically  
2 the fuel being used by the highest cost generator dispatched to meet demand in New  
3 England. As wholesale electricity spot prices are set at the price of the highest cost  
4 generator dispatched, and the price offered by each generator is set largely based on fuel  
5 costs, natural gas prices are a primary factor in setting the spot price of wholesale  
6 electricity in New England.<sup>15</sup> As shown in Figure 4, ISO New England wholesale  
7 electricity spot prices are highly correlated with the Algonquin City Gates spot price of  
8 natural gas.

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<sup>15</sup> See, e.g., Micek, Kassia, “US EIA sees summer power prices climbing on fuel costs, delivery constraints,” *S&P Global Market Intelligence*, June 17, 2022.

1 **Figure 4: Correlation between ISO NE Spot Electricity Prices and Algonquin City Gates**  
2 **Spot Natural Gas Prices<sup>16</sup>**  
3 **January 2020 to June 2022**



4 **Note:** The prices shown are monthly averages.

5 As forward prices for electricity are based on expectations of the price of electricity in the  
6 future, forward prices for electricity are similarly influenced by forward prices for natural  
7 gas. Thus, wholesale electricity prices vary with the expected future supply and demand  
8 conditions in natural gas markets.

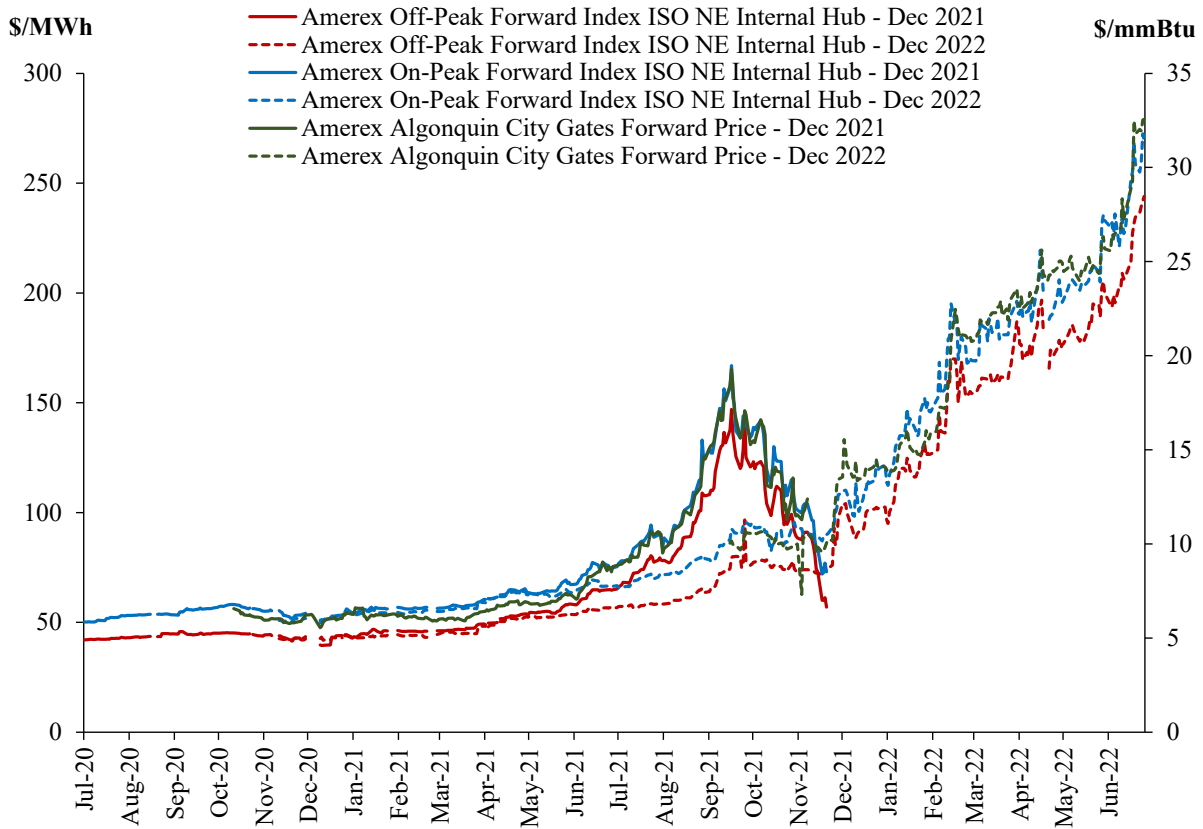
9  
<sup>16</sup> "SNL Algon Gates Spot Natural Gas Index," S&P Global Market Intelligence; "Day-Ahead and Real-Time Monthly LMP Index Report," ISO New England.

1 **Q. You showed that spot prices for natural gas and wholesale electricity in New**  
2 **England have increased in recent months, have forward prices for the coming**  
3 **winter also increased?**

4 A. Yes. Figure 5 shows the forward prices for the December 2021 and December 2022  
5 contracts for on-peak and off-peak wholesale electricity at ISO New England's Internal  
6 Hub as well as the forward prices for the same contracts for natural gas delivered to  
7 Algonquin City Gates. As shown in the figure, the forward prices of natural gas and  
8 wholesale electricity for December 2022 are dramatically higher than the forward prices  
9 for December 2021. In particular, on-peak wholesale electricity forward prices for ISO  
10 New England's Internal Hub settled at roughly \$70/MWh for December 2021 and are  
11 currently trading at nearly \$270/MWh in July 2022. Similarly, the forward price of  
12 natural gas delivered to Algonquin City Gates settled at roughly \$12/mmBtu for  
13 December 2021 and is currently trading at more than \$30/mmBtu in July 2022.

1  
2  
3

**Figure 5: Forward Prices for On-Peak and Off-Peak Wholesale Electricity  
and Natural Gas<sup>17</sup>  
December 2021 and December 2022 Contracts**



4

5 **Q. What are the key factors driving the increase in forward natural gas prices in New**  
6 **England for the coming winter?**

<sup>17</sup> “Amerex Forward Power Index Internal Hub On-Peak,” “Amerex Forward Power Index Internal Hub Off-Peak,” and “Amerex Algon Gates Natural Gas Full Value Monthly,” S&P Global Market Intelligence.

1 A. Electricity and natural gas prices in New England are typically higher in winter than in  
2 summer due to high demand for heating;<sup>18</sup> however, forward natural gas and electricity  
3 prices for the coming winter have also increased dramatically relative to the prices that  
4 prevailed last winter, as discussed above. A key factor causing this increase is Russia's  
5 invasion of Ukraine in February 2022 and the associated disruptions to the natural gas  
6 markets caused by Europe's heavy dependence on Russia for natural gas, Europe's  
7 sanctions of Russia, and the ensuing disputes over natural gas supply.<sup>19</sup> Europe's efforts  
8 to replace Russian natural gas supplies with supplies from other sources increase the  
9 price of natural gas in the U.S. due, in part, to the ability of the U.S. to export natural gas

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<sup>18</sup> See, e.g., Micek, Kassia, "US EIA sees summer power prices climbing on fuel costs, delivery constraints," *S&P Global Market Intelligence*, June 17, 2022.

<sup>19</sup> Wallace, Joe and Jenny Strasburg, "Ukraine Reduced Russian Gas Flowing to Europe Through Key Pipeline," *The Wall Street Journal*, May 11, 2022; Pancevski, Bojan and Jenny Strasburg, "Europe Fears Widespread Economic Fallout if Russian Gas Outage Drags On," *The Wall Street Journal*, July 18, 2022; "Short-Term Energy Outlook: Natural Gas," U.S. Energy Information Administration, July 12, 2022, available at <https://www.eia.gov/outlooks/steo/report/natgas.php>.

Other factors influencing the increase in natural gas and electricity prices since 2021 include the continued economic recovery, limited natural gas production increases, forecasts of a colder winter in 2022-23 than 2021-22, smaller than average inventories of natural gas in the U.S., and limited switching to coal-fired generation due to generator retirements, fuel delivery issues, and low stocks. See "Short-Term Energy Outlook: Natural Gas," U.S. Energy Information Administration, July 12, 2022, available at <https://www.eia.gov/outlooks/steo/report/natgas.php>; Weber, Maya, "Spot gas prices to top \$8/MMBtu in H2'22 despite production growth, EIA predicts," *S&P Global Market Intelligence*, June 7, 2022; Micek, Kassia, "US EIA sees summer power prices climbing on fuel costs, delivery constraints," *S&P Global Market Intelligence*, June 17, 2022.

1 in liquefied form (“liquefied natural gas” or “LNG”).<sup>20</sup> As demand for natural gas in  
2 Europe strengthens, so does the price Europeans are willing to pay for natural gas, which  
3 strengthens the incentive for U.S. producers to export natural gas to Europe.<sup>21</sup> With more  
4 supply going to Europe, the price of natural gas in the U.S. increases, including in New  
5 England. For example, in the first quarter of 2022, the U.S. supplied 47% of the  
6 European Union’s LNG imports, representing a 235% increase in year-on-year LNG  
7 exports from the U.S. to the European Union.<sup>22</sup> Similarly, the U.S. Energy Information  
8 Administration expects that total LNG exports from the U.S. in 2022 will be 22% higher  
9 than in 2021.<sup>23</sup>

10

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<sup>20</sup> See, e.g., Weber, Maya, “‘Uncomfortable questions’ seen ahead for global gas supply dynamics,” *S&P Global Market Intelligence*, July 15, 2022; “Short-Term Energy Outlook: Natural Gas,” U.S. Energy Information Administration, July 12, 2022, available at <https://www.eia.gov/outlooks/steo/report/natgas.php> (“LNG prices in Europe remain high amid supply uncertainties because of Russia’s invasion of Ukraine and the need to replenish Europe’s natural gas inventories, which has kept Europe’s demand for LNG elevated... The Henry Hub spot price averaged \$6.07 per million British thermal units (MMBtu) in 1H22, rising steadily from an average of \$4.38/MMBtu in January to \$8.14/MMBtu in May... The increase through May resulted from continued demand for LNG exports, increased demand in electric power generation as a result of limited natural gas-to-coal switching, and decreased production compared with the end of 2021.”).

<sup>21</sup> “Short-Term Energy Outlook: Natural Gas,” U.S. Energy Information Administration, July 12, 2022, available at <https://www.eia.gov/outlooks/steo/report/natgas.php> (“Strong natural gas demand and high LNG prices in Europe and Asia drove the continued growth in U.S. LNG exports in the first half of this year.”).

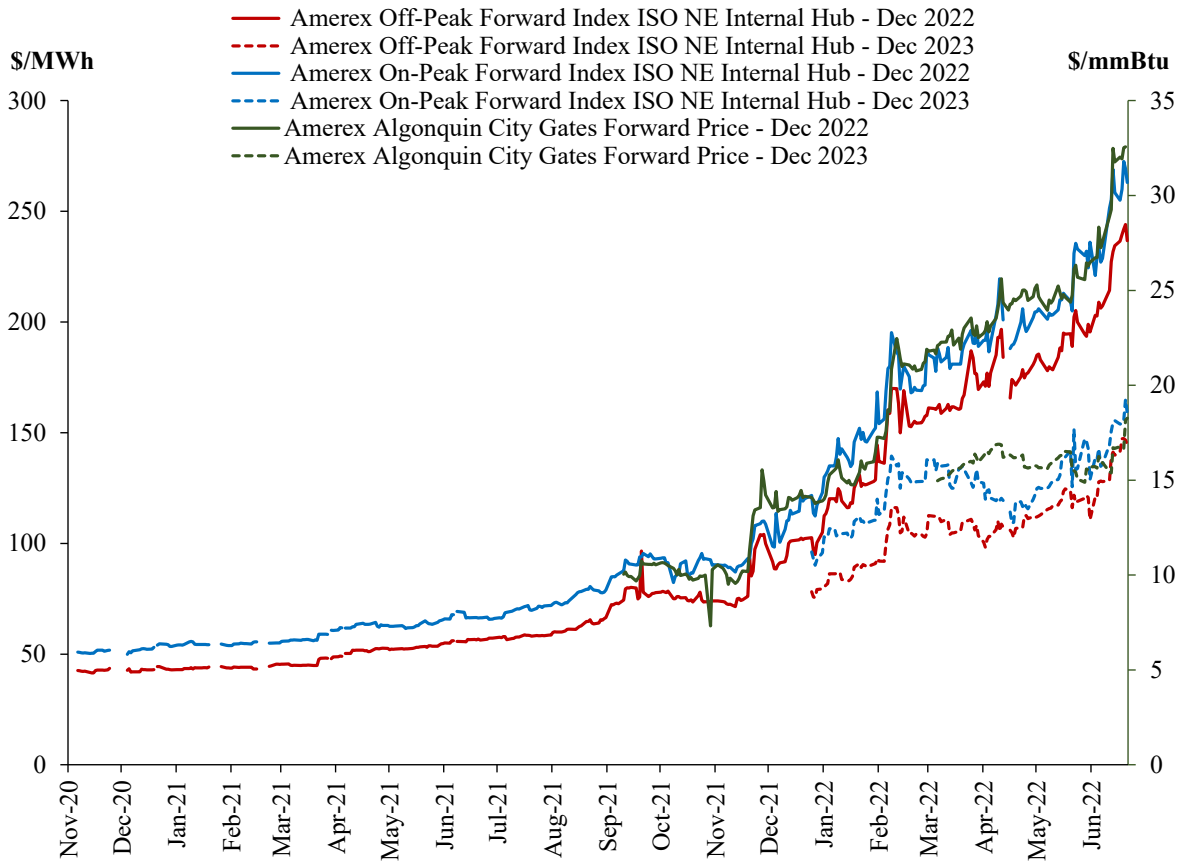
<sup>22</sup> “Quarterly Report on European Gas Markets,” European Commission, Vol. 15, Issue 1, Q1 2022, available at [https://ec.europa.eu/info/sites/default/files/energy\\_climate\\_change\\_environment/quarterly\\_report\\_on\\_european\\_gas\\_markets\\_q1\\_2022.pdf](https://ec.europa.eu/info/sites/default/files/energy_climate_change_environment/quarterly_report_on_european_gas_markets_q1_2022.pdf), p. 16. See also Weber, Maya, “‘Uncomfortable questions’ seen ahead for global gas supply dynamics,” *S&P Global Market Intelligence*, July 15, 2022 (“In the first half of 2022, [the International Energy Agency’s] report showed European LNG imports rose by more than 50% compared to last year, while two-thirds of the increase in global LNG trade came from the U.S. alone.”).

<sup>23</sup> Weber, Maya, “Spot gas prices to top \$8/MMBtu in H2’22 despite production growth, EIA predicts,” *S&P Global Market Intelligence*, June 7, 2022.

1 **Q. Are New England natural gas and wholesale electricity prices, expected to be this**  
2 **high for the 2023-24 winter season?**

3 A. No, as shown in Figure 6, current prices for the December 2023 forward contracts for  
4 Algonquin City Gates and ISO New England's Internal Hub are well below the prices of  
5 the December 2022 contracts, indicating that prices are expected to fall by the 2023-24  
6 winter season.

1 **Figure 6: Forward Prices for On-Peak and Off-Peak Wholesale Electricity**  
2 **and Natural Gas<sup>24</sup>**  
3 **December 2022 and December 2023 Contracts**



4  
5 **V. The Company Faces the Same LRS Rate Increases that Other New England Utilities**  
6 **Face**

7 **Q. Have retail rates also increased for other New England utilities?**

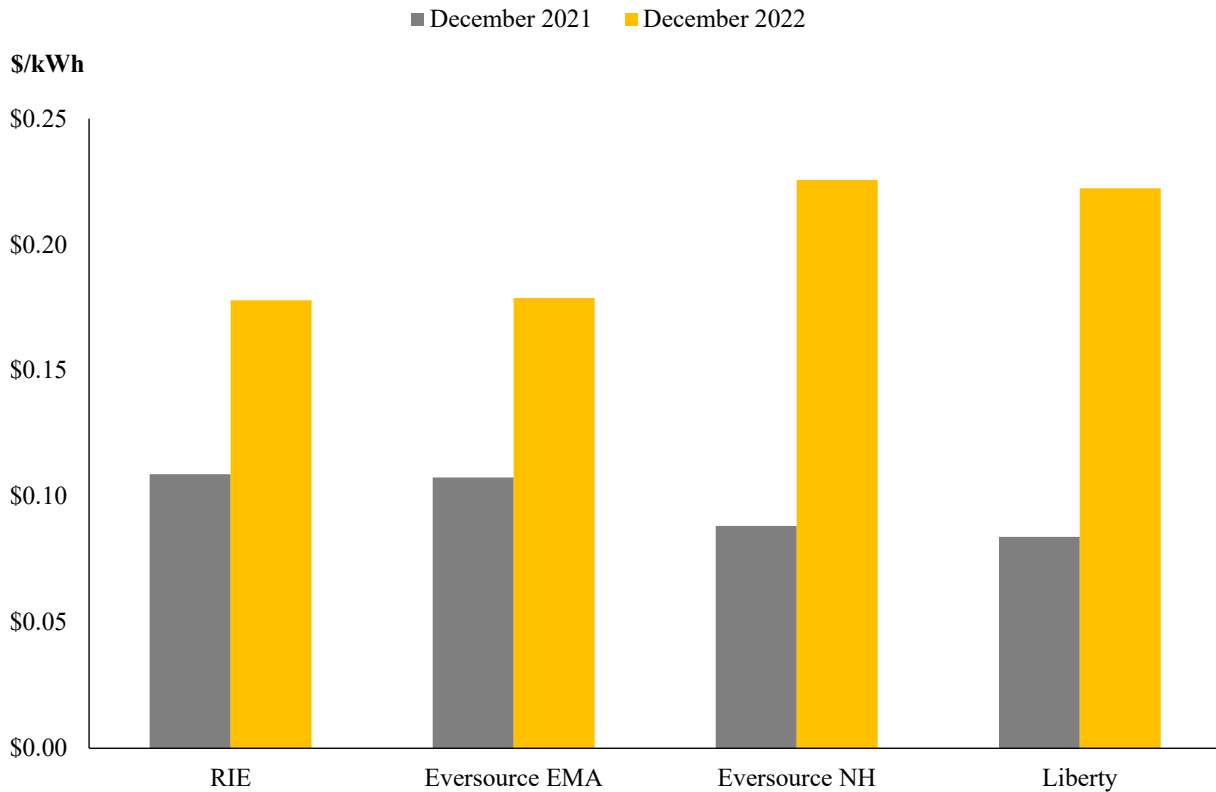
8 A. Yes, as shown in Figure 7, residential rates for Eversource EMA, Eversource NH, and  
9 Liberty—New England utilities that have recently procured power for Fall/Winter 2022-

<sup>24</sup> “Amerex Forward Power Index Internal Hub On-Peak,” “Amerex Forward Power Index Internal Hub Off-Peak,” and “Amerex Algon Gates Natural Gas Full Value Monthly,” S&P Global Market Intelligence.



1 23 and published the resulting rates—will also be higher for December 2022 than they  
2 were for December 2021 as a result of the market disruptions and other factors discussed  
3 above.

4 **Figure 7: Residential Retail Electric Supply Rates at Select New England Utilities<sup>25</sup>**  
5 **December 2021 versus December 2022**

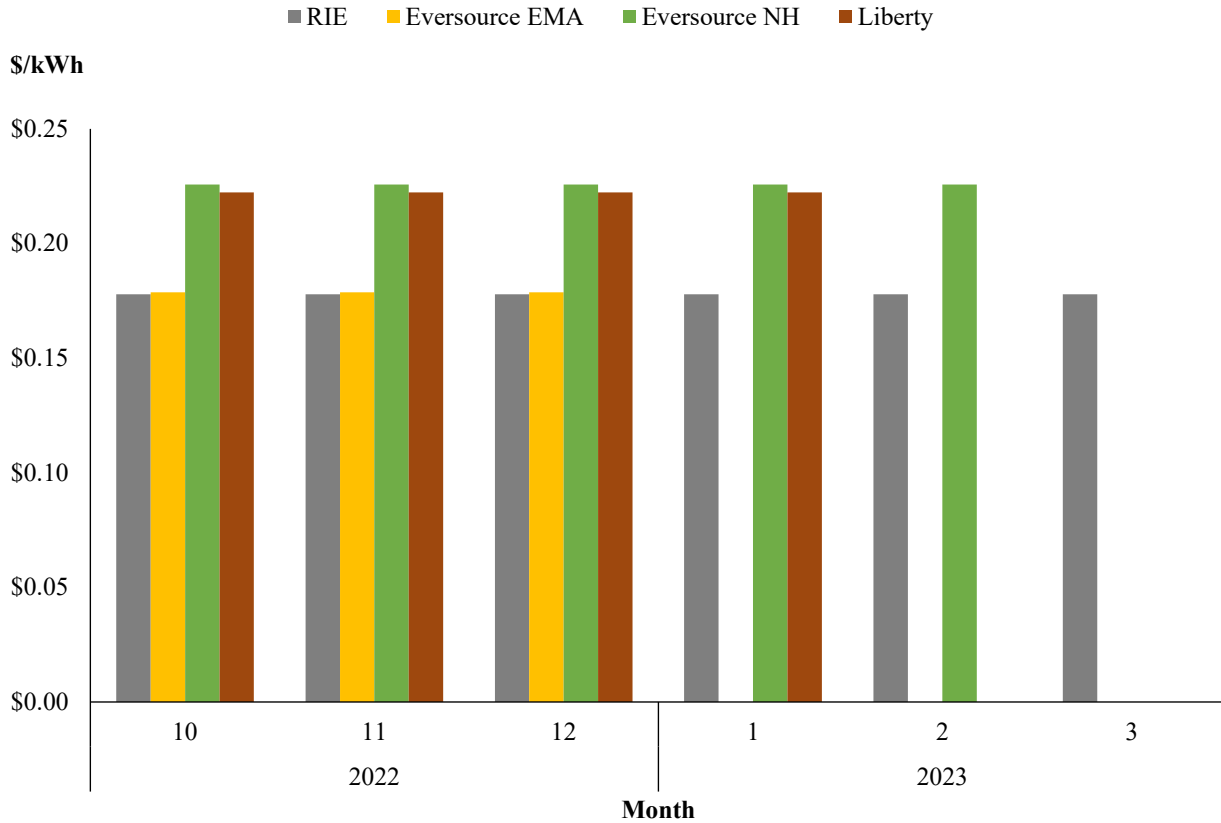


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<sup>25</sup> “Proposed Last Resort Service Rate for the Residential Group for the Months of October 2022 through March 2023,” Narragansett Electric Company d/b/a Rhode Island Energy, RIPUC Docket No. 4978, July 21, 2022; “Electric Supply Rates,” Eversource Eastern Massachusetts, available at <https://www.eversource.com/content/ema-c/residential/account-billing/manage-bill/about-your-bill/rates-tariffs/electric-supply-rates>; “2022 Energy Service Solicitation,” Eversource NH, NHPUC Docket No. 22-021; “Cost of Electricity Price Increase,” Liberty NH, available at <https://new-hampshire.libertyutilities.com/concord/residential/my-account/my-bill/rates-tariffs/electricity-price-increase-residential-nh-electric-liberty.html>.

1 Further, as shown in Figure 8, the Company's rates throughout the 2022-23 Fall/Winter  
2 season are in line with the rates other utilities in New England have set. Finally, as  
3 discussed above, the futures prices for December 2023 are lower than those for December  
4 2022, indicating that the 2022-23 Fall/Winter season price increases are currently  
5 expected to be temporary.

1 **Figure 8: Selected New England Utility Residential Customer Electricity Supply Rates<sup>26</sup>**  
 2 **October 2022 – March 2023**



3

<sup>26</sup> “Last Resort Service (LRS) Rates for All Customers,” National Grid, available at [https://www.nationalgridus.com/media/pdfs/billing-payments/electric-rates/rhode-island/sos-rates-all\\_customers.pdf](https://www.nationalgridus.com/media/pdfs/billing-payments/electric-rates/rhode-island/sos-rates-all_customers.pdf); “Proposed Last Resort Service Rate for the Residential Group for the Months of October 2022 through March 2023,” Narragansett Electric Company d/b/a Rhode Island Energy, RIPUC Docket No. 4978, July 21, 2022; “Electric Supply Rates Archive,” Eversource Eastern Massachusetts, available at <https://www.eversource.com/content/ema-c/residential/account-billing/manage-bill/about-your-bill/rates-tariffs/electric-supply-rates/electric-supply-rates-archive> “Electric Supply Rates,” Eversource Eastern Massachusetts, available at <https://www.eversource.com/content/ema-c/residential/account-billing/manage-bill/about-your-bill/rates-tariffs/electric-supply-rates>; “2022 Energy Service Solicitation,” Eversource NH, NHPUC Docket No. 22-021; 2021 Energy Service Solicitation, Eversource NH, NHPUC Docket No. 21-077; “Cost of Electricity Price Increase,” Liberty NH, available at <https://new-hampshire.libertyutilities.com/concord/residential/my-account/my-bill/rates-tariffs/electricity-price-increase-residential-nh-electric-liberty.html>; Rates and Tariffs Archive, Liberty NH, available at <https://new-hampshire.libertyutilities.com/bath/residential/rates-and-tariffs/archive-electrical.html#nav-bar-rates-and-tariffs-residential>.

1 VI. **Conclusion**

2 Q. **Please summarize your conclusions.**

3 A. The Company's proposed increases to its LRS rates for October 2022 to March 2023 are  
4 consistent with the increasing cost of New England wholesale electricity supply. The  
5 Company relies on wholesale electricity markets to procure LRS electricity supply for its  
6 customers. The cost of New England wholesale electricity supply has been increasing  
7 and futures markets show even higher expected prices for the upcoming Fall/Winter as  
8 global natural gas market demand pushes prices higher. Thus, the Company's proposed  
9 LRS rates are rising as the costs of securing future electricity supply increases. Finally,  
10 the Company's proposed LRS rate increases are also consistent with the rate increases of  
11 other New England utilities whose rates incorporate the increased cost of securing power  
12 supply for the upcoming Fall/Winter.

13

14 Q. **Does this complete your testimony?**

15 A. Yes.

## APPENDIX A

### JOSEPH CAVICCHI Vice President

Office: 617 425 8233  
Fax: 617 425 8001  
joe.cavicchi@analysisgroup.com

111 Huntington Avenue  
14th Floor  
Boston, MA 02199

Mr. Cavicchi is an expert on the economics of wholesale and retail electricity markets. With more than 20 years of consulting experience, he advises a wide range of clients on issues associated with wholesale power market design and market power mitigation frameworks, wholesale and retail contracting practices, and regulatory and contract disputes arising in these marketplaces. In these engagements, Mr. Cavicchi has conducted economic analyses evaluating the impact of regulatory policies on electricity markets, applied rigorous analytical modeling tools to power system operations, evaluated contracting disputes and assessed financial damages, analyzed the effectiveness of market power mitigation frameworks in conjunction with antitrust analyses, and led economic investigations of market participant bidding behavior associated with allegations of market manipulation. He has extensive experience as an expert witness before the Federal Energy Regulatory Commission (FERC) and other federal and state regulatory authorities and has provided testimony in court and arbitration proceedings. Mr. Cavicchi presents and publishes frequently on issues relevant to electricity market design and evolution. He is a registered professional mechanical engineer in the Commonwealth of Massachusetts.

#### EDUCATION

1997            S.M., technology policy, Massachusetts Institute of Technology  
1992            S.M., environmental engineering, Tufts University  
1987            B.S., mechanical engineering, University of Connecticut

#### PROFESSIONAL EXPERIENCE

2019–Present    Analysis Group  
                    *Vice President*

1997–2019      Compass Lexecon  
                    *Executive Vice President/Senior Vice President (2007–2019)*  
                    *Vice President (2001–2006)*  
                    *Consultant/Senior Consultant (1997–2001)*

1989–1997      Massachusetts Institute of Technology  
                    *Research Assistant/Engineer (1995–1997)*  
                    *Project Manager/Staff Mechanical Engineer (1989–1995)*

1987–1988      Carrier Building Systems and Services  
                    *Project Engineer*

## SELECTED CONSULTING EXPERIENCE

### **Electric Generation Companies, Trade Associations, and Independent System Operators**

Conducts power system economic analyses to investigate the interaction of regulatory policies and rules with wholesale power markets, the results of which form the basis for a wide variety of reports, presentations, and papers. Conducts wholesale market power screening analyses and evaluates the impacts of mergers and acquisitions on wholesale and retail markets. Analyzes power market designs and runs workshops and seminars on power market design features.

### **Electricity Generation and Transmission Facility Developers**

Oversees the development and implementation of security-constrained unit commitment and dispatch modeling for proposed electricity generation units and transmission facilities located in the Northeastern, Mid-Atlantic, and Midwestern US. The analyses typically focus on going-forward generation and transmission resource economic evaluations, and on assessing the impacts of different resource mixtures on local and regional air pollutant emissions and projected wholesale and retail electricity prices. In addition, these analyses often include an estimate of the impact of particular resource investments on social welfare.

## SELECTED EXPERT TESTIMONY

- **Olin Chlorine 7 f/k/a Dow Mitsui Chlor-Alkali LLC**  
*Before the American Arbitration Association International Centre for Dispute Resolution, Olin Chlorine 7 f/k/a Dow Mitsui Chlor-Alkali LLC, and Blue Cube Operations, LLC, Claimants, and Dow Hydrocarbons and Resources LLC, Respondent, Case No. 01-21-0004-3837*  
Expert Report of Allen Joseph Cavicchi, February 1, 2022. Confidential.
- **PJM Interconnection, L.L.C.**  
*United States of America, Before the Federal Energy Regulatory Commission, Docket No. ER22-26-000*  
Direct Testimony of A. Joseph Cavicchi and Megan H. Accordino, Ph.D., October 1, 2021
- **Twin Eagle Resource Management**  
*City of Raton vs. Twin Eagle, State of New Mexico, County of Colfax, Eighth Judicial District, Resource Management, No: D-809-CV-2019-00020*  
Deposition Testimony, December 3, 2020.
- **PPL Electric Utilities Corporation**  
*Before the Pennsylvania Public Utility Commission, Docket No. P-2020-3019356, PPL Electric Utilities Corporation*  
Statement No. 2. Direct Testimony of A. Joseph Cavicchi, March 25, 2020. Written, Public.  
Statement No. 2-R. Rebuttal Testimony of A. Joseph Cavicchi, July 23, 2020. Written, Public.
- **PJM Power Providers Group**  
*United States of America, Before the Federal Energy Regulatory Commission, Docket Nos. ER19-1486-000 and EL19-58-000*  
Affidavits of A. Joseph Cavicchi on behalf of the PJM Power Providers (“P3”) Group, May 15, 2019 and June 20, 2019. Written, Public.
- **NextEra Energy Resources, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, Docket No. ER18-1639-000*

Answering Testimony of A. Joseph Cavicchi on behalf of NextEraEnergy Resources, LLC, August 23, 2018. Written, Public and Confidential. Deposition Testimony of A. Joseph Cavicchi, September 10, 2018. Oral, Public. Testimony of A. Joseph Cavicchi, October 8, 2018, Oral, Public and Confidential.

- **CXA La Paloma, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission. RE : CXA La Paloma, LLC v. California Independent System Operator Corporation, Docket No. EL18-177*  
Affidavit of Jeffrey Tranen and Joseph Cavicchi, June 20, 2018. Written, Public.
- **Talen Montana, LLC and Talen Energy Marketing, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission. RE : Triennial Market-Based Rate Update for the Northwest Region, Talen Montana, L.L.C. et al., Dockets ER 15-2013 et al.*  
Affidavit of A. Joseph Cavicchi, April 27, 2018. Written, Public.
- **Talen Montana, LLC and Talen Energy Marketing, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission. RE : Triennial Market-Based Rate Update for the Northwest Region, Talen Montana, L.L.C. et al., Dockets ER 10-2016 et al.*  
Affidavit of A. Joseph Cavicchi, December 20, 2016. Written, Public.
- **PPL Electric Utilities Corporation and LG&E Energy Marketing Inc.**  
*United States of America, Before the Federal Energy Regulatory Commission. RE : Triennial Market-Based Rate Update for the Northeast Region, PPL Electric Utilities Corporation et al., Dockets ER 10-2010 et al.*  
Affidavit of A. Joseph Cavicchi, December 20, 2016. Written, Public.
- **NextEra Energy Resources, LLC**  
*Before the Commonwealth of Massachusetts, Department of Public Utilities, Docket D.P.U. 16-05, Petition for Approval of Gas Infrastructure Contracts with Algonquin Gas Transmission Co. for the Access Northeast Project*  
Direct Testimony of Joseph P. Kalt and A. Joseph Cavicchi, June 20, 2016 (corrected June 28, 2016), Written, Public and Confidential. Surrebuttal Testimony of Joseph P. Kalt and A. Joseph Cavicchi, July 18, 2016. Written, Public and Confidential.
- **NextEra Energy Resources, LLC**  
*Before the Commonwealth of Massachusetts, Department of Public Utilities, Docket D.P.U. 15-181, Petition for Approval of Gas Infrastructure Contracts with Algonquin Gas Transmission Co. for the Access Northeast Project*  
Direct Testimony of Joseph P. Kalt and A. Joseph Cavicchi, June 13, 2016 (corrected June 28, 2016), Written, Public and Confidential. Surrebuttal Testimony of Joseph P. Kalt and A. Joseph Cavicchi, July 12, 2016. Written, Public and Confidential.
- **PPL Electric Utilities Corporation**  
*Before the Pennsylvania Public Utility Commission, Docket No. P-2016-2526627, PPL Electric Utilities Corporation*  
Statement No. 2. Direct Testimony of A. Joseph Cavicchi, January 29, 2016. Written, Public.  
Statement No. 2-Supp. Supplemental Testimony of A. Joseph Cavicchi, March 9, 2016, Written, Public. Statement No. 2-R Rebuttal Testimony of A. Joseph Cavicchi, May 23, 2016. Written, Public.

- **Calpine Corporation et al.**  
*United States of America, Before the Federal Energy Regulatory Commission. Calpine Corporation et al., Complainants v. PJM Interconnection, L.L.C., Respondent. RE: Complaint Requesting Fast Track Processing, PJM Interconnection, L.L.C., Docket No. EL 16-49-000*  
Affidavit of A. Joseph Cavicchi, March 21, 2016. Written, Public.
- **PJM Power Providers Group**  
*Before the Public Utilities Commission of Ohio, In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter into an Affiliate Power Purchase Agreement for Inclusion in the Power Purchase Agreement Rider, Case No. 14-1693-EL-RHR et al.*  
Supplemental Testimony of A. Joseph Cavicchi on behalf of the PJM Power Providers Group and The Electric Power Supply Association, December 28, 2015. Written, Public and Confidential.  
Deposition of A. Joseph Cavicchi on behalf of the PJM Power Providers Group and The Electric Power Supply Association, January 5, 2016. Deposition Testimony of A. Joseph Cavicchi, January 5, 2016. Testimony of A. Joseph Cavicchi, January 7, 2016. Oral, Public.
- **Exelon Generation Company, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Services, Into Markets Operated by the California, Independent System Operator Corporation, And the California Power Exchange, Docket EL 00-95-280 et al.*  
Affidavit of A. Joseph Cavicchi in Support of the Exelon Generation Company, LLC's Fuel Cost Allowing Filing, December 4, 2015. Written, Public.
- **PJM Power Providers Group**  
*Before the Public Utilities Commission of Ohio, In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter into an Affiliate Power Purchase Agreement for Inclusion in the Power Purchase Agreement Rider, Case No. 14-1693-EL-RHR et al.*  
Direct Testimony of A. Joseph Cavicchi on behalf of the PJM Power Providers Group and The Electric Power Supply Association, September 11, 2015, Written, Public and Confidential. Testimony of A. Joseph Cavicchi on behalf of the PJM Power Providers Group and The Electric Power Supply Association, October 20, 2015. Oral, Public.
- **Iberdrola Renewables, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, Docket Nos. EL02-60-007 and EL02-62-006, consolidated*  
Prepared Answering Testimony of A. Joseph Cavicchi on behalf of Iberdrola Renewables, LLC, July 21, 2015 Written, Public & Confidential. Deposition of A. Joseph Cavicchi on behalf of the Iberdrola Renewables, LLC, September, 24, 2015. Oral, Confidential. Testimony of A. Joseph Cavicchi, December 3, 2015. Oral, Public.
- **PPL Electric Utilities Corporation**  
*Before the Pennsylvania Public Utility Commission, Docket No. P-2014-2417907, PPL Electric Utilities Corporation*  
Statement No. 2. Direct Testimony of A. Joseph Cavicchi, April 25, 2014, Written, Public. Statement No. 2-R Rebuttal Testimony of A. Joseph Cavicchi, July 28, 2014. Written, Public.
- **San Diego Gas and Electric Company**  
*Naturener USA, LLC, et al. v. San Diego Gas & Electric Company, in the Montana Ninth Judicial District Court, Toole County, Declaration, January 22, 2014. Non-Public.*



- **PPL EnergyPlus**  
*United States of America, Before the Federal Energy Regulatory Commission. RE : Triennial Market-Based Rate Update for the Northeast Region, PPL Electric Utilities Corporation et al., Dockets ER 10-2010 et al.*  
Affidavit of A. Joseph Cavicchi, December 31, 2013. Written, Public.
- **PPL EnergyPlus**  
*United States of America, Before the Federal Energy Regulatory Commission. RE : Triennial Market-Based Rate Update for the Northwest Region, PPL EnergyPlus LLC et al., Dockets ER 10-2011 et al.*  
Affidavit of A. Joseph Cavicchi, December 31, 2013. Written, Public.
- **Transalta Energy Marketing**  
*United States of America, Before the Federal Energy Regulatory Commission, Puget Sound Energy, Inc., Complainant v. All Jurisdictional Sellers of Energy and/or Capacity at Wholesale into Electric Energy and/or Capacity Markets in the Pacific Northwest, Including Parties to the Western System Power Pool Agreement Participants, Docket. No. EL01-085*  
Prepared Answering Testimony of A. Joseph Cavicchi on behalf of Transalta Energy Marketing (U.S.) Inc. and Transalta Energy Marketing (California) Inc., December 17, 2012. Deposition of A. Joseph Cavicchi on behalf of Transalta Energy Marketing (California) Inc., February 8, 2013. Testimony of A. Joseph Cavicchi, October 21 and 22, 2013. Oral, Public.
- **Avista Corporation et al.**  
*United States of America, Before the Federal Energy Regulatory Commission, In the Matter of Puget Sound Energy, Inc. v. All Jurisdictional Sellers of Energy and/or Capacity at Wholesale into Electric Energy and/or Capacity Markets in the Pacific Northwest, including Parties to the Western Systems Power Pool Agreement. Docket EL01-10-085*  
Testimony of A. Joseph Cavicchi, September 26, 2013. Oral, Public. Answering Testimony of A. Joseph Cavicchi on behalf of Avista Corporation et al. (“Joint Defense Group”), June 24, 2013. Deposition of A. Joseph Cavicchi on behalf of Avista Corporation et al., July 9, 2013.
- **US Department of Justice**  
*Before the United States Court of Federal Claims, Pacific Gas and Electric Company and Southern California Edison Company, Plaintiffs et al. v. The United States, Defendant, No. 07-157C, No. 07-167C (Consolidated), No. 07-184C*  
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- **US Department of Justice**  
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Expert Report of A. Joseph Cavicchi, March 1, 2013. Confidential, Subject to Protective Order.
- **PPL Montana and PPL EnergyPlus**  
*United States of America, Before the Federal Energy Regulatory Commission, Puget Sound Energy, Inc., Complainant v. All Jurisdictional Sellers of Energy and/or Capacity at Wholesale into Electric Energy and/or Capacity Markets in the Pacific Northwest, Including Parties to the Western System Power Pool Agreement Participants, Docket. No. EL01-085*  
Prepared Answering Testimony of A. Joseph Cavicchi on behalf of PPL Montana and PPL EnergyPlus, December 17, 2012. Written, Public. Deposition of A. Joseph Cavicchi on behalf of PPL Montana and PPL EnergyPlus, February 8, 2013.

- **Constellation New Energy**  
*United States of America, Before the Federal Energy Regulatory Commission, Puget Sound Energy, Inc., Complainant v. All Jurisdictional Sellers of Energy and/or Capacity at Wholesale into Electric Energy and/or Capacity Markets in the Pacific Northwest, Including Parties to the Western System Power Pool Agreement Participants, Docket No. EL01-085*  
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- **Constellation NewEnergy**  
*United States of America, Before the Federal Energy Regulatory Commission, San Diego Gas & Electric Company, Complainant, v. Sellers of Energy and Ancillary Services into Markets Operated by the CA ISO and CA Power Exchange, et al., Respondents, Docket No. EL00-95-248*  
Direct Testimony and Exhibits of Constellation NewEnergy, Inc. Testimony of A. Joseph Cavicchi on behalf of Constellation NewEnergy, July 11, 2012. Oral, Public.
- **PPL Electric Utility Corporation**  
*Before the Pennsylvania Public Utility Commission, Docket No. P-2012-2302074, PPL Electric Utility Corporation*  
Statement No. 2. Direct Testimony of A. Joseph Cavicchi, May 16, 2012. Statement No. 2-R. Direct Testimony of A. Joseph Cavicchi, August 17, 2012. Statement No. 3. Testimony of A. Joseph Cavicchi, September 10, 2012. Oral, Public.
- **PPL Corporation**  
*United States of America, Before the Federal Energy Regulatory Commission, RE: Notice of Change in Status Regarding Market-Based Rate Authority, Docket No. ER10-2016-\_\_\_ et al.*  
Affidavit of A. Joseph Cavicchi on behalf of PPL Corporation, January 30, 2012. Written, Public.
- **Entegra Power Services, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, Union Power Partners LP, Docket No. ER05-1191-016, Entegra Power Services LLC, Docket No. ER09-838-002*  
Updated Market Power Analysis for Market-Based Rates. Affidavit of A. Joseph Cavicchi, December 29, 2011.
- **Constellation NewEnergy, Inc.**  
*United States of America, Before the Federal Energy Regulatory Commission, San Diego Gas & Electric Company, Complainant, v. Sellers of Energy and Ancillary Services into Markets Operated by the CA ISO and CA Power Exchange, et al., Respondents, Docket No. EL00-95-248*  
Direct Testimony and Exhibits of Constellation NewEnergy, Inc., Direct and Answering Testimony and Exhibits of A. Joseph Cavicchi on behalf of Constellation NewEnergy, October 25, 2011. Written, Public.
- **CP Energy**  
*United States of America, Before the Federal Energy Regulatory Commission, RE: Triennial Market-Based Rate Update for the Northeast Region, Docket No. ER10-1342 et al.*  
Affidavit of A. Joseph Cavicchi, June 30, 2011. Written, Public.
- **Edison Mission**  
*United States of America, Before the Federal Energy Regulatory Commission, RE: Triennial Market-Based Rate Update for the Northeast Region, Edison Mission Marketing and Trading, et al., Docket No. ER11-\_\_\_-000, et al.*

Affidavit of A. Joseph Cavicchi, June 29, 2011. Written, Public.

- **Entegra Power Services, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, Gila River Energy Supply LLC, Docket No. ER11-\_\_\_\_-000, Request for Acceptance of Initial Market-Based Rate Tariff, Waivers and Blanket Authority Under Section 205 of the Federal Power Act*  
Affidavit of A. Joseph Cavicchi, April 11, 2011. Written, Public.
- **PPL Corporation**  
*United States of America, Before the Federal Energy Regulatory Commission, Triennial Market-Based Rate Update for the Northwest Region, PPL Northwest Companies, ER10-2011-000 et al.*  
Affidavit of A. Joseph Cavicchi on behalf of the PPL Northwest Companies, January 31, 2011. Written, Public.
- **Entegra Power Services LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, Gila River Power, LP, Docket No. ER05-1178-015 and Entegra Power Services LLC, Docket ER09-838-001, Second Supplement to Updated Market Power Analysis for Continued Market-Based Rate Authority in Compliance with Order No. 697*  
Second Supplement Affidavit of A. Joseph Cavicchi, January 12, 2011. Written, Public.
- **PPL Corporation**  
*United States of America, Before the Federal Energy Regulatory Commission, RE: Notice of Change of Status Regarding Market-Based Rate Authority, Docket No. ER10-1511-001 et al.*  
Affidavit of A. Joseph Cavicchi on behalf of PPL Corporation, December 1, 2010. Written, Public.
- **Entegra Power Services LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, Gila River Power, LP, Docket No. ER05-1178-015 and Entegra Power Services LLC, Docket ER09-838-001*  
Supplement to Updated Market Power Analysis for Continued Market-Based Rate Authority in Compliance with Order No. 697. Affidavit of A. Joseph Cavicchi, November 19, 2010. Written, Public.
- **Chesapeake Energy Corp., et al.**  
*Before the Public Utilities Commission of the State of Colorado, In the Matter of Commission Consideration of Public Service Company of Colorado Plan in Compliance with House Bill 10-1365 "Clean Air Jobs Act," Docket No. 10M-245E*  
Testimony of A. Joseph Cavicchi on behalf of Noble Energy, Inc., Chesapeake Energy Corporation and Encana Oil & Gas (USA), November 1, 2010. Oral, Public. November 9, 2010. Written, Public. November 18, 2010. Oral, Public.
- **Chesapeake Energy Corp., et al.**  
*Before the Public Utilities Commission of the State of Colorado, In the Matter of Commission Consideration of Public Service Company of Colorado Plan in Compliance with House Bill 10-1365 "Clean Air Jobs Act," Docket No. 10M-245E*  
Cross Answer Testimony and Exhibits of A. Joseph Cavicchi on behalf of Noble Energy, Inc., Chesapeake Energy Corporation and Encana Oil & Gas (USA), October 8, 2010. Written Report Public, Exhibits Confidential, Filed Under Seal.
- **Chesapeake Energy Corp., et al.**

*Before the Public Utilities Commission of the State of Colorado, In the Matter of Commission Consideration of Public Service Company of Colorado Plan in Compliance with House Bill 10-1365 "Clean Air Jobs Act," Docket No. 10M-245E*

Answer Testimony and Exhibits of A. Joseph Cavicchi on behalf of Noble Energy, Inc., Chesapeake Energy Corporation and Encana Oil & Gas (USA), September 17, 2010. Written, Confidential.

▪ **PPL Electric Utilities Corporation**

*Before the Pennsylvania Public Utility Commission, RE: Petition of PPL Electric Utilities Corporation for Approval of a Default Service Program and Procurement Plan for the Period January 1, 2011 through May 31, 2014, Docket No. P-2008-2060309*

Statement No. 2. Direct Testimony of A. Joseph Cavicchi on behalf of PPL Electric, September 14, 2010. Oral, Written and Public.

▪ **PPL Corporation and E.ON U.S.**

*United States of America, Before the Federal Energy Regulatory Commission, RE: PPL Corporation and E.ON U.S. LLC Application for Authorization Under Section 203 of the Federal Power Act, Request for Waivers of Filing Requirements, and Confidential Treatment of Agreement and Workpapers, Docket No. EC10-77-000*

Affidavit of Dr. Joseph P. Kalt and Mr. A. Joseph Cavicchi, June 28, 2010.

▪ **BG Masspower**

*Before the Commonwealth of Massachusetts Trial Court, Suffolk, SS, Civil Action 07-3243 (BLS2), Masspower, by its General Partners, BG MP Partners I, LLC, and BG MP Partners II, LLC, Plaintiffs, v. Massachusetts Municipal Wholesale Electric Company, Defendant*

Deposition of A. Joseph Cavicchi on behalf of Masspower, February 19, 2010. Testimony of A. Joseph Cavicchi on behalf of Masspower, March 18 and 19, 2010. Oral, Public.

▪ **Allegheny**

*United States of America, Before the Federal Energy Regulatory Commission, State of California ex rel. Lockyer v. British Columbia Power Exchange Corp., et al., Docket No. EL02-71-017 et al.*

Prepared Answering Testimony of A. Joseph Cavicchi on behalf of Allegheny Energy, September 17, 2009. Written, Public.

▪ **MPS Merchant Services**

*United States of America, Before the Federal Energy Regulatory Commission, State of California ex rel. Lockyer v. British Columbia Power Exchange Corp., et al., Docket No. EL02-71-017*

Prepared Answering Testimony of A. Joseph Cavicchi on behalf of MPS Merchant Services, September 17, 2009. Written, Public.

▪ **PPL Montana, LLC**

*United States of America, Before the Federal Energy Regulatory Commission, State of California ex rel. Lockyer v. British Columbia Power Exchange Corp., et al., Docket No. EL02-71-017*

Answering Testimony of A. Joseph Cavicchi on behalf of PPL Montana, LLC, September 17, 2009. Written, Public.

▪ **Constellation New Energy**

*United States of America, Before the Federal Energy Regulatory Commission, San Diego Gas and Electric Co. v. Sellers of Energy and Ancillary Services, Docket No. EL00-95 et al.*

Affidavit of A. Joseph Cavicchi on behalf of Constellation New Energy, August 4, 2009. Written, Public.

▪ **Energy Northwest**

*Before the American Arbitration Association, Seattle, Washington, Grays Harbor Energy LLC, Claimant, Energy Northwest, Respondent, Case No. 75-158-115-08*

Testimony of A. Joseph Cavicchi on behalf of Energy Northwest, June 18, 2009. Oral, Public. Deposition

Testimony of A. Joseph Cavicchi on behalf of Energy Northwest, May 13, 2009. Oral, Public.

Supplemental Expert Report of A. Joseph Cavicchi on behalf of Energy Northwest, April 30, 2009.

Written, Confidential. Expert Report of A. Joseph Cavicchi on behalf of Energy Northwest, April 15, 2009. Written, Confidential.

- **Entegra Power Services LLC**

*United States of America, Before the Federal Energy Regulatory Commission, Request for Acceptance of Initial Market-Based Rate Tariff, RE: Updated Market Power Analysis for EPS' Affiliate, Gila River, Docket ER09-838-000*

Affidavit of A. Joseph Cavicchi, March 13, 2009. Written, Public.

- **Union Pacific Railroad Company**

*In the Matter of the Arbitration between Wisconsin Public Service Corporation and Union Pacific Railroad Company*

Rebuttal Expert Report of A. Joseph Cavicchi, February 16, 2009.

- **PPL Electric Utilities Corporation**

*Before the Pennsylvania Public Utility Commission, RE: Petition of PPL Electric Utilities Corporation for Approval of a Default Service Program and Procurement Plan for the Period January 1, 2001 through May 31, 2014, Docket No. P-2008-2060309*

Testimony of A. Joseph Cavicchi on behalf of PPL Electric Utilities Corporation, February 11, 2009. Oral, Public.

- **PPL Electric Utilities Corporation**

*Before the Pennsylvania Public Utility Commission, Docket No. P-2008-2060309*

Rebuttal Testimony of A. Joseph Cavicchi on behalf of PPL Electric Utilities Corporation, January 20, 2009.

- **Union Power Partners, L.P.**

*United States of America, Before the Federal Regulatory Commission, Docket No. ER05-1191-014, Updated Market Power Analysis for Continued Market-Based Rate Authority*

Affidavit of A. Joseph Cavicchi on behalf Union Power Partners, L.P., December 30, 2008.

- **PPL Electric Utilities Corporation**

*Before the Pennsylvania Public Utility Commission, Docket No. P-2008-2060309*

Supplemental Testimony of A. Joseph Cavicchi of behalf of PPL Electric Utilities Corporation, November 3, 2008.

- **PPL Electric Utilities Corporation**

*Before the Pennsylvania Public Utility Commission, Docket No. P-2008-2060309*

Testimony of A. Joseph Cavicchi of behalf of PPL Electric Utilities Corporation, September 11, 2008.

- **PPL Electric Utilities Corporation**

*United States of America, Before the Federal Regulatory Commission, Docket No. ER00-1712-008, ER02-2408-003, ER00-744-006, ER02-1327-005, ER00-1703-003, ER02-1749-003, ER02-1747-003, ER99-4503-005, ER00-2186-003, ER01-1559-004*

Affidavit of A. Joseph Cavicchi on behalf of PPL Companies, September 2, 2008.

- **PPL Electric Utilities Corporation**  
*United States of America, Before the Federal Regulatory Commission, Docket No. EL08-67-000*  
Affidavit of A. Joseph Cavicchi (with Joseph P. Kalt) on behalf of PPL Companies, August 12, 2008.
- **PPL Electric Utilities Corporation**  
*United States of America, Before the Federal Regulatory Commission, Docket No. EL08-67-000*  
Affidavit of A. Joseph Cavicchi (with Joseph P. Kalt) on behalf of PPL Companies, July 11, 2008.
- **Entegra Power Group L.L.C.**  
*United States of America, Before the Federal Regulatory Commission, Docket Nos. ER05-1178-00 and ER05-1191-00*  
Affidavit of A. Joseph Cavicchi on behalf of Entegra Power Group L.L.C, Gila River Power, L.P., Union Power Partners, L.P., Harbinger Capital Partners Master Fund I, Ltd., and Harbinger Capital Partners Special Situations Fund, LP, May 30, 2008.
- **Harbinger**  
*United States of America, Before the Federal Regulatory Commission, Docket No. EC08-87-000*  
Affidavit of A. Joseph Cavicchi on behalf of the Entegra Power Group L.L.C, Gila River Power, L.P., Union Power Partners, L.P., Harbinger Capital Partners Master Fund I, Ltd., and Harbinger Capital Partners Special Situations Fund, LP, May 9, 2008.
- **IEPA**  
*United States of America, Before the Federal Regulatory Commission, Docket Nos. ER08-556-000 and ER06-615-020*  
Affidavit of A. Joseph Cavicchi on behalf of Independent Energy Producers Association, February 29, 2008.
- **PJM Power Providers Group**  
*United States of America, Before the Federal Regulatory Commission, Docket No. EL08-34-000*  
Affidavit of Joseph P. Kalt and A. Joseph Cavicchi on behalf of the P3 Group, responding to the Complaint of the Maryland Public Service Commission against PJM Interconnection, L.L.C., regarding marketing power mitigation, February 19, 2008.
- **Tractebel Energy Marketing, Inc.**  
*Tractebel Energy Marketing, Inc. v. AEP Power Marketing, Inc., American Electric Power Company, Inc. and Ohio Power Company, 03 CV 6731 (S.D.N.Y.) (HB) (JCF); and Ohio Power Company and AEP Power Marketing, Inc. v. Tractebel Energy Marketing, Inc. and Tractebel S.A., 03 CV 6770 (S.D.N.Y.) (HB) (JCF)*  
Expert Report of A. Joseph Cavicchi on behalf of Tractebel Energy Marketing, Inc., January 21, 2008.
- **PPL Corporation**  
*United States of America, Before the Federal Regulatory Commission, Docket Nos. ER00-1712-007, ER02-2408-003, ER00-744-006, ER02-1327-005, ER00-1703-002, ER02-1749-003, ER02-1747-003, ER99-4503-005, ER00-2186-003, ER01-1559-004*  
Affidavit of A. Joseph Cavicchi on behalf of Triennial Market Power Update of PPL Companies, January 14, 2008.
- **IEPA**

*United States of America, Before the Federal Regulatory Commission, Docket Nos. ER06-615-003, 005, 012, ER07-1257-000, ER02-1656-017, ER02-1656-018, EL05-146-000 and EL08-20-000*  
Affidavit of A. Joseph Cavicchi on behalf of Independent Energy Producers Association, January 9, 2008.

▪ **NRG**

*United States of America, Before the Federal Regulatory Commission, New York Independent System Operator – Docket No. EL07-39-000*

Affidavits of A. Joseph Cavicchi on behalf of NRG Power Marketing, Inc., Arthur Kill Power LLC, Astoria Gas Turbine Power LLC, Dunkirk Power LLC, Huntley Power LLC, and Oswego Harbor Power LLC, November 19, 2007, December 10, 2007, and December 21, 2007. Written, Public.

▪ **American Electric Power Services Corporation, Conectiv Energy Supplies, Inc., DTE Energy Trading, Inc., Energy America, LLC, Integrys Energy Services, Inc., and PPL Energy Plus, LLC**

*United States of America, Before the Federal Regulatory Commission, The People of the State of Illinois, ex rel. Illinois Attorney General Lisa Madigan v. Exelon Generation Co., LLC, et al., Docket No. EL07-47-000*

Affidavit of Joseph Cavicchi and Joseph P. Kalt, June 18, 2007. Written, Public.

▪ **Independent Energy Producers Association of California**

*United States of America, Before the Federal Regulatory Commission, Docket No. R.06-02-013, Long-Term Procurement Plans, Prepared Testimony of the Independent Energy Producers Association*

Prepared Testimony of Joseph Cavicchi and David Reishus on behalf of the IEPA, March 2, 2007. Written, Public.

▪ **Cross Hudson**

*Before the State Of New York Public Service Commission, Request of Hudson Transmission Partners, LLC, for Unredacted Copies of Records Filed In Case 01-T-1474*

Affidavit of Joseph Cavicchi in Support of Cross Hudson Corporation's Appeal of Records Access Officer's February 9, 2007, Determination (Trade Secret 07-1), February 21, 2007. Written, Public.

▪ **PPL Electric Utilities Corporation**

*Before The Pennsylvania Public Utility Commission, RE: Petition of PPL Electric Utilities Corporation for Approval of A Competitive Bridge Plan, Docket No. P-00062227*

Direct Testimony of Joseph Cavicchi, December 19 and 20, 2006. Oral, Public.

▪ **PPL Electric Utilities Corporation**

*Before The Pennsylvania Public Utility Commission, RE: Petition of PPL Electric Utilities Corporation for Approval of A Competitive Bridge Plan, Docket No. P-00062227*

Reply to Surrebuttal Testimony of Marjorie R. Philips, Joseph Cavicchi, December 20, 2006. Written, Public.

▪ **PJM Interconnect, LLC**

*United States of America, Before the Federal Regulatory Commission, Docket No. EL05-148-000, 001; Docket No. ER05-1410-000, 001, Initial Comments of the PPL Parties and the PSEG Companies in Opposition to Proposed Settlement, Exhibit D-1 (Exhibit AJC-1)*

Affidavit of A. Joseph Cavicchi, October 19, 2006. Written, Public.

▪ **Excelsior Energy Inc.**

*Before The Minnesota Office Of Administrative Hearings, RE: In The Matter Of The Petition Of Excelsior Energy Inc. And Its Wholly-Owned Subsidiary MEP-I, LLC For Approval Of Terms And Conditions For The Sale Of Power From Its Innovative Energy Project Using Clean Energy Technology Under Minn. Stat. §216B.1694 and a Determination That The Clean Energy Technology Is Or Is Likely To Be A Least-Cost Alternative Under Minn. Stat. §216B.1693, MPUC Docket No. E-6472-/M-05-1993; OAH Docket No. 12-2500-17260-2*

Prepared Rebuttal Testimony and Exhibits of Excelsior Energy Inc. and MEP-I LLC. Rebuttal and Exhibits of Joseph Cavicchi, October 10, 2006. Written, Confidential.

- **PPL Electric Utilities Corporation**

*Before The Pennsylvania Public Utility Commission, RE: Petition of PPL Electric Utilities Corporation for Approval of A Competitive Bridge Plan, Docket No. P-00062227*

Statement No. 2, Direct Testimony of Joseph Cavicchi, September 15, 2006. Written, Public.

- **Independent Energy Producers Association of California**

*United States of America, Before the Federal Regulatory Commission, Docket No. EL05-146-000*

Reply Comments of the Independent Energy Producers Association, September 26, 2006. Affidavit of Joseph Cavicchi, August 26, 2006. Written, Public.

- **Independent Energy Producers Association of California**

*United States of America, Before the Federal Regulatory Commission, Docket No. EL05-146-000,*

Affidavit in Support of Justness and Reasonableness of the Offer of Settlement's Reference Resource's Cost and Performance Characteristics

Affidavit of Joseph Cavicchi, August 21, 2006. Written, Public.

- **PPL Maine, LLC**

*United States of America, Before the Federal Regulatory Commission, RE: PPL Maine, LLC, Docket No. ER00-2186-002*

Triennial Market-Based Rate Update. Affidavit of A. Joseph Cavicchi on behalf of the PPL Companies, June 19, 2006. Written, Public.

- **FirstEnergy Solutions Corp.**

*United States of America, Before the Federal Regulatory Commission, FirstEnergy Solutions Corp., Docket No. ER06-117-000*

Prepared Direct Testimony of Scott T. Jones, Ph.D., and A. Joseph Cavicchi on behalf of FirstEnergy Solutions Corporation, March 15, 2006, confirming the auction price result of the Competitive Bidding Process carried out by the Ohio Public Utilities Commission in December 2004, and establishing that Solutions is not charging a rate greater than market prices for wholesale electricity sold to its affiliated Ohio based regulated distribution companies.

- **PPL Montana, LLC**

*United States of America, Before the Federal Energy Regulatory Commission, RE: PPL Montana, LLC, Docket No. ER99-3491-003; PPL Colstrip I, LLC, Docket No. ER00-2184-001; PPL Colstrip II, LLC, Docket No. ER00-2185-001; Answer of the PPL Montana Parties to Montana Consumer Counsel's New Uncommitted Capacity Pivotal Supplier Analysis and Uncommitted Capacity Market Share Analysis*

Affidavit (filed with Joseph Kalt), February 28, 2005; Affidavit (filed with Joseph Kalt), November 14, 2005 (original October 31, 2005); First Supplemental Affidavit on behalf of the PPL Montana Parties (filed with Joseph Kalt), December 23, 2005; Affidavit (filed with Joseph Kalt), February 1, 2006.



- **PPL Corporation**  
*United States of America, Before the Federal Energy Regulatory Commission, Triennial Market-Based Rate Update, Submitted by PPL Great Works, Docket No. ER05-4503-004*  
Affidavit, January 24, 2006.
- **Independent Energy Producers Association of California**  
*Before the Public Utilities Commission of the State of California, Evidentiary Hearings, Dockets Nos. R04-04-025 and R04-04-003*  
Testimony of Joseph Cavicchi and David Reishus on behalf of Independent Energy Producers Association of California, January 23 and 24, 2006. Oral, Public.
- **PPL Corporation**  
*United States of America, Before the Federal Energy Regulatory Commission, Docket No. ER05-1416-000*  
Affidavit of A. Joseph Cavicchi, Joseph P. Kalt, Ph.D., and David A. Reishus, Ph.D., on behalf of the PPL Parties, October 19, 2005.
- **Independent Energy Producers Association of California**  
*United States of America, Before the Federal Energy Regulatory Commission, Docket No. EL05-146-000*  
Affidavit in Support of the Complaint of the Independent Energy Producers Association to Implement CAISO Market Design Modifications, August 26, 2005.
- **PPL Corporation**  
*United States of America, Before the Federal Energy Regulatory Commission, PPL Resource Adequacy Market Proposal, Docket No. PL05-7-000*  
“A Policy Analysis of PJM’s Proposed Four-Year Forward Capacity Market” (with Joseph P. Kalt), June 16, 2005.
- **PPL EnergyPlus**  
*United States of America, Before the Federal Energy Regulatory Commission, Docket ER00-1712-004, Request for Leave to Respond and Response of PPL Parties to Protest of PJM Industrial Customer Coalition and the PP&L Industrial Customer Alliance and to Comments of Joint Consumer Advocates*  
Supplemental Affidavit, December 16, 2004.
- **PPL Montana, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, RE: PPL Montana, LLC; PPL Colstrip I, LLC; PPL Colstrip II, LLC; Docket No. ER99-3491-\_\_, Compliance Filing: Triennial Market-Based Rate Update and Revised Tariff Sheet*  
Affidavit (filed with Joseph Kalt), November 9, 2004.
- **PPL Montana, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, PPL Colstrip I, LLC; PPL Colstrip II, LLC; Docket No. ER99-3491-003, market power analysis in support of application for renewal of authority to sell electric energy and capacity at market-based rates. Affidavit (filed with Joseph Kalt), November 9, 2004.*
- **PPL EnergyPlus**  
*United States of America, Before the Federal Energy Regulatory Commission, PPL EnergyPlus et al., Docket ER00-1712-004, market power analysis in support of application for renewal of authority to sell electric energy and capacity at market-based rates*

Supplemental Affidavit, November 9, 2004.

- **PPL Southwest Generation Holdings, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, PPL Southwest Generation Holdings, LLC, Docket No. ER01-1870-002, market power analysis in support of application for renewal of authority to sell electric energy and capacity at market-based rates*  
Supplemental Affidavit, October 25, 2004.
- **PPL Wallingford Energy LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, PPL Wallingford Energy LLC, Docket No. ER01-1559-002, market power analysis in support of application for renewal of authority to sell electric energy and capacity at market-based rates*  
Supplemental Affidavit, October 8, 2004.
- **PPL Wallingford Energy LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, PPL Wallingford Energy LLC, Docket No. ER01-1559-002, market power analysis in support of application for renewal of authority to sell electric energy and capacity at market-based rates*  
Affidavit, July 12, 2004.
- **PPL Southwest Generation Holdings, LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, PPL Southwest Generation Holdings, LLC, Docket No. ER01-1870-002, market power analysis in support of application for renewal of authority to sell electric energy and capacity at market-based rates*  
Affidavit, July 12, 2004.
- **PPL Wallingford Energy LLC**  
*United States of America, Before the Federal Energy Regulatory Commission, PPL Wallingford Energy LLC and PPL EnergyPlus, LLC, Petition for Rehearing, Request for Clarification and Request for Expedited Action on Rehearing and Clarification of PPL Wallingford Energy LLC and PPL EnergyPlus, LLC*  
Affidavit, June 16, 2003.
- **Massachusetts Department of Telecommunications and Energy**  
*Submission of comments on the investigation by the Massachusetts DTE on its own motion into the Provision of Default Service*  
DTE 02-40-B (with Charles Augustine), May 28, 2003.

## ARTICLES AND PUBLICATIONS

“When the wind doesn’t blow: The limits of intermittent resources and battery storage in the decarbonization of New England’s power system under increased electrification” (with Phillip H. Ross), *The Electricity Journal*, 33 (2020), pp. 1–11.

“Achieving Western States Greenhouse Gas (GHG) Reduction Objectives: Least-Cost Compliance in a Constantly Evolving Policy Environment,” with Todd Schatzki, prepared for the Public Generating Pool and Pacificorp (August 2020).

“Carbon Pricing for New England: Context, Key Factors, and Impacts,” with Paul Hibbard, prepared for the New England Power Generators Association, Inc. (June 2020).

“Ensuring Fuel Security for the Electricity System: New England and the Role of LNG,” with Kenneth Grant, *Utility Dive* (January 7, 2019).

“Promoting Competitive Power Markets and Growing Zero-Emission Resources in New England,” prepared for the New England Power Generators Association, Inc. (November 12, 2018).

“The Future of State-Subsidized Electric Generation Resources,” with Kenneth Grant, *Law360* (August 20, 2018).

“Ramp Capability Dispatch and Uncertain Intermittent Resource Output,” Rutgers Center for Research in Regulated Industries Advanced Workshop in Regulation and Competition, 31st Annual Western Conference, Hyatt Regency, Monterey, California, June 27-29, 2018 (with Scott Harvey) 6-21-2018, Revised 7-17-2018.

“Growing Evidence of Increased Frequency of Negative Electricity Prices in U.S. Wholesale Electricity Markets,” with Maheen Bajwa, *IAEE Energy Forum*, pp. 37-41, Fourth Quarter 2017.

“Rethinking Government Subsidies for Renewable Electricity Generation Resources,” *The Electricity Journal*, 30, pp. 1-7 (2017).

*Economists’ Amici Brief to the United States Supreme Court*, In re: Long-Term Contracts for Energy Markets, No. 14-614, 14-623; with Gilbert, Richard J., et al. (January 19, 2016).

“The Polar Vortex: Implications for Improving the Efficiency of Wholesale Electricity Spot Market Pricing,” prepared for the Electric Power Supply Association (March 2014).

“Anatomy of Sealed-Bid Auctions. Bringing Flexibility and Efficiency to Energy RFPs,” with Andrew Lemon, *Public Utilities Fortnightly*, pp. 20-64 (June 2009).

“U.S. Centralized Wholesale Electricity Markets: An Update,” *International Association for Energy Economics Newsletter*, pp. 8-12 (First Quarter 2007).

“Power Procurement. What’s in Your Mix? Why Competitive Markets Are Scaring Regulators,” with Andrew Lemon, *Public Utilities Fortnightly*, pp. 49-54 (November 2006).

“Competition and Regulation in the Power Industry, Part III: Tensions Evolve Between Regulation and Competition,” with Charles Augustine and Joseph Kalt, *Electric Light & Power*, volume 84.01, pp. 24-25 (January/February 2006).

“Gradualism in Retail Restructuring.” with Charles Augustine and Joseph P. Kalt, *Electric Light & Power*, volume 83:05, pp. 26-30 (September/October 2005).

“Competition and Regulation in the Power Industry: Can the Two Coexist?” with Charles Augustine and Joseph Kalt, *Electric Light & Power*, volume 83.04, pp. 28-31 (July/August 2005).

“Ensuring The Future Construction of Electricity Generation Plants: The Challenge of Maintaining Reliability in New U.S. Wholesale Electricity Markets,” with Andrew Kolesnikov, *International Association for Energy Economics Newsletter* (First Quarter 2005).

“Electricity Company Affiliate Asset Transfer Self Build Policies: Renewed Regulatory Challenges,” with Scott T. Jones, *The Electricity Journal* (November 2004).

“Onward Restructuring,” *Hart Energy Markets*, Vol. 9, No. 9, p. 64 (September 2004).

“Competition and Regulation in the North American Electricity Industry: Can These Two Seemingly Opposed Forces Coexist?” with Charlie Augustine and Joseph P. Kalt, 24<sup>th</sup> Annual North American Conference of the USAEE/IAEE Proceedings, Washington, DC (July 9, 2004).

“Wholesale Electricity Procurement Strategies for Serving Retail Demand,” *International Association for Energy Economics Newsletter* (First Quarter 2004).

“Economic and Environmental Benefits of the Kings Park Energy Project: System Production Modeling Report,” with Susan F. Tierney (January 25, 2002).

“Economic and Environmental Benefits of the Wawayanda Energy Center: System Production Modeling Report,” with Susan F. Tierney (August 24, 2001).

“Air Pollution Reductions Resulting from the Kings Park Energy Project,” with Susan F. Tierney (January 24, 2001).

## **PRESENTATIONS AND SPEAKING ENGAGEMENTS**

“Getting ELCC Right – Managing the Changing Fleet,” EUCI Applying ELCC in ISOs and Utility Balancing Areas to Ensure Resource Adequacy (December 14, 2021).

“Overview of Ancillary Services, Regulation and Reserve Products in Wholesale Markets,” EUCI Ancillary Services Fundamentals and Market Dynamics (August 25, 2021).

“Market Power Monitoring and Mitigation in RTO/ISOs,” EUCI Electricity Market Power, Manipulation, Regulation and Enforcement (April 20, 2021).

“Critical Elements of Ancillary Services Market Design and Costing,” EUCI Ancillary Services Fundamentals and Market Dynamics Workshop (December 1, 2020).

“Achieving Western States Green House Gas (GHG) Reduction Objectives: Effective, Least-Cost Compliance in a Constantly Evolving Policy Environment,” presented with Todd Schatzki, Washington CETA Markets Workgroup (August 28, 2020).

“Carbon Pricing for New England,” NEPOOL Participants Committee Meeting (August 6, 2020).

“Fundamentals of Capacity Market Design and Performance,” EUCI Capacity Markets Workshop, (July 29, 2020).

“Fundamentals of Capacity Market Design and Performance,” EUCI Capacity Markets Workshop, Philadelphia, PA (May 1, 2019).

“Critical Elements of Ancillary Services Market Design and Costing,” EUCI Ancillary Services Markets Conference, Charleston, SC (March 19, 2019).

“Accommodating the Growing Supply of Zero-Emission Resources in U.S. Wholesale Power Markets, Institute for Energy Law Alternative & Renewable Energy Practice Committee, (January 23, 2019).

“Implementing Order No. 841: What Should We Expect?” K&L Gates, Energy Storage Association, Edison Electric Institute, 2<sup>nd</sup> Annual Energy Storage Conference, Washington, DC (November 29, 2018).

“Dumping Energy: Renewable Energy, Cost-Effective Curtailment and Remediating Negative Pricing Conditions,” EUCI Conference, Minneapolis, MN (July 12, 2018).

“Enhanced Reliability Unit Commitment: Fundamentals Design Elements 9-13,” presented with Scott Harvey and Susan Pope, Independent Electricity System Operator of Ontario, Toronto, Ontario (November 27, 2017).

“Enhanced Reliability Unit Commitment: Fundamentals Design Elements 1-8,” presented with Scott Harvey and Susan Pope, Independent Electricity System Operator of Ontario, Toronto, Ontario (October 30, 2017).

“The Growing Conflict between FERC Jurisdictional Electric Markets and State Policies,” 2017 White & Case Energy Conference (October 18, 2017).

“Enhanced Reliability Unit Commitment: Overview and Design Elements,” presented with Scott Harvey and Susan Pope, Independent Electricity System Operator of Ontario, Toronto, Ontario (October 11, 2017).

“Critical Elements of Ancillary Services Market Design and Costing,” EUCI Ancillary Services Markets Workshop, Austin Texas (February 17, 2017).

”What Are the Implications for Adequacy and Future Generation Builds?” Infocast, Panelist, RPM and CP BRA Auction Results, PJM Market Summit 2016 (September 8, 2016).

“What Are the Implications for Adequacy, and Future Generation Builds?” Infocast, Panelist, RPM and CP BRA Auction Results, PJM Market Summit 2015 (September 17, 2015).

Panelist, Congressional Staff Briefing regarding the financial repercussions of the EPA’s Clean Power Plan to public power plants, electric co-operatives, and merchant power plants, Stranded Assets Panel – Focusing on Financial Impacts to Public Power, Co-Ops, and Merchant Power Plants Under EPA’s 111 (d) Clean Power Plan, Washington DC (March 2, 2015).

“Lessons Learned from Existing Scarcity and Shortage Pricing Rules,” Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators, Scarcity and Shortage Pricing, Offer Mitigation, and Offer Caps Workshop, Federal Energy Regulatory Commission, Docket No. AD14-14-000 (October 28, 2014).

“Impacts of Offer Caps and Market Power Mitigation,” Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators, Scarcity and Shortage Pricing, Offer Mitigation, and Offer Caps Workshop, Federal Energy Regulatory Commission, Docket No. AD14-14-000 (October 28, 2014).

Led a Congressional Staff Briefing examining section 111(d) of the Clean Air Act, Stranded Assets Panel – Focusing on the Impacts of EPA’s GHG Proposal for Existing Plants Under 111(d), Washington, DC (July 30, 2014).

“Forward Capacity Auctions: Financial, Physical, or Both,” EUCI (November 7, 2013).

“Capacity Market Performance Incentives,” EUCI (November 7, 2013).

“Fundamentals of Capacity Market Design and Performance,” EUCI (November 6, 2013).

“Electricity Industry Fundamentals,” EUCI (January 29-30, 2013).

“Market Power Monitoring and Mitigation in Electric Capacity Markets,” Capacity Markets: Achieving Market Price Equilibrium?, EUCI (October 4, 2012).

“Market Power Monitoring and Mitigation in Electric Capacity Markets,” Capacity Markets: Achieving Market Price Equilibrium?, EUCI (November 7, 2011).

“Economics and Regulation of Large Scale Renewable Resource Electricity System Transmission Additions,” Center for Research in Regulated Industries, Eastern Conference, Rutgers University (May 6, 2010).

“PJM’s RPM Auctions: Emerging and Unsettled Issues,” NECA Power Markets Conference (November 1, 2007).

“Locational Capacity Markets: Understanding the Upside,” New York City, July 8, 2006.

“Competition and Regulation in the North American Electricity Industry: Can These Two Seemingly Opposed Forces Coexist?” 24<sup>th</sup> Annual North American Conference of the USAEE/IAEE, Washington, DC (July 9, 2004).

“Merchant Transmission Investment Regimes: An Outsider’s Observations,” The East Coast Energy Group (April 16, 2004).

“Wholesale Procurement Strategies for the Restructured Electricity Markets: Experiences from the Field,” Platts First Annual Electricity Market Design Imperative, Chicago, IL (November 6, 2003).

“Power Plant Technologies and Characteristics,” The Harvard Institute for International Development’s Third Annual Program on Climate Change and Development, Cambridge, MA (June 19, 2000).

“Transmission Planning & Investment in the RTO Era,” with John Farr and Susan F. Tierney, workshop at Infocast Conference on Transmission Pricing, Chicago, IL (May 1, 2000).

“The US Market for Merchant Plants—Outlooks, Opportunities and Impediments,” CBI’s 4<sup>th</sup> Annual Profit from Merchant Plants Conference (January 31, 2000).

“Projecting Electricity Prices for a Restructured Electricity Industry,” EXNET Merchant Power Plant Conference, Washington, DC (June 3, 1999).

“Transmission Planning and Competitive Generation Markets: The New England Case,” EUCI conference on Transmission Restructuring for Retail Competition, Denver, CO (March 25, 1999).

“Key Issues in Ancillary Service Markets,” IBC’s conference on Pricing and Selling Ancillary Services in a Competitive Market Conference, San Francisco, CA (March 11, 1999).

“Successfully Forecasting the Price of Energy and Other Products,” workshop presented at IBC’s conference on Successful Load Profiling, San Francisco, CA (December 2, 1998).

“International Perspective: Lessons from the US Deregulation Experience,” Nordic Power ’98, Stockholm, Sweden (October 7, 1998).

“Successfully Forecasting the Price of Energy and Other Products in a Restructured Electric Power Industry,” workshop presented at IBC’s 3<sup>rd</sup> Strategic Forum on Market Price Forecasting, Baltimore, MD (August 24, 1998).

“Managing Market Share Loss with the Opening of Retail Markets to Competition,” Electric Utility Business Environment Conference, Denver, CO (June 24, 1998).

“Multi-Attribute Trade-Off Analysis for Water and Electricity Policy Development,” presented in Mendoza, Argentina, (July 1996 and April 1997).

“The Basics of Cogeneration,” Tufts University Forum on Energy Conservation (December 1993).

“Implications and History of the MIT Cogeneration Project,” presented to the Massachusetts Society of Professional Engineers (November 1993).

## **CERTIFICATIONS/ACCREDITATIONS**

1992–Present Registered Professional Engineer, Commonwealth of Massachusetts

## **PROFESSIONAL ASSOCIATIONS AND MEMBERSHIPS**

2002–2012 Board of Directors, Northeast Energy and Commerce Association