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VIA FEDERAL EXPRESS MAIL AND ELECTRONIC MAIL

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

April 6, 2018

Re: DOCKET NO. 4770, IN RE: THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID – ELECTRIC AND GAS DISTRIBUTION RATE FILING

Dear Ms. Massaro:

Enclosed for filing in the above-referenced matter, please find an original and ten (10) copies of the Direct Testimony and Exhibits of Ali Al-Jabir, filed on behalf of the Department of the Navy.

Please call me at (757) 322-4119 if you have any questions or concerns regarding this filing. Thank you for your attention to this matter.

Very truly yours,

KELSEY A. HARRER, ESQ.
Assistant Counsel
Department of the Navy
Filing on Behalf of the
Federal Executive Agencies

cc: Service List for Docket No. 4770

Enclosure

BEFORE THE

RHODE ISLAND PUBLIC UTILITIES COMMISSION

THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID – APPLICATION FOR APPROVAL OF A CHANGE IN ELECTRIC AND GAS BASE DISTRIBUTION RATES	)	**DOCKET NO. 4770**

Direct Testimony and Exhibits of

Ali Al-Jabir

On behalf of

The U.S. Department of the Navy
And
The Federal Executive Agencies

April 6, 2018

BRUBAKER & ASSOCIATES, INC.
CHESTERFIELD, MO 63017

Project 10566

BEFORE THE

RHODE ISLAND PUBLIC UTILITIES COMMISSION

THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID – APPLICATION FOR APPROVAL OF A CHANGE IN ELECTRIC AND GAS BASE DISTRIBUTION RATES	)	**DOCKET NO. 4770**

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Direct Testimony of Ali Al-Jabir

Introduction

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A My name is Ali Al-Jabir and my business address is 5151 Flynn Parkway, Suite 412 C/D, Corpus Christi, Texas, 78411.

Q WHAT IS YOUR OCCUPATION?

A I am an energy advisor and an Associate in the field of public utility regulation with the firm of Brubaker & Associates, Inc. ("BAI").

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A These are set forth in Appendix A to my testimony.

Q ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A I am testifying on behalf of the United States Department of the Navy ("Navy"). The Navy is a large consumer of electricity in the service territory of the Narragansett Electric Company d/b/a National Grid ("National Grid" or "Company") and takes service from the Company primarily on Rate Schedule G-62. I am also testifying on behalf of the United States Army Corp of Engineers ("USACE") as part of the Navy's role in representing the Federal Executive Agencies ("FEA") in this proceeding.

Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A My testimony focuses on the portions of National Grid's filing that address the Company's electric cost of service and rate design. The purpose of my testimony is to discuss the Company's proposed revenue allocation and its proposal to consolidate Rate Schedule G-32 with Rate Schedule G-62. I also address National Grid's delivery service rates to the Fox Point Hurricane Barrier ("Barrier") that is operated by the USACE. The fact that I am not addressing a specific issue in the Company's application in this proceeding or that I am not addressing gas cost of service issues should not be construed as an endorsement of the Company's position with regard to such issues.

Q PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS.

A My conclusions and recommendations can be summarized as follows:

1. The Company's proposal to cap the electric distribution base revenue increase for all customer classes at two times the system average increase would impose an undue burden on large customers under Rate G-62 that could adversely impact the economic climate in Rhode Island. Therefore, the Rhode Island Public Utilities Commission ("Commission") should require the Company to modify the revenue allocation by capping the distribution service base rate increase for any electric customer class at 1.5 times the system average rate increase. This approach is consistent with the precedent on revenue allocation established by the

Commission in the Company's prior electric base rate cases. It also comports with the rate design principles that the Commission adopted in Docket No. 4600.

2. The Commission should reject the Company's proposal to consolidate Rate G-32 and Rate G-62. At least in the specific case of the Navy, the Company's own calculations undermine its assertion that all Rate G-62 customers would benefit from class consolidation relative to a stand-alone Rate G-62 under the Company's revenue allocation proposal. Moreover, to the extent some customers are shown to benefit from rate class consolidation under the Company's analysis, this supposed benefit merely reflects the excessive rate increases that would be imposed on Rate G-62 customers under the Company's revenue allocation proposal in this proceeding. To truly moderate the rate increase for Rate G-62 customers, the Commission should reject rate class consolidation and should instead adopt my recommendation to cap the electric distribution base rate increase for any customer class at 1.5 times the system average rate increase. This approach is superior to consolidating the Rate G-32 and Rate G-62 classes.

3. The Barrier has a unique electricity usage profile that is characterized by very transitory and random spikes in peak demand, the timing of which are outside of the USACE's control. This unique profile distinguishes the USACE from other customers taking service under Rate G-32. The unique nature of the Barrier's demand profile justifies investigating the development of an alternative rate structure for the Barrier other than the standard Rate G-32 rate structure.

4. I recommend that the Commission direct National Grid to work with the USACE to explore alternative rate structures for the Barrier and to recommend a suitable alternative rate structure to the Commission by a date certain (e.g., within six months from the date of the issuance of a Commission final order in this proceeding). The alternative rate structure should appropriately recognize the USACE's unique usage characteristics and should mitigate the delivery service cost volatility that the USACE has been experiencing at the Barrier.

Revenue Allocation

Q HAVE YOU REVIEWED THE RESULTS OF THE COMPANY'S ELECTRIC CLASS COST OF SERVICE STUDY ("CCOSS")?

A Yes. I reviewed the results of the CCOSS for the rate year ending August 31, 2019. The results of the CCOSS are summarized in Exhibit AZA-1. This exhibit shows the Company's CCOSS results at present and proposed rates. The CCOSS results include the rate of return, the relative rate of return index, and the revenue under- or over-collection.

Q HOW CAN THE CCOSS RESULTS BE INTERPRETED WITH RESPECT TO THE REVENUE CONTRIBUTION OF EACH CLASS RELATIVE TO ITS COST OF SERVICE?

A The rates of a customer class are set at cost of service when the relative rate of return index of the class is 100. At that level, the rate of return derived from the class is equal to the system rate of return. A customer class has a revenue under-collection when the revenues provided through its rates are less than the cost to serve that class, resulting in a class relative rate of return index below 100. Conversely, a customer class has a revenue over-collection when the revenues collected from the class are greater than the cost to serve that class, resulting in a relative rate of return index greater than 100.

Q HOW DOES THE COMPANY PROPOSE TO DISTRIBUTE THE PROPOSED REVENUE INCREASE AMONG THE CUSTOMER CLASSES?

A Exhibit AZA-2 shows the Company's proposed revenue increase by amount and as a percentage of present revenue for each customer class. For comparison purposes, the exhibit also shows the rate increases that would result from a direct application of the results of the CCOSS in this proceeding.

Q HOW DOES THE COMPANY'S REVENUE ALLOCATION PROPOSAL COMPARE TO THE ACTUAL COST TO SERVE EACH RATE CLASS, AS INDICATED BY THE CCOSS RESULTS?

A As shown in Exhibit AZA-1, the Company's proposed revenue allocation results in a relative rate of return of 99 for all classes except for the Lighting and Propulsion classes. For the latter two classes, the relative rate of return is greater than 100.

This means that the Company is proposing to immediately move the majority of its customer classes to rates that approximate full cost-based rates.

Q WHAT REVENUE ALLOCATION CONSTRAINTS DID THE COMPANY APPLY TO DEVELOP ITS PROPOSED ELECTRIC REVENUE DISTRIBUTION?

A The Company states that it applied the concept of gradualism by limiting the electric distribution service base rate increase for any class to twice the system average increase. The Company also applied no base rate increase to classes that would receive a rate decrease under cost-based rates.[1]

Q ARE THE COMPANY'S GRADUALISM CRITERIA REASONABLE?

A No. By the Company's own admission, its proposal to limit class base rate increases to twice the system average rate increase did not actually limit the rate increase for any customer class relative to the CCOSS results. This is the case because the class with the highest electric base rate increase under the CCOSS (the Rate G-62 class) would receive a distribution base rate increase of 24.7% or 1.62 times the system average increase to reach full cost-based rates. This is less than the Company's proposed class base rate increase cap of two times the system average increase. Therefore, the Company's proposal does not apply gradualism in any meaningful way. In fact, National Grid has proposed a rate increase cap that is purely theoretical because it fails to moderate the rate increase for any class as a practical reality.

While the Company's proposal to impose no base rate increase on the Lighting and Propulsion classes modestly moderates the rate increase for other customer classes, the Company's revenue allocation proposal would nevertheless result in a significant electric distribution service base rate increase of 24.3% for the

[1]Docket No. 4770, Direct Testimony of Howard S. Gorman, page 22.

large Rate G-62 customer class in the Company's service territory. This is equivalent to 1.6 times the system average rate increase. This rate increase is excessive, and the Commission should take steps to moderate the magnitude of this rate increase.

Q PLEASE EXPLAIN WHY IT IS APPROPRIATE TO LIMIT THE MAGNITUDE OF RATE INCREASES FOR LARGE CUSTOMERS ON THE COMPANY'S SYSTEM.

A In determining the revenue allocation in this proceeding, the Commission should recognize the harm that large electric rate increases of this magnitude can inflict on the economic base in the state of Rhode Island. Large customers on the Company's system make important contributions to the economic health of the state directly through their payrolls and tax revenues, as well as indirectly through their purchase of goods and services from local suppliers. Large electric rate increases have the potential to adversely impact these economic contributions by making it more costly for large customers to operate in Rhode Island. For these reasons, the Commission should restrict the size of the rate increase proposed by the Company for large customers.

Q HAS THE COMMISSION PREVIOUSLY RECOGNIZED THAT THE RATE INCREASES FOR LARGE CUSTOMERS MERIT REASONABLE MITIGATION?

A Yes. In its Order in Docket No. 4065, the Commission determined that it was appropriate to limit the distribution rate increase for customers with demands greater than 8 MW to 150% of the average overall rate increase approved by the Commission.[2]

[2]Docket No. 4065, Order No. 19965, April 14, 2010, page 19.

Q IS THE NEED TO MODERATE RATE INCREASES FOR LARGE CUSTOMERS CONSISTENT WITH THE RATE DESIGN PRINCIPLES THAT THE COMMISSION ADOPTED IN DOCKET NO. 4600?

A. Yes. In Docket No. 4600, the Commission recognized that gradualism is an important rate design tenet that should be applied to the development of utility rates in Rhode Island. Specifically, the Commission stated that:

> "any changes in rate structures are to be implemented with due consideration to the principle of gradualism in order to allow ample time for customers (including DER customers) to understand new rates and to lessen immediate bill impacts."[3]

My electric revenue allocation recommendation appropriately applies this rate design principle in the development of electric distribution rates in this proceeding.

Q WHAT IS YOUR RECOMMENDATION REGARDING THE ALLOCATION OF ANY ELECTRIC BASE REVENUE INCREASE IN THIS PROCEEDING?

A I recommend capping the electric distribution base rate increase for any electric customer class at 1.5 times the system average rate increase. This approach appropriately mitigates the impact of the rate increase on large customers and recognizes the adverse impact that significant electric rate increases can have on the economic environment in Rhode Island. This approach is also consistent with the precedent established by the Commission on revenue allocation in the Company's prior electric base rate cases. Furthermore, this approach gives practical import to the rate design principle of gradualism that was articulated by the Commission in Docket No. 4600. The results of my proposed electric class revenue allocation are shown in Exhibit AZA-2. As can be seen in this exhibit, my proposed revenue

[3]Docket No. 4600, *Public Utilities Commission's Guidance on Goals, Principles and Values for Matters Involving The Narragansett Electric Company d/b/a National Grid*, effective October 27, 2017, pages 4 – 5.

allocation would reduce the electric distribution base rate increase for the Rate G-62 (5,000 kW Demand) class from 24.3% under the Company's proposal to 22.9% on a class average basis.

Consolidation of Rate G-32 and Rate G-62

Q PLEASE SUMMARIZE THE COMPANY'S RATE CONSOLIDATION PROPOSAL.

A Currently, customers with a maximum 12-month average demand in excess of 5 MW may take service under Rate G-62, at their option. The current Rate G-62 distribution rates include a monthly customer charge and a demand charge, but no per kWh distribution energy charge. Smaller customers with a maximum 12-month average demand of 200 kW or greater take service under Rate G-32. The current Rate G-32 distribution rates include a monthly customer charge, a demand charge for kW in excess of 200 kW and a per kWh energy charge.

The Company proposes to consolidate Rate G-32 and Rate G-62 into one set of rates applicable to all customers in both rate classes by combining the revenue requirements and billing units of the separate classes.[4]

Q HOW WOULD THIS RATE CONSOLIDATION PROPOSAL IMPACT THE DISTRIBUTION RATE STRUCTURE AND DISTRIBUTION RATE DESIGN FOR CURRENT RATE G-62 CUSTOMERS?

A The consolidation proposal would decrease the Rate G-62 customer charge from $17,000 to $1,100 per month, but it would significantly increase the Rate G-62 demand charge from its current level of $2.99 per kW-month to $5.00 per kW-month. This represents a 67% increase in the Rate G-62 demand charge. In addition, the

[4]Docket No. 4770, Direct Testimony of Howard S. Gorman, pages 33 – 34.

rate consolidation would result in the imposition of a new distribution energy charge of $0.00631 per kWh on Rate G-62 customers where no distribution energy charge currently exists for such customers.[5]

Q IS THIS RATE CLASS CONSOLIDATION PROPOSAL APPROPRIATE?

A No. The proposal should be rejected because it is inconsistent with Commission precedent and because it would impose an excessive rate increase on Rate G-62 customers.

Q WHAT IS THE FINANCIAL IMPACT OF THE COMPANY'S RATE CONSOLIDATION PROPOSAL ON THE NAVY?

A National Grid calculated that consolidating Rate G-32 and Rate G-62 would increase the Navy's total electricity charges from the Company by $609,914 annually, an increase of 5.4% on a total bill basis. If Rate G-62 were to remain as a stand-alone class, the Company calculated that its revenue allocation proposal would result in an increase in total electricity charges of $573,963, or 5.1%, for the Navy. The total Navy rate impact information provided by the Company is included in my testimony as Exhibit AZA-3.

Using the information provided by National Grid, I calculated the rate increase that the Navy would incur under the Company's proposal by rate category. The purpose of this categorization is to highlight the true impact of the Company's distribution rate increase by isolating the impact of this rate increase on the distribution component of rates. The results of these calculations are summarized in Exhibit AZA-4. As can be seen in this exhibit, the Company's proposal would result in a very large rate increase of 66.3% for the Navy when one considers only the

[5]Docket No. 4770, Direct Testimony of Howard S. Gorman, pages 39 – 40.

distribution component of rates. If Rate G-62 were to remain as a stand-alone class, the Company's revenue allocation proposal would result in a rate increase of 50.9% for the Navy when considering only the distribution component of rates. These results highlight the dramatic and unreasonable impact of National Grid's revenue allocation and class consolidation proposals on individual customers within the Rate G-62 class.

Q IS THIS LEVEL OF RATE IMPACT REASONABLE?

A No. The proposed rate consolidation is unacceptable due to the adverse impact it would have on the Navy's operating costs in Rhode Island. Due to fiscal constraints, the Navy faces severe and ongoing financial limitations on its operations. Therefore, the Commission should reject rate proposals such as the Company's proposal in this proceeding that would significantly increase the Navy's utility costs in Rhode Island.

Q ARE CUSTOMER RATE IMPACTS AN IMPORTANT CONSIDERATION IN THE RATE DESIGN PROCESS?

A Yes. The rate design process should consider a variety of factors, including equity, cost-causation and sending appropriate price signals to customers. Another important consideration is the desire to avoid large and rapid rate increases that may result in adverse economic impacts for individual customers or customer classes. A related consideration is that large rate increases can have adverse economic development impacts in the local region.

Cost-causation is a central, but not an exclusive, driver of rate design decisions. Another significant and relevant factor in the rate design process is the bill impact on customer classes and individual customers within the class, along with the attendant implications of these bill impacts on the local economy. For these reasons,

it is critically important to apply gradualism principles when evaluating the merits of rate design proposals.

Q HAS THE COMMISSION RECOGNIZED THE IMPORTANCE OF APPLYING GRADUALISM TO THE DESIGN OF ELECTRICITY RATES?

A Yes. As I noted earlier in my testimony, the Commission included gradualism as one of the important rate design principles that it adopted in Docket No. 4600.

Q IN SUPPORT OF ITS RATE CLASS CONSOLIDATION PROPOSAL, THE COMPANY ASSERTS THAT EVERY RATE G-62 CUSTOMER WOULD INCUR HIGHER COSTS UNDER A STAND-ALONE RATE G-62 RELATIVE TO THE RATES THAT THEY WOULD PAY UNDER ITS CONSOLIDATED G-32/G-62 RATE PROPOSAL.[6] WHAT IS YOUR RESPONSE?

A In his direct testimony, Company witness Howard S. Gorman stated as follows:

> "The Company computed that if Rate G-32 and Rate G-62 remain in separate classes, the proposed rates for Rate G-62 would result in every Rate G-62 customer paying more as a Rate G-62 customer than they would as a Rate G-32 customer under the proposed Rate G-32 rates."[7]

The Company's assertion is inconsistent with the Company's rate impact calculations for the Navy. As I noted earlier in my testimony, National Grid calculated that consolidating Rate G-32 and Rate G-62 would increase the Navy's total electricity charges by $609,914 annually, while the Navy's annual rate increase would be $573,963 under stand-alone G-62 rates using the Company's proposed revenue allocation. These figures show that the Company's rate class consolidation proposal would result in an incremental rate increase of $35,950, above and beyond the very

[6]Docket No. 4770, Direct Testimony of Howard S. Gorman, pages 34 – 35.
[7]Docket No. 4770, Direct Testimony of Howard S. Gorman, pages 34, lines 17 - 20.

large rate increase that would apply to the Navy as a stand-alone Rate G-62 customer under the Company's revenue allocation. Therefore, at least in the specific case of the Navy, the Company's calculations fail to demonstrate that rate class consolidation is beneficial to all Rate G-62 customers.

More importantly, the Company's argument ignores the reality that the key driver for the large Rate G-62 rate increase is the Company's unreasonable revenue allocation proposal that would impose a distribution service base rate increase of 1.6 times the system average increase on Rate G-62 customers. The fact that some Rate G-62 customers may benefit from the Company's rate class consolidation proposal relative to a stand-alone Rate G-62 is merely a reflection of the unreasonably severe nature of the Company's proposed revenue allocation for Rate G-62. It is not a legitimate argument in support of rate class consolidation for Rate G-32 and Rate G-62.

If the Commission desires to moderate the rate increase for Rate G-62 customers, the appropriate remedy is to apply reasonable gradualism criteria that would cap the electric distribution base rate increase for any class at 1.5 times the system average increase, as discussed earlier in my testimony. This approach is superior to the Company's rate class consolidation proposal.

Q HAS THE COMMISSION PREVIOUSLY CONSIDERED AND REJECTED A SIMILAR RATE CONSOLIDATION PROPOSAL BY NATIONAL GRID?

A Yes. National Grid presented a similar proposal in Docket No. 4065. The Commission rejected the Company's proposal in that case, citing the significant increase in the demand charge for Rate G-62 customers that would result from the rate consolidation. The Commission further found that the Company had not

submitted sufficient evidence to demonstrate that the rate consolidation would not result in a detrimental impact on Rate G-62 customers.[8]

Clearly, Commission precedent establishes that rate impact considerations justify the rejection of proposals to consolidate the Rate G-32 and Rate G-62 classes. Given the significant adverse rate impact of this proposal on the Navy in the instant proceeding and the large proposed demand charge increase for current Rate G-62 customers, the Commission should once again reject this rate consolidation proposal.

Q DID THE COMMISSION ADDRESS THE MERITS OF CONSOLIDATING RATE G-32 AND RATE G-62 IN A MORE RECENT COMPANY RATE PROCEEDING, DOCKET NO. 4323?

A No. Docket No. 4323 was resolved through the Commission's approval of a settlement agreement. While the Commission's Final Order in that docket referenced the settlement agreement's provisions regarding the revenue distribution to the G-62 rate class, the Order was silent regarding the merits of consolidating Rate G-32 and Rate G-62.[9]

Q DID THE COMPANY SUBMIT A PROPOSAL TO CONSOLIDATE RATE CLASSES G-32 AND G-62 IN DOCKET NO. 4568?

A Yes. However, the Company withdrew its application in that proceeding. Therefore, the Commission did not rule on the merits of the Company's rate class consolidation proposal in that docket.

[8]Rhode Island Public Utilities Commission, Docket No. 4065, Decision and Order, April 29, 2010, p. 148.

[9]Rhode Island Public Utilities Commission, Docket No. 4323, Report and Order, April 11, 2013, pp. 105-106.

Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS REGARDING THE COMPANY'S RATE CLASS CONSOLIDATION PROPOSAL.

A The Commission should reject the Company's proposal to consolidate Rate G-32 and Rate G-62. At least in the specific case of the Navy, the Company's own calculations undermine its assertion that all Rate G-62 customers would benefit from class consolidation relative to a stand-alone Rate G-62 under the Company's revenue allocation proposal. Moreover, to the extent that some customers are shown to benefit from rate class consolidation under the Company's analysis, this alleged benefit merely reflects the excessive rate increases that would be imposed on Rate G-62 customers under the Company's revenue allocation proposal in this proceeding. To truly moderate the rate increase for Rate G-62 customers, the Commission should reject rate class consolidation and should instead adopt my recommendation to cap the electric distribution base rate increase for any customer class at 1.5 times the system average rate increase. This approach is superior to consolidating the Rate G-32 and Rate G-62 classes.

Fox Point Hurricane Barrier

Q PLEASE PROVIDE A HIGH LEVEL DESCRIPTION OF THE BARRIER AND THE ROLE OF THE USACE IN OPERATING THE BARRIER.

A The Barrier generally consists of a pumping station, central barrier, river gates and related facilities that are located near the City of Providence, where the Providence River empties into Narragansett Bay. The purpose of the Barrier is to provide flood remediation and flood damage reduction for the City of Providence and surrounding areas. The central barrier is closed as needed to prevent flooding caused by major storms and high tides in Narragansett Bay. The Barrier facilities also include pumping

stations that are used to control flooding of the Providence River when the central barrier is closed, which closure has the effect of preventing the waters of the Providence River from emptying into Narragansett Bay. In 2010, the USACE assumed ownership of the Barrier and all of its main components from the City of Providence, including the central barrier, river gates and pumping stations.

Q HOW DOES THE OPERATION OF THE BARRIER AFFECT THE USACE'S ELECTRICITY LOAD PROFILE?

A As noted above, when the USACE closes the central barrier to mitigate the potential for flooding in the City of Providence, it generally must operate at least one of its pumps to control flooding of the Providence River. The USACE usually operates the pumps for only thirty to forty minutes at a time. When the pumps are first activated, the USACE experiences a spike in electricity demand that is generally in the range of three MW in order to power the start-up of the pumps. These demand spikes are transitory and typically are of less than an hour in duration.

The timing of these demand spikes is outside of the USACE's control, as the Barrier must be closed during randomly occurring natural events such as storms or high tides that threaten flooding of the City of Providence and surrounding areas. When the pumps are not in operation, the Barrier's peak electricity demand falls off significantly.

Q UNDER WHICH RATE SCHEDULE DOES THE USACE CURRENTLY TAKE DELIVERY SERVICE FOR THE BARRIER?

A The USACE takes delivery service for the Barrier from National Grid under the Rate G-32 Large Demand Rate.

Q WHAT IS THE LARGEST DRIVER FOR THE INCURRENCE OF DELIVERY SERVICE COSTS UNDER RATE G-32?

A The bulk of the delivery service charges under this rate schedule are a function of the customer's demand billing determinant.

Q PLEASE EXPLAIN HOW A CUSTOMER'S MONTHLY DEMAND BILLING DETERMINANT IS ESTABLISHED UNDER RATE G-32.

A Under Rate G-32, a customer's monthly demand billing determinant is established based on the greater of 100% of the customer's highest fifteen-minute electricity usage interval (measured in kW) or 90% of the customer's highest fifteen-minute usage interval (measured in kVA) that occurs during designated Peak hours of each month. The Peak hours differ by month of the year, but they generally run from the early morning to the late evening on weekdays. The demand determination provision for Rate G-32 also contains a 75% demand ratchet that establishes a minimum monthly demand billing determinant for a customer based on 75% of the highest demand established by the customer during the prior eleven months.

A customer can elect to opt-out of the demand ratchet provision by selecting the Optional Determination of Demand provision under Rate G-32. However, selection of this option results in a 20% increase in the customer's monthly distribution and transmission demand and energy charges. The USACE currently takes service under this Optional Determination of Demand provision.

Q HOW DOES THE BARRIER'S ELECTRICITY LOAD PROFILE IMPACT THE USACE'S DELIVERY SERVICE COSTS UNDER RATE G-32?

A The Barrier's load profile results in highly volatile delivery service costs for the USACE from month to month. The Barrier's delivery service costs are relatively low

during months when the USACE operates the pumps at the Barrier during off-peak hours or during months when there is no pump activity. However, the USACE's delivery service costs spike significantly (up to 500%) during months when the USACE is required to operate the pumps during the Peak hours designated under Rate G-32.

As noted above, the electricity demand spikes associated with the operation of the Barrier's pumps are very transitory and are driven by random weather events such as storms and high tides. Consequently, these events and the associated spikes in demand are outside of the USACE's control. Nevertheless, they result in large and unpredictable spikes in the Barrier's delivery service costs when the Barrier's pumps must be operated during Peak hours. This situation is problematic and National Grid should work to correct it.

Q HAVE YOU ANALYZED THE LOAD CHARACTERISTICS OF THE BARRIER RELATIVE TO THE AVERAGE LOAD CHARACTERISTICS OF THE G-32 RATE CLASS?

A Yes. Table 1 below provides a comparison of the class average annual load factor of the G-32 rate class and the annual load factor for the Barrier for the historical test year ending June 30, 2017. As can be seen in this Table, the load factor of the Barrier is significantly below the G-32 class average load factor.

TABLE 1

Comparison of Annual Load Factor for Fox Point Barrier vs. Rate G-32 Rate Class
Test Year Ending June 30, 2017

Annual Load Factor for Rate Class G-32[1]	Annual Load Factor for Fox Point Barrier[2]
58.6%	23.1%

Source:
[1] Schedule HSG-2M
[2] Fox Point Barrier invoices

Q WHAT ARE THE IMPLICATIONS OF THIS DIFFERENCE IN LOAD CHARACTERISTICS?

A One objective of having multiple rate schedules is to accommodate the different load characteristics of the customers that National Grid serves. If the characteristics of a particular customer or group of customers significantly diverges from other customers within a rate class, this suggests that a different rate structure may be appropriate for that particular customer or group of customers.

When customer loads are not driven by temperature, there is generally an inverse relationship between load factor and coincidence factor. Therefore, the annual load factor data depicted in Table 1 suggests that it is unlikely that the Barrier is peaking at the time of the G-32 class peak. This difference in load characteristics should be considered in developing delivery service rates for the Barrier.

Q WHAT ARE YOUR RECOMMENDATIONS FOR ADDRESSING THE VOLATILITY IN THE USACE'S DELIVERY SERVICE COSTS?

A As described above, the Barrier has a unique electricity usage profile that is characterized by very transitory and random spikes in peak demand, the timing of which are outside of the USACE's control. This unique profile distinguishes the USACE from other customers taking service under Rate G-32. The unique nature of the Barrier's demand profile justifies investigating the development of an alternative rate structure for the Barrier that appropriately recognizes the USACE's unique usage characteristics and that mitigates the delivery service cost volatility that the USACE has been experiencing at the Barrier.

Therefore, I recommend that the Commission direct National Grid to work with the USACE to explore such alternative rate structures and to recommend a suitable alternative rate structure to the Commission by a date certain (e.g., within six months from the date of the issuance of a Commission final order in this proceeding).

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes.

Qualifications of Ali Al-Jabir

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Ali Al-Jabir. My business address is 5151 Flynn Parkway, Suite 412 C/D, Corpus Christi, Texas, 78411.

Q WHAT IS YOUR OCCUPATION AND BY WHOM ARE YOU EMPLOYED?

A I am a consultant in the field of public utility regulation with the firm of Brubaker & Associates, Inc. ("BAI").

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND.

A I am a graduate of the University of Texas at Austin ("UT-Austin"). I hold the degrees of Bachelor of Arts and Master of Arts in Economics, both from UT-Austin. I have also completed course work at Harvard University. I received my B.A. degree with highest honors, and I am a member of the Phi Beta Kappa Honor Society.

Q PLEASE STATE YOUR EXPERIENCE.

A I joined BAI in January 1997. My work consists of preparing economic studies and economic policy analysis related to investor-owned, cooperative, and municipal utilities. Prior to joining BAI, I was employed at the Public Utility Commission of Texas ("Texas Commission") since 1991, where I held various positions including Policy Advisor to the Chairman. As Policy Advisor, I advised the Chairman on policy decisions in numerous rate and rulemaking proceedings. In 1995, I advised the Texas Legislature on the development of the statutory framework for wholesale competition in the Electric Reliability Council of Texas ("ERCOT"), and I was involved

in subsequent rulemakings at the Texas Commission to implement wholesale open access transmission service in the region.

During my tenure at the Texas Commission and in my present capacity, I have reviewed and analyzed several electric utility base rate and fuel filings in Texas. I have also worked on utility rate, fuel, and merger proceedings and rulemakings in Virginia, Missouri, Colorado, Indiana, Alberta, Pennsylvania, North Carolina, South Carolina, Michigan and Nova Scotia. In addition to my work on such proceedings, I have drafted policy papers and comments regarding electric industry restructuring and competitive policy issues in Texas, Alabama, Louisiana, Georgia, and Delaware, as well as before the Federal Energy Regulatory Commission. I have been an invited speaker at several electric utility industry conferences, and I have presented seminars on utility regulation and industry restructuring.

BAI and its predecessor firms have been active in utility rate and economic consulting since 1937. The firm provides consulting services in the field of public utility regulation to many clients, including large industrial and institutional customers, some competitive retail power providers and utilities and, on occasion, state regulatory agencies. In addition, we have prepared depreciation and feasibility studies relating to utility service. We assist in the negotiation of contracts and the solicitation and procurement of competitive energy supplies for large energy users, provide economic policy analysis on industry restructuring issues, and present seminars on utility regulation. In general, we are engaged in regulatory consulting, economic analysis, energy procurement, and contract negotiation.

In addition to our main office in St. Louis, the firm also has branch offices in Corpus Christi, Texas and Phoenix, Arizona.

Q HAVE YOU PREVIOUSLY FILED TESTIMONY IN CONTESTED UTILITY PROCEEDINGS?

A Yes, I have filed written testimony in the following dockets:

1. Texas Docket No. 10035 – Application of West Texas Utilities Company to Reconcile Fuel Costs and for Authority to Change Fixed Fuel Factors;

2. Texas Docket No. 10200 – Application of the Texas - New Mexico Power Company for Authority to Change Rates;

3. Texas Docket No. 10325 – Application of the Central Texas Electric Cooperative, Inc. for Authority to Change Rates;

4. Texas Docket No. 10600 – Application of the Brazos River Authority for Approval of Rates;

5. Texas Docket No. 10881 – Application of the New Era Electric Cooperative, Inc. for Authority to Change Rates;

6. Texas Docket No. 11244 – Petition of the Medina Electric Cooperative, Inc. to Reduce its Fixed Fuel Factor and the Application of the South Texas Electric Cooperative, Inc. for Authority to Refund an Over-Recovery of Fuel Cost Revenues and to Reduce its Fixed Fuel Factor;

7. Texas Docket No. 11271 – Application of Bowie-Cass Electric Cooperative, Inc. for Authority to Change Rates;

8. Texas Docket No. 11567 – Application of Kaufman County Electric Cooperative, Inc. for Authority to Change Rates;

9. Texas Docket No. 18607 – Application of West Texas Utilities Company for Authority to Reconcile Fuel Costs;

10. Texas Docket No. 20290 – Application of Central Power & Light Company for Authority to Reconcile Fuel Costs;

11. Virginia Case No. PUE980814 – In the matter of considering an electricity retail access pilot program: American Electric Power – Virginia;

12. Texas Docket No. 21111 – Application of Entergy Gulf States Inc. for Authority to Reconcile Fuel Costs and to Recover a Surcharge for Under-Recovered Fuel Costs;

13. Virginia Case No. PUE990717 – Application of Virginia Electric and Power Company to Revise Its Fuel Factor Pursuant to Virginia Code Section 56-249.6;

14. Texas Docket No. 22344 – Generic Issues Associated with Applications for Approval of Unbundled Cost of Service Rates Pursuant to PURA Section 39.201 and Public Utility Commission Substantive Rule § 25.344;

15. Texas Docket No. 22350 – Application of TXU Electric Company for Approval of Unbundled Cost of Service Rates Pursuant to PURA Section 39.201 and Public Utility Commission Substantive Rule 25.344 (Phase III);

16. Texas Docket No. 22352 – Application of Central Power and Light Company for Approval of Unbundled Cost of Service Rates Pursuant to PURA Section 39.201 and Public Utility Commission Substantive Rule 25.344 (Final Phase);

17. Texas Docket No. 22353 – Application of Southwestern Electric Power Company for Approval of Unbundled Cost of Service Rates Pursuant to PURA Section 39.201 and Public Utility Commission Substantive Rule 25.344 (Final Phase);

18. Texas Docket No. 22354 – Application of West Texas Utilities Company for Approval of Unbundled Cost of Service Rates Pursuant to PURA Section 39.201 and Public Utility Commission Substantive Rule 25.344 (Final Phase);

19. Texas Docket No. 22356 – Application of Entergy Gulf States, Inc. for Approval of Unbundled Cost of Service Rates Pursuant to PURA Section 39.201 and Public Utility Commission Substantive Rule 25.344;

20. Texas Docket No. 22349 – Application of Texas-New Mexico Power Company for Approval of Unbundled Cost of Service Rates Pursuant to PURA Section 39.201 and Public Utility Commission Substantive Rule 25.344 (Final Phase);

21. Virginia Case No. PUE000584 – Application of Virginia Electric and Power Company for Approval of a Functional Separation Plan under the Virginia Electric Utility Restructuring Act;

22. Texas Docket No. 24468 – Staff's Petition to Determine Readiness for Retail Competition in the Portions of Texas Within the Southwest Power Pool;

23. Texas Docket No. 24469 – Staff's Petition to Determine Readiness for Retail Competition in the Portions of Texas Within the Southeastern Electric Reliability Council;

24. Virginia Case No. PUE-2002-00377 – Application of Virginia Electric and Power Company to Revise Its Fuel Factor Pursuant to Section 56-249.6 of the Code of Virginia;

25. Texas Docket No. 27035 – Application of Central Power and Light Company for Authority to Reconcile Fuel Costs;

26. Texas Docket No. 28818 – Application of Entergy Gulf States, Inc. for Certification of an Independent Organization for the Entergy Settlement Area in Texas;

27. Virginia Case No. PUE-2000-00550 -- Appalachian Power Company d/b/a American Electric Power: Regional Transmission Entities;

28. Texas Docket No. 29408 – Application of Entergy Gulf States, Inc. for the Authority to Reconcile Fuel Costs;

29. Texas Docket No. 29801 – Application of Southwestern Public Service Company for: (1) Reconciliation of its Fuel Costs for 2002 and 2003; (2) A Finding of Special Circumstances; and (3) Related Relief;

30. Texas Docket No. 30143 -- Petition of El Paso Electric Company to Reconcile Fuel Costs;

31. Texas Docket No. 31540 – Proceeding to Consider Protocols to Implement a Nodal Market in the Electric Reliability Council of Texas Pursuant to PUC Substantive Rule 25.501;

32. Texas Docket No. 32795 – Staff's Petition to Initiate a Generic Proceeding to Re-Allocate Stranded Costs Pursuant to PURA Section 39.253(f);

33. Texas Docket No. 33309 – Application of AEP Texas Central Company for Authority to Change Rates;

34. Texas Docket No. 33310 – Application of AEP Texas North Company for Authority to Change Rates;

35. Michigan Case No. U-15245 – In the Matter of the Application of Consumers Energy Company for Authority to Increase its Rates for the Generation and Distribution of Electricity and for Other Rate Relief;

36. Texas Docket No. 34800 – Application of Entergy Gulf States, Inc. for Authority to Change Rates and to Reconcile Fuel Costs;

37. Texas Docket No. 35717 – Application of Oncor Electric Delivery Company LLC for Authority to Change Rates.

38. RIPUC Docket No. 4065 – Application of the Narragansett Electric Company d/b/a National Grid for Approval of a Change in Electric Base Distribution Rates Pursuant to R.I.G.L. Sections 39-3-10 and 39-3-11;

39. RIPUC Docket No. 4323 – Application of the Narragansett Electric Company d/b/a National Grid for Approval of a Change in Electric and Gas Base Distribution Rates Pursuant to R.I.G.L. Sections 39-3-10 and 39-1-3-11;

40. Oregon Docket No. UE 283 -- In the Matter of Portland General Electric Company's Request for a General Rate Revision;

41. Washington Docket No. UE-141368 – In the Matter of the Petition of Puget Sound Energy to Update Methodologies Used to Allocate Electric Cost of Service and for Electric Rate Design Purposes;

42. Federal Energy Regulatory Commission Docket No. EL15-82-000 -- Illinois Industrial Energy Consumers, Complainant, v. Midcontinent Independent System Operator, Inc., Respondent;

43. RIPUC Docket No. 4568 – In Re: Review of the Narragansett Electric Company d/b/a National Grid's Rate Design Pursuant to R.I. General Laws Section 39-26.6-24; and

44. Washington Docket Nos. UE-170033 and UG-170034 – Washington Utilities and Transportation Commission, Complainant, v. Puget Sound Energy, Respondent.

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Narragansett Electric Company

Summary of Cost of Service Study Results
Rate Year Ending August 31, 2019

Line	Customer Class	Present Rates[1] Rate of Return	Present Rates[1] Relative Rate of Return	Present Rates[1] Over/(Under) Collection (000)	Company Proposed Revenue Distribution[1,2] Rate of Return	Company Proposed Revenue Distribution[1,2] Relative Rate of Return	Company Proposed Revenue Distribution[1,2] Over/(Under) Collection (000)	Navy Proposed Revenue Distribution[3] Rate of Return	Navy Proposed Revenue Distribution[3] Relative Rate of Return	Navy Proposed Revenue Distribution[3] Over/(Under) Collection (000)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Residential	2.28%	58	$ (10,862)	7.34%	99	$ (577)	7.35%	99	$ (501)
2	Small C&I	3.07%	78	$ (1,047)	7.34%	99	$ (109)	7.35%	99	$ (95)
3	General C&I	5.91%	150	$ 3,747	7.35%	99	$ (142)	7.36%	99	$ (124)
4	200 kW Demand	8.13%	207	$ 7,025	7.38%	99	$ (81)	7.38%	99	$ (81)
5	5,000 kW Demand	2.59%	66	$ (477)	7.35%	99	$ (27)	7.05%	95	$ (136)
6	Lighting	10.56%	268	$ 889	9.61%	129	$ 292	9.61%	129	$ 292
7	Propulsion	219.46%	5576	$ 725	199.10%	2680	$ 645	199.10%	2680	$ 645
8	**Total**	**3.94%**	**100**	**$ 0**	**7.43%**	**100**	**$ -**	**7.43%**	**100**	$ -

Sources:
[1] Company results based on Schedule HSG-3.
[2] Assumes the rate increase is capped at 2 times the system average.
[3] Assumes the rate increase is capped at 1.5 times the system average.

Narragansett Electric Company

Summary of Base Rate Increase
Rate Year Ending August 31, 2019

Line	Customer Class	Present Revenues (000)	Company CCOSS Rate Change[1] Amount (000)	Company CCOSS Rate Change[1] Percent	Company Proposed Revenue Distribution[1,2] Amount (000)	Company Proposed Revenue Distribution[1,2] Percent	Navy Proposed Revenue Distribution[3] Amount (000)	Navy Proposed Revenue Distribution[3] Percent
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Residential	$ 144,451	$ 31,785	22.0%	$ 31,263	21.6%	$ 31,332	21.7%
2	Small C&I	$ 28,729	$ 5,101	17.8%	$ 5,002	17.4%	$ 5,015	17.5%
3	General C&I	$ 42,965	$ 3,538	8.2%	$ 3,407	7.9%	$ 3,423	8.0%
4	200 kW Demand	$ 38,950	$ 73	0.2%	$ -	0.0%	$ -	0.0%
5	5,000 kW Demand	$ 6,584	$ 1,627	24.7%	$ 1,603	24.3%	$ 1,505	22.9%
6	Lighting	$ 8,291	$ (265)	-3.2%	$ -	0.0%	$ -	0.0%
7	Propulsion	$ 692	$ (585)	-84.4%	$ -	0.0%	$ -	0.0%
8	**Total**	**$ 270,662**	**$ 41,274**	**15.2%**	**$ 41,274**	**15.2%**	**$ 41,274**	**15.2%**

Source:
[1] Company results based on Schedule HSG-3, distribution only.
[2] Assumes the rate increase is capped at 2 times the system average.
[3] Assumes the rate increase is capped at 1.5 times the system average.

Exhibit AZA-3

The Narragansett Electric Company
Bill Comparison
Estimate - Migration of G-62 to G-32 - Estimate

		Based on Today's G-62 and G-32 Rates			Based on Illustrative G-62 Rates for Sept 1, 2018			Based on Company's Proposal to Consolidate			Difference
	Present Rate G-62 (a)	Present Rate G-32 (b)	Increase (Decrease) on Present G-32 (c) = (b) - (a)	% Inc (Dec) (d) = (c) ÷ (a)	Rate Year Stand-Alone Rate G-62 (e)	Increase (Decrease) on Stand-Alone G-62 (f) = (e) - (a)	% Inc (Dec) (g) = (f) ÷ (a)	Proposed Rate G-32 (h)	Increase (Decrease) Proposed G-32 (i) = (h) - (a)	% Inc (Dec) (j) = (i) ÷ (a)	Between Stand-Alone G-62 & Proposed G-32 (k) = (i) - (f)
Navy	$11,215,417	$11,519,661	$304,244	2.7%	$11,789,381	$573,963	5.1%	$11,825,331	$609,914	5.4%	$35,950

* Partial year (6 months)

The Narragansett Electric Company

Department of the Navy
Summary of Proposed Rate Increase under Rate G-32

Line	Cost Category	Current Nov 1, 2017 G-62 Rates (1)	Illustrative Sep 1, 2018 G-62 Rates (2)	Increase over Current G-62 Rates Amount (3)	Increase over Current G-62 Rates Percent (4)	Proposed G-32 Rates (5)	Increase over Current G-62 Rates Amount (6)	Increase over Current G-62 Rates Percent (7)
1	***Distribution***	***$1,074,305***	***$1,620,703***	***$546,398***	***50.9%***	***$1,786,086***	***$711,781***	***66.3%***
2	Transmission	$1,993,498	$1,994,411	$913	0.0%	$1,885,180	($108,318)	-5.4%
3	SOS	$5,942,283	$5,945,051	$2,768	0.0%	$5,945,051	$2,768	0.0%
4	Riders (Other)	$1,756,715	$1,757,640	$925	0.1%	$1,736,000	($20,714)	-1.2%
5	GRT	$448,617	$471,575	$22,959	5.1%	$473,013	$24,397	5.4%
6	Total	$11,215,417	$11,789,380	$573,963	5.1%	$11,825,331	$609,914	5.4%