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August 5, 2016

BY HAND DELIVERY

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

Re: Docket 4627 – In Re: Request for Approval of Firm Transportation Contracts with Algonquin Gas Transmission, LLC for the Access Northeast Project
Responses to Division Data Requests – Set 1

Dear Ms. Massaro:

On behalf of National Grid,[1] enclosed are National Grid's responses to the First Set of Data Requests issued by the Rhode Island Division of Public Utilities and Carriers in the above-referenced matter. Please note that the responses to Data Requests DIV 1-11, DIV 1-12, DIV 1-18, DIV 1-23, DIV 1-24, and DIV 1-26 contain Highly Sensitive Confidential Information; a Motion for Protective Treatment with respect to these responses is enclosed and will only be provided to the Public Utilities Commission and those parties that have executed the appropriate non-disclosure agreement.

Also enclosed please find an updated response to Data Request PUC 1-1 which requested all discovery filed by National Grid's Massachusetts affiliates in D.P.U. 16-05; the enclosed update includes all discovery filed through July 28, 2016 (the close of discovery in D.P.U. 16-05).

Thank you for your attention to matter. If you have any questions, please contact me at (617) 951-1400, or Jennifer Brooks Hutchinson at 401-784-7685.

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

Very truly yours,

John K. Habib

John K. Habib

Enclosures

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

RHODE ISLAND PUBLIC UTILITIES COMMISSION

Review of Precedent Agreement with Algonquin Gas Transmission LLC for Capacity on the Access Northeast Project Pursuant to R.I.G.L. § 39-31 *et seq.*	**Docket No. 4627**

NATIONAL GRID'S REQUEST FOR PROTECTIVE TREATMENT OF CONFIDENTIAL INFORMATION

National Grid[1] hereby requests that the Rhode Island Public Utilities Commission (PUC) provide confidential treatment and grant protection from public disclosure of certain confidential, competitively sensitive, and proprietary information submitted in this proceeding, as permitted by PUC Rule 1.2(g) and R.I.G.L. § 38-2-2(4)(B). National Grid also hereby requests that, pending entry of that finding, the PUC preliminarily grant National Grid's request for confidential treatment pursuant to Rule 1.2 (g)(2).

I. BACKGROUND

On June 30, 2016, National Grid filed with the PUC its request for approval of a precedent agreement with Algonquin Gas Transmission LLC (Algonquin) for capacity on the Access Northeast Energy Project (ANE Project). In support of its request for approval, National Grid submitted initial testimony and supporting exhibits including a copy of the precedent agreement and the Company's analysis of the precedent agreement and ANE Project, including proprietary modeling information and analysis provided by

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

the Company's third-party consultants. For example, the testimony of Gary Wilmes of Black & Veatch Management Consulting LLC (Black & Veatch), provided detailed cost-benefit analysis related to the ANE Project that was created using Black & Veatch's proprietary modeling.

On August 5, 2016 National Grid filed its responses to the Rhode Island Division of Public Utilities and Carriers' (the Division) First Set of Data Requests that reference these highly sensitive confidential terms. Specifically, the Company is seeking protective treatment of its response to Data Requests DIV 1-11, DIV 1-12, DIV 1-18, DIV 1-23, DIV 1-24, and DIV 1-26.

As noted above, the Company's affiliates Massachusetts Electric Company and Nantucket Electric Company each d/b/a National Grid have filed a similar request for approval of precedent agreements with Algonquin for capacity on the ANE Project with the Department. The Department has approved a two tier confidential document designation to provide an added layer of protective treatment in this related proceeding. This additional layer of protective treatment is necessary because certain intervenors granted full-party status in the Massachusetts proceeding are classified as bidders with respect to the request for proposals (RFP) that resulted in the precedent agreement that is the subject of this proceeding. The RFP was jointly simultaneously with the RFP issued by the Company's Massachusetts affiliates and Eversource Energy and, therefore, the Company expects that some or all of the parties who have intervened in the Massachusetts proceeding will also seek to intervene in this proceeding. Therefore, in order to ensure that confidential information is treated consistently across jurisdictions, the Company proposes to implement the same two-tier system for this proceeding. If the same parties intervene in this proceeding and the two-tier system is not utilized, the two-tier system being used in Massachusetts will be undermined and the Company (and its affiliates) will be placed at a competitive disadvantage. This result would be particularly problematic because it is expected that other pipeline projects will be proposed in the near future to address capacity restraint in the New England region.

In this proceeding, the Company proposed to adopt the same approach to ensure consistency across New England jurisdictions, and to prevent intervenors from gaining access to confidential information that has been restricted in Massachusetts. Each of the documents referenced in this Motion have been classified as either Confidential or Highly Sensitive Confidential Information, consistent with the Company's initial filing and as filed in Massachusetts. Although the PUC has declined to adopt the two-tier method of protective treatment proposed, the PUC has determined that National Grid can still mark documents as either HSCI or Confidential and enter into non-disclosure agreements appropriate for each classification.

The Company has provided redacted and unredacted versions of each of these documents. Each of these documents and/or files contains confidential and proprietary contractual or economic analysis information. Therefore, National Grid requests that the PUC give the information contained in the unredacted version of the HSCI or Confidential Documents confidential treatment.

II. LEGAL STANDARD

The PUC's Rule 1.2(g) provides that access to public records shall be granted in accordance with the Access to Public Records Act (APRA), R.I.G.L. §38-2-1 *et seq.* Under APRA, all documents and materials submitted in connection with the transaction of official business by an agency is deemed to be a "public record," unless the information contained in such documents and materials falls within one of the exceptions specifically identified in R.I.G.L. §38-2-2(4). Therefore, to the extent that information provided to the PUC falls within one of the designated exceptions to the public records law, the PUC has the authority under the terms of APRA to deem such information to be confidential and to protect that information from public disclosure.

In that regard, R.I.G.L. §38-2-2(4)(B) provides that the following types of records shall not be deemed public:

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

The Rhode Island Supreme Court has held that this confidential information exemption applies where disclosure of information would be likely either (1) to impair the Government's ability to obtain necessary information in the future; or (2) to cause substantial harm to the competitive position of the person from whom the information was obtained. Providence Journal Company v. Convention Center Authority, 774 A.2d 40 (R.I. 2001).

The first prong of the test is satisfied when information is voluntarily provided to the governmental agency and that information is of a kind that would customarily not be released to the public by the person from whom it was obtained. Providence Journal, 774 A.2d at 47.

III. BASIS FOR CONFIDENTIALITY

The information contained in the un-redacted versions of the response to Data Request DIV 1-11, DIV 1-12, DIV 1-18, DIV 1-23, DIV 1-24, and DIV 1-26 includes confidential and proprietary bidder information, pricing information, and confidential contractual terms including pricing information that was negotiated by the Company with Algonquin. This information includes information that was obtained from bidders under a confidentiality agreement and contains their confidential pricing data. Disclosure of this information would impact the competitive position of these parties, and such disclosure would impede National Grid's future ability to obtain bids and/or favorable contractual terms. Such disclosure would have a negative impact not only on National Grid but on National Grid's customers by impeding National Grid's ability to obtain the best price for future capacity agreements.

IV. CONCLUSION

Accordingly, the Company requests that the PUC grant protective treatment to the Company's response to Data Requests DIV 1-11, DIV 1-12, DIV 1-18, DIV 1-23, DIV 1-24, and DIV 1-26.

WHEREFORE, the Company respectfully requests that the PUC grant its Motion for Protective Treatment as stated herein.

Respectfully submitted,

NATIONAL GRID

By its attorneys,

Jennifer Brooks Hutchinson

Jennifer Brooks Hutchinson (RI Bar #6176)
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John K. Habib

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Dated: August 5, 2016

DIV 1-1

Request:

On page 4 of the cover letter, it states that Algonquin will require additional subscriptions before proceeding. Has Algonquin established a minimum level of quantities to be subscribed before it will proceed? If so, please describe in full and provide all supporting documentation. If not, please describe in detail how Algonquin will decide whether to proceed of not.

Response:

Algonquin has not established a minimum level of quantities to be subscribed before it will proceed. The Precedent Agreement filed in this case has a provision that states that, if the project is less than fully subscribed, Algonquin and the customers will need to determine whether to terminate the project or renegotiate terms. Sufficient subscription would be at a lesser amount than the 900,000 Dth/d, but at an adequate level of contracted for volumes for the Project that the parties mutually agree are sufficient.

As this contract provides a regional solution to a critical, long standing and complex issue, it is very difficult to predict the outcome by each New England public utilities commissions (although it should be noted that, on July 19, 2016, the Maine Public Utilities Commission voted to move forward with a contract with ANE, contingent upon participation by the electric distribution companies in Massachusetts, Rhode Island, Connecticut and New Hampshire (but not Vermont)).The Precedent Agreement is constructed in recognition of the complexities that may arise for a project of the scale and scope of the ANE project to accommodate needed adjustments over time subject to all required state approvals. The Agreement describes the process that would be undertaken by the parties in the event that firm capacity commitments are less than 900,000 Dth/d. In such an event, the alternatives range from EDCs increasing their volumes; the Project taking a certain degree of volume risk; a reshaping of the Project; and Project termination. It is important to note that the Company considered that additional regulatory approvals would be necessary and that the PAs were structured to allow for another expedited regulatory approval process, including the Company's confirmation as to net benefits accruing to Rhode Island if, for example, the Company's volumes were to increase.

DIV 1-2

Request:

Page 3 of the executive summary discusses FERC's oversight and approval of the project. Please list and describe all FERC proceedings, dockets, or other activities that relate to the proposed project that are known to NECO. Please update this response throughout the Rhode Island proceeding as new FERC activities emerge.

Response:

Currently there are three FERC dockets directly or peripherally related to the Access Northeast Project:

1) FERC Docket No. PF16-1 – Project Pre-file
2) FERC Docket No. EL 16-93 – NextEra/PSEG Complaint
3) FERC Docket No. RP16-618 – Capacity Release Tariff Amendment

1) FERC Docket No. PF16-1: On November 3, 2015 Algonquin Gas Transmission, LLC (AGT or Algonquin) submitted a letter requesting use of the Federal Energy Regulatory Commission's Pre-Filing Review Process for the Access Northeast Project. The Commission approved the request and the Project was assigned the docket PF16-1.

Use of the Pre-Filing Review Process will benefit Algonquin, interested federal, state, and local agencies, and other stakeholders by:

- assisting in the development of initial information about the Project and identifying affected parties;

- facilitating issue identification and resolution;

- providing a process that accommodates site visits, meetings with federal, state, and local agencies and stakeholders, participation in public information meetings (e.g., open houses), and the examination of alternatives;

- providing interested federal, state, and local agencies and stakeholders with access to draft Environmental Resource Reports and other Project-related information;

minimizing the number of Commission Staff environmental data requests and subsequent filings;

- maintaining a coordinated schedule for a thorough environmental impact review; and facilitating preparation of Environmental Resource Reports and other related documents.

2) FERC Docket No. EL 16-93: A complaint was filed against ISO-NE by NextEra/PSEG related to alleged regional electric market impacts of EDC contracts for firm gas capacity (Complaint). Answers to the Complaint were due July 28, 2016.

3) FERC Docket No. RP16-618: AGT is seeking a tariff amendment to the General Terms & Conditions (GT&C) of the Algonquin FERC Gas Tariff to establish a process to release firm pipeline capacity to electric generators on a priority basis pursuant to a state-approved program. On February 19, 2016, AGT filed a revised tariff record to its GT&C with FERC under Docket No. RP16-618 for effect on April 1, 2016. On March 31, 2016, FERC accepted and suspended the proposed tariff record, to be effective the earlier of September 1, 2016 or the date specified in a further FERC order, and set a date for a technical conference. This technical conference occurred on May 9, 2016 with numerous parties attending. Briefs were filed on May 31, 2016 and Reply Briefs were filed on June 10, 2016. If FERC does not issue an order by September 1, 2016, the tariff will go into effect subject to refund.

Updates on these dockets can be accessed on FERC's public website at:

http://elibrary.ferc.gov/idmws/search/fercgensearch.asp

Prepared by or under the supervision of: John E. Allocca

DIV 1-3

Request:

Page 3 of the executive summary states that all six New England states except Vermont have laws or regulations in place or proposed that allow for development of regional infrastructure projects. Please provide citations or detailed descriptions of such laws and regulation.

Response:

Please see the Company's response to Data Request PUC 1-3.

DIV 1-4

Request:

Page 3 of the executive summary states that efforts are underway in all six New England states are considering participation in regional infrastructure projects. Please describe such efforts by Vermont and Maine in as much detail as possible.

Response:

Please see the Company's response to Data Request PUC-1-4 with respect to efforts underway in Maine. The executive summary should have made clear that Vermont does not currently have any efforts underway to consider participation in and support for infrastructure contracts. As stated on page 3 of the Executive Summary, Vermont does not currently have any laws or regulations in place or proposed for effect that would allow for the development of natural gas infrastructure to serve power generation.

DIV 1-5

Request:

Please provide any information available to the Company regarding the schedule and timing of efforts in Connecticut, New Hampshire, and Massachusetts to participate in regional electric or natural gas infrastructure projects. Please update this response throughout the Rhode Island proceeding as new activities in those states become known to the Company.

Response:

Please see the Company's response to Data Request PUC-1-4. Hearings in the Massachusetts proceeding (D.P.U. 16-05) are underway but are expected to last into September with briefing through the end of October.

Prepared by or under the supervision of: Counsel

DIV 1-6

Request:

The request for a two-tiered confidentiality agreement lists full-party intervenors in the Massachusetts proceeding. Please provide all confidential and highly confidential materials in possession of the Company that were provided by any intervenor in Massachusetts, including but not limited to the Company.

Response:

Please see the Company's response to Data Request PUC-1-1 for all confidential and highly sensitive confidential materials filed by the Company's affiliates, Massachusetts Electric Company and Nantucket Electric Company each d/b/a National Grid (National Grid) in the Massachusetts proceeding.

The Company is unable at this time to provide any confidential and highly sensitive confidential information filed by parties other than National Grid in the Massachusetts proceeding due to non-disclosure agreements executed by National Grid with such parties because it is not easily discernable which confidential and highly sensitive confidential documents might contain only information that belongs to the Company. However, with the exception of the Massachusetts Office of Attorney General, each of the parties that have filed confidential and/or highly sensitive confidential information in the Massachusetts proceeding are intervenors in this proceeding (Conservation Law Foundation and NextEra Energy Resources, LLC), and would be able to provide this information directly to the Division in response to a data request.

DIV 1-7

Request:

Regarding page 21 of the Brennan-Allocca testimony, please provide the underlying data in cents per KWH for the chart. Also explain why the Company is offering a solution to the Massachusetts DOER in this proceeding.

Response:

Please refer to Attachment DIV 1-7 for the requested underlying data.

On page 21 of the Brennan-Allocca testimony, the Company stated the following:

> With this filing, the Company is offering a solution to the need for additional interstate pipeline capacity identified by the Rhode Island general assembly and the Massachusetts DOER.

That sentence was not intended to indicate that a solution was being offered to the Massachusetts DOER in this proceeding. The Massachusetts DOER was mentioned in that sentence to indicate only that the Massachusetts DOER had also identified the need for additional pipeline capacity.

DIV 1-8

Request:

Regarding page 22 of the Brennan-Allocca testimony, the new LNG facility at Acushnet is able to inject gas into storage at 54,000 MMBTU/d. Does this mean that it will take approximately 120 days of the injection season to fill the storage facility (6,400,000 / 54,000)? If so, does this mean that some of the 500,000 MMBTU/d transport will be used to deliver gas to inject into storage, such that less than 500,000 MMBTU/d will be unavailable for electric generation during the injection season. Please explain in detail. Also explain how this process was reflected in the B&V analysis.

Response:

The Acushnet LNG facility will be able to liquefy natural gas at a maximum rate of 54,000 MMBtu/d, and would require approximately 126 days to refill an empty 6.8 Bcf LNG tank at the stated maximum liquefaction rate. Black & Veatch's analysis assumed that the refill would occur from April through November, and utilize ANE capacity to do so.

DIV 1-9

Request:

Regarding page 22 of the Brennan-Allocca testimony, the new LNG facility at Acushnet is able to withdraw gas from storage at 400,000 MMBTU/d. Does this mean that this withdrawal will last approximately 16 days of the withdrawal season to empty the storage facility (6,400,000 / 400,000)? Also explain how this process was reflected in the B&V analysis.

Response:

The Acushnet LNG facility will have a daily maximum vaporization rate of 400,000 Mcf/d. When the Acushnet LNG facility is full at 6.8 Bcf, it would take approximately 17 days to empty the storage facility. Black & Veatch assumed that the gas vaporization from Acushnet would occur between January and March as a 1-turn storage facility.

DIV 1-10

Request:

Regarding page 30 of the Brennan-Allocca testimony, please confirm that the table below is an accurate summary of the information in Figure 1. If it is not accurate, please provide a corrected version of this table. Also explain how the amounts of natural gas assumed to be retained or consumed in each PPAA were determined, and if they are subject to change based upon system conditions.

PPAA	connected generators, mw	ANE consumed MDth/d	approx generators served, mw	% generators served
CT	3,283	380	2,110	64%
C-E MA	4,419	360	2,000	45%
SEMA/R1	2,188	80	445	20%
i.e. the	2,277	80	445	20%
total	12,167	900	5,000	41%

Response:

The table appears to be an accurate summary of the information in Figure 1. The Company notes that the information provided in the column entitled "ANE consumed MDth/d" represents the contractual maximum daily delivery obligation for each of the PPAAs. As described below, this represents the contractual entitlement. Depending on system conditions, a firm shipper may be able to flow amounts in excess of these contractual quantities.

Under the Access Northeast Project, Algonquin has established 4 designated aggregation areas. Each electric power generator within an aggregation area will have the ability to take firm deliveries of natural gas up to the designed limitation of that respective aggregation area (i.e., the quantity set forth in the column entitled "ANE consumed MDth/d"). These aggregation areas were determined by ranking the most-efficient and most frequently dispatched plants on the Algonquin and Maritimes systems and assigning a firm number of dekatherms per day to flow into certain areas to assure that the highly dispatched generators are served. Aggregation areas have been specifically selected to serve certain areas based on efficiency and dispatch of natural gas-fired generators in those areas. Importantly, the design allows for optionality and flexibility because if downstream aggregation areas do not utilize the available transportation capacity, the capability will exist for generators in other aggregation areas within the path to receive the supply.

Prepared by or under the supervision of: John E. Allocca

DIV 1-11

Request:

Page 37 of the Brennan-Allocca testimony provides a cost structure for this project. Please provide an example of how the rates in this cost structure would be used to determine annual costs paid for the use of the ANE project. In this example, assume that the Acushnet storage facility is fully filled during the injection season and fully emptied during the withdrawal season, and that electric generators served by the ANE project operate ate a daily capacity factor of 100%. Describe in full any assumptions made regarding injection and withdrawal season commodity pricing. Also, explain how this cost structure was incorporated into the B&V economic evaluation.

Response:

In Black & Veatch's cost-ben[redacted]nalysis, the annual cost of the ANE project reflects only the negotiated reservation rate of [redacted]/Dth per day. Once the ANE project is fully phased in after May 2021, the annual cost will be the [redacted]/Dth per day times 900,000 Dth times 365 days, which equates to [redacted]Million a year.

The ANE project's variable pipeline and LNG costs are as follows:

ANE Pipeline Commodity rate of [redacted]
ANE Pipeline Incremental fuel rate of [redacted]
LNG Injection Commodity rate of [redacted]
LNG Withdrawal Commodity rate of [redacted]
LNG Fuel Rate for liquefaction at [redacted]
LNG Fuel Rate for vaporization at [redacted]

The ANE project's variable pipeline and LNG costs are incorporated in Black & Veatch's gas market fundamental model and is reflected in the regional gas price/basis projections used to calculate the net benefits. Black & Veatch assumed that LNG injections would occur April through November and LNG withdrawals would occur December through March and that the LNG Acushnet facility would only provide a single turn service.

Prepared by or under the supervision of: Gary J Wilmes and Denny K Yeung

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DIV 1-12

Request:

What is the current estimated all-in capital cost of the ANE project at its expected completion date that would be included in rate base for a revenue requirement calculation for the ANE project? Please provide a detailed breakdown of this cost. Using this estimate of capital cost as well as other assumptions regarding allowed ROE, debt costs, annual costs such as O&M, A&G, etc. Provide a 20-year calculation of revenue requirements for the ANE Project in a live spreadsheet with all formulas intact, showing all assumptions and calculations.

Response:

The current estimated cost of the ANE Project is approximately [redacted] Please see Attachment DIV-1-12(a) (Highly Sensitive Confidential Information) which includes the illustrative recourse rate calculation that was provided by Algonquin in its proposal and also see Attachment DIV-1-12(b) (Highly Sensitive Confidential Information) which is Algonquin's preliminary cost of service and rate design study in live spreadsheet format.

Prepared by or under the supervision of: John E. Allocca

Table 6: Illustrative Recourse Reservation Rate Calculations

Incremental Cost of Service Calculation	Capital Cost ($MM)	O&M ($MM)	Property Insurance ($MM)	Lease Cost ($MM)	Other Taxes ($MM)	Depreciation ($MM)	Pre-Tax Return ($MM)	Incremental Cost of Service New Capacity ($MM)
2018 Pipeline Facilities	[redacted]							
2019 Pipeline Facilities								
2020 Pipeline Facilities								
2021 Acushnet LNG Pipeline								
Total Pipeline Facilities 1/								
2021 Acushnet LNG Facilities								

Indicative Recourse Rate Design	Cumulative Cost of Service ($MM)	Cumulative Capacity (Dth/d) 2/	Average Cost ($/dth/d)
2018 Pipeline Facilities	[redacted]		
2018-2019 Pipeline Facilities			
2018-2020 Pipeline Facilities			
2021 Total Pipeline & LNG Facilities			

1/ Does not include LDC Lateral
2/ Includes 25,000 dth/d capacity for LDC volumes that are part of the Access Northeast Project along with the 900,000 dth/d for the EDC Customers

- Commodity & Fuel Rates – Applied to both negotiated rate and recourse rate customers as defined by the pipeline's tariff
  - These Commodity & Fuel Rates represent variable costs associated with the operation of the LNG Acushnet Facility and the project Pipeline Facilities that are related to and in support of the processes and systems for liquefaction, storage, vaporization, and transportation of the gas. These variable operating expenses will be fully tracked and passed through to the customer in the form of variable charges (Commodity Rate, Injection Charge Rate, and Withdrawal Charge Rate). LNG and Pipeline fuel will be tracked and collected through the Fuel Reimbursement tracker.
  - **Table 7** provides Commodity & Fuel Rate calculations for illustrative purposes only.

CONFIDENTIAL

Table 7: Summary of Illustrative Commodity & Fuel Rates

LNG Commodity Costs ($ MM)		[redacted]
Boost Compressor Electricity - Injection	$	
Pretreat/Liq Support Electricity - Injection	$	
Amine Make-Up - Injection	$	
Mole Sieve Make-Up - Injection	$	
Nitrogen Make-Up - Injection	$	
Balance of Plant Electricity - Injection/Withdrawal	$	
Misc - Injection/Withdrawal	$	
Total Estimated LNG Commodity Costs	$	
Design Determinant - MSQ (Dth)		
LNG Commodity Rate ($/dth) - Injection	$	
LNG Commodity Rate ($/dth) - Withdrawal	$	
LNG Fuel Rates		
Liquefaction Fuel Rate		
Vaporization Fuel Rate		
Pipeline Commodity Costs ($ MM)		
Variable Pipeline O&M Expenses	$	
Rate Design Determinant Assumption @70% Utilization		
Pipeline Commodity Rate ($/dth)	$	
Pipeline Incremental Fuel Rate		
Pipeline Incremental Fuel Rate		

Contract Term and Renewal Rights

[redacted]

Precedent Agreement

Attached as **Attachment 1** hereto is a clean copy of the draft of a Precedent Agreement for the Access Northeast project. This draft Precedent Agreement reflects the latest version negotiated between

REDACTED

Algonquin Gas Transmission, LLC
Access Northeast Project
Preliminary Cost of Service and Rate Design Study

	(1)	(2)	(3)	(4)	(5)
Line No.	Description	2018	2019	2020	2021
1	Capital Cost	[redacted]			
	Cost of Service Components				
2	Operation and Maintenance Expense	[redacted]			
3	Depreciation Expense				
4	Taxes Other than Income				
5	Lease Cost				
5	Pre-Tax Return				
6	Total Cost of Service				
7	Rate Derivation:	[redacted]			
8	Capacity (Dth/d)				
9	Design Determinant				
10	Estimated Monthly Reservation Charge				
11	Estimated Daily Reservation Charge				

DIV 1-13

Request:

Regarding page 39 of the Brennan-Allocca testimony, please identify the four additional plants that will be connected to Algonquin by 2020, and their MW capacities. Also identify which PPAA these plants will be located in.

Response:

The four plants identified by Algonquin in its proposal and the respective aggregation area are:

Plant	PPAA
CPV-Towantic (785 MW)	Area 1
Salem Harbor (674 MW)	Area 2
Medway (200 MW)	Area 2
Wallingford (100 MW)	Area 1

Prepared by or under the supervision of: John E. Allocca

DIV 1-14

Request:

Regarding page 46 of the Brennan-Allocca testimony, has either the Company or B&V included aby benefits from the VOLL in the net benefits analysis of the ANE Project. If so, please explain and describe in full how this was done.

Response:

Black & Veatch has not included any benefits from the VOLL in its cost benefit analysis of the ANE project.

Prepared by or under the supervision of: Gary J Wilmes Denny K Yeung

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DIV 1-15

Request:

Regarding section B-3 of the RFP provide as TJB/JEA-3, please explain how the maximum quantity of 2,000,000 MMBTU/d and minimum quantity of 500,000 MMBTU/d were established. Provide all analyses and work papers that were used in establishing this limits.

Response:

Numerous studies, analysis and publications regarding the solution size for New England's natural gas infrastructure, including the "Gas-Electric Study Phase III Report prepared for The New England States Committee on Electricity, 26 August 2013", cited a "supply deficiency of approximately 500 million cubic feet per day ("MMcf/d") of natural gas in the absence of infrastructure resiliency and capacity/delivery-related solutions, thereby creating serious reliability concerns for the regional electric power supply." This minimum amount was also intended to attract the size and scale of infrastructure project that would have a lasting and significant impact on the region's energy infrastructure deficiencies to alleviate volatile prices and improve gas and power reliability in the region. The maximum amount was intended to be an upward bound relative to regional demands.

Please see the response to Information Request NEER 1-42 filed by the Company's Massachusetts affiliates in D.P.U. 16-05 for a summary of these studies. This response was provided in this proceeding in response to Data Request PUC 1-1.

DIV 1-16

Request:

Regarding the Porter testimony, please provide complete copies of all proposals received in response to the RFP for natural gas capacity.

Response:

Please see Attachments AG-1-4 (Highly Sensitive Confidential Information) filed by the Company's Massachusetts affiliates in D.P.U. 16-05 for complete copies of all proposals received in response to the RFP for natural gas capacity and as provided in this proceeding in response to Data Request PUC-1-1.

Prepared by or under the supervision of: Richard W. Porter

DIV 1-17

Request:

Does the Company or B&V have a schematic similar to the one on page 30 of the Brennan / Allocca testimony for the other bids received? If so, please provide.

Response:

Black & Veatch is not aware of a similar schematic to the one on page 30 of the Brennan/Allocca testimony for the other bids received.

Prepared by or under the supervision of: Gary J Wilmes and Denny K Yeung

DIV 1-18

Request:

Regarding the Wilmes testimony, please provide the cost and performance assumptions used by B&V for the GDF Suez and Repsol projects, including but not limited to any capital costs, annual costs, etc.

Response:

Please see Attachment DIV-1-18 (Highly Sensitive Confidential Information) for a summary of all costs assumptions used by Black & Veatch regarding the GDF SUEZ and Repsol Projects.

REDACTED

Column	A	B	C	D
Line #	**Year**	**GDF SUEZ LNG Impot Terminal Demand Charges (Nominal$/Millions)**	**GDF SUEZ LNG - Transportation Demand Charges (Nominal$/Millions)**	**Total Annual GDF SUEZ Costs (Nominal$/Millions)**
1	2019	[redacted]		
2	2020			
3	2021			
4	2022			
5	2023			
6	2024			
7	2025			
8	2026			
9	2027			
10	2028			
11	2029			
12	2030			
13	2031			
14	2032			
15	2033			
16	2034			
17	2035			
18	2036			
19	2037			
20	2038			

REDACTED

Column	A	B	C	D
Line #	**Year**	**Repsol LNG Impot Terminal Demand Charges (Nominal$/Millions)**	**Repsol LNG - Transportation Demand Charges (Nominal$/Millions)**	**Total Annual Repsol Costs (Nominal$/Millions)**
1	2019	[redacted]	[redacted]	[redacted]
2	2020	[redacted]	[redacted]	[redacted]
3	2021	[redacted]	[redacted]	[redacted]
4	2022	[redacted]	[redacted]	[redacted]
5	2023	[redacted]	[redacted]	[redacted]
6	2024	[redacted]	[redacted]	[redacted]
7	2025	[redacted]	[redacted]	[redacted]
8	2026	[redacted]	[redacted]	[redacted]
9	2027	[redacted]	[redacted]	[redacted]
10	2028	[redacted]	[redacted]	[redacted]
11	2029	[redacted]	[redacted]	[redacted]
12	2030	[redacted]	[redacted]	[redacted]
13	2031	[redacted]	[redacted]	[redacted]
14	2032	[redacted]	[redacted]	[redacted]
15	2033	[redacted]	[redacted]	[redacted]
16	2034	[redacted]	[redacted]	[redacted]
17	2035	[redacted]	[redacted]	[redacted]
18	2036	[redacted]	[redacted]	[redacted]
19	2037	[redacted]	[redacted]	[redacted]
20	2038	[redacted]	[redacted]	[redacted]

DIV 1-19

Request:

Regarding the Byers testimony, in its economic evaluation of the ANE project, did B&V assume that electric generators would need to purchase allowances for SO2, NOX, and GHG emissions? If so, please provide the assumed allowance costs for each type of emission for each year of the study? Also, specify if the provided allowance costs are in real or nominal dollars. If in real dollars, please provide B&V's forecast of inflation that would be used to convert real dollars to nominal dollars.

Response:

Black & Veatch only used CO2 allowance prices to affect the generation dispatch of units to limit the amount of emissions from electric generating sources.

The allowance costs for CO2 that affect the generating resources have been previously submitted by the Company’s Massachusetts affiliates in D.P.U. 16-05 as Exhibit CLF-1-9(a) (Att.) (Supplemental) (HSCI). This attachment was previously filed in this docket in response to Data Request PUC 1-1.

These values are in 2015$. Black & Veatch utilized the EIA AEO 2015 implied inflation rate to convert to nominal dollars.

Prepared by or under the supervision of: Gary J Wilmes and Denny K Yeung

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DIV 1-20

Request:

Regarding page 4 of the Calviou testimony, please identify all incentives currently provided by the Commission and describe how each is determined.

Response:

The Testimony of Michael C. Calviou describes all incentives currently provided by the Commission and how each is determined, as follows:

- Gas Procurement Incentive Plan (GPIP) – see Testimony of Michael C. Calviou, at 12-13[1]
- Natural Gas Portfolio Management Plan (NGPMP) incentive – see Testimony of Michael C. Calviou, at 13[2]
- Energy efficiency incentives - see Testimony of Michael C. Calviou, at 14
- Performance incentives for renewable energy procurement - see Testimony of Michael C. Calviou, at 14-15[3]

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[1] The GPIP and NGPMP incentive are described in detail in the Testimony and Attachments of Stephen A. McCauley dated September 1, 2015 in RIPUC Docket No. 4576, available at http://www.ripuc.org/eventsactions/docket/4576-NGrid-GCR2015-Book2-McCauley(9-1-15).pdf. Attachment SAM-1 is the GPIP approved by the PUC in RIPUC Docket No. 4576, Order 22242 (November 30, 2015).

[2] *See* f.n. 1. *See also* RIPUC Docket No. 4038, Order 22418 (May 24, 2016) (approving the Company's current NGPMP, which is set forth in Attachment SAM-5 of the Company's Supplemental filing dated March 21, 2016.).

[3] Specifically, R.I.G.L §39-26.1-4 provides that "electric distribution companies shall be entitled to financial remuneration and incentives for long-term contracts for newly developed renewable energy resources" and that "[t]he financial remuneration and incentives shall be in the form of annual compensation, equal to two and three quarters percent (2.75%) of the actual annual payments made under the contracts for those projects that are commercially operating." In addition, R.I.G.L §39-26.6-12 provides for a similar incentive for the Company tied to payments made to eligible distributed-generation projects, the latter under the Renewable Energy Growth Program, where "[t]he incentive shall be one and three-quarters percent (1.75%) of the annual value of performance-based incentives." The Renewable Energy Growth Program incentives, per the statute, are conditioned on the following criteria: "(1) The targets set for the applicable program year for the applicable project classifications were met or, if not met, such failure was due to factors beyond the reasonable control of the electric-distribution company; (2) The electric-distribution company has processed applications for service and completed interconnections in a timely and prudent manner for the projects under this chapter, taking into account factors within the electric-distribution company's reasonable control."

DIV 1-21

Request:

Regarding page 29 of the Calviou testimony, please explain in detail how the requested incentive fairly balances risk and return between customers and shareholders.

Response:

In enumerating an appropriate list of principles to guide the approval of and design of utility shareholder incentives for the current context, the Testimony of Michael C. Calviou, at 19, presents three principles related to the incentive:

2) With respect to the incentive:
a. The size of the incentive should be large enough to motivate utility attention, but be relatively small compared to the potential customer and public benefits;
b. The incentive and any other ratemaking elements should fairly balance risk and return between customers and shareholders; and
c. The incentive should be easy to administer.

These three principles are inter-related, especially with respect to how the Company's requested incentive meets principle (b) above. With regard to the first principle, the Testimony of Michael C. Calviou, at 28, explains how the requested incentive constitutes a small fraction of the projected net economic benefits to customers (0.8 percent of the levelized net economic benefits). Moreover, structured as a straightforward percentage adder on the annual fixed contract payments under the Proposed Agreement, the requested incentive is easy to administer, consistent with the third principle.

In certain cases where utility shareholder incentives are employed, the balance between risk and return for customers and shareholders is addressed by providing a shareholder incentive that is calculated based on realized customer benefits (e.g., as measured by utility performance against *ex ante* goals). In designing its requested innovation incentive in this case, the Company realized that linking the incentive to *ex post* changes in wholesale electricity prices as a result of the ANE project would prove prohibitively complex and contentious from an administrative view, which would violate the third principle above. Such an approach would in essence require an analytically and administratively complicated exercise (perhaps as often as on an annual basis) to compare actual wholesale electricity prices with the ANE project in service (with the project having ameliorated the acute winter gas capacity constraint that has caused excessive electricity prices in Rhode Island) with electricity prices as estimated for a corresponding time period under a counterfactual scenario identical in all respects save for assuming no ANE pipeline.

As such, in order to fairly balance risk and return between customers and shareholders, the Company's requested incentive is equal to a very small fraction of projected customer benefits, relative to the share of benefits allocated to shareholders in other cases. As noted in the Testimony of Michael C. Calviou, at 29, the requested incentive provides for a 99.2 percent allocation of net benefits to customers. This allocation of benefits provides for a substantially greater allocation to customers than shareholders when compared, for example, to the comparable case of energy efficiency programs in Rhode Island, where energy commodity cost savings (the same benefit delivered by energy efficiency programs and the ANE project) are more amenable to *ex post* measurement and verification given the relative ease of measuring energy savings from energy efficiency programs. Specifically, Attachment 5, Table E-5 and Attachment 6, Table G-5 of the Energy Efficiency Program Plan for 2016 Settlement of the Parties (October 15, 2015, in Docket No. 4580) show that the Rhode Island energy efficiency shareholder incentive is equal to 4.5 percent of projected net benefits to customers, which is more than 5.5 times the percentage of net economic benefits from the ANE project that the Company requests as an incentive in this case.

This comparison with a shareholder incentive recently approved by the Rhode Island Public Utilities Commission for the Company's energy efficiency programs demonstrates that the requested incentive in this case fairly balances risk and return between customers and shareholders in light of the relative magnitudes of the costs and benefits while also meeting the other two criteria listed above.

Prepared by or under the supervision of: Michael C. Calviou

DIV 1-22

Request:

Would the Company continue to pursue the ANE project if the Commission denied its requested innovation incentive?

Response:

Having advanced the ANE project this far and identified the substantial net economic benefits to the Company's customers quantified in Schedule GJW-3 (*see* Tables 7-9), the Company would not deprive its customers of those substantial net benefits if the Commission denied its requested innovation incentive. As such, the Company did not negotiate any provision in the ANE Agreement that makes the agreement contingent on the Commission's approval of the requested innovation incentive.

In the Company's affiliates' parallel proceeding (D.P.U. 16-05) before the Massachusetts Department of Public Utilities (MADPU), the Company's affiliates addressed a related discovery question from the MADPU in Exhibit DPU-Comm-1-12; this exhibit was provided in this docket in response to Data Request PUC 1-1.

To reiterate the points made by the Company's affiliates in Massachusetts, the Company does not contend that utilities will never pursue innovative solutions absent a financial incentive to do so. Rather, the testimony of Michael Calviou addresses the valid role of incentives when certain principles are satisfied (*see* Testimony of Michael C. Calviou, at 18-19). Financial incentives are likely to spur more innovation by utilities, yielding greater benefits for customers (*see, e.g.*, Testimony of Michael C. Calviou, at 11-12). Put simply, as the MADPU has concluded, "[i]ncentive regulation recognizes the legitimacy of profit as an important motivator for utilities" (Testimony of Michael C. Calviou, footnote 19).

The Company contends, and the Testimony of Michael C. Calviou demonstrates, that the proposed innovation incentive is fair, reasonable, and consistent with Commission policy and precedent. Most importantly, a decision by the Commission to approve the Company's proposed innovation incentive, and to endorse the Company's proposed policy and principles regarding innovation incentives (*see* Testimony of Michael C. Calviou, at 18-19) would support future customer benefits. As the Company explained, "[a] consistent policy of providing incentives to utilities for innovation that yields customer benefits will spur utilities to seek out previously unanticipated and novel opportunities for innovation such as the Company's present proposal" (*see* Testimony of Michael C. Calviou, at 12).

Prepared by or under the supervision of: Michael C. Calviou

DIV 1-23

Request:

In a March 25, 2016 email, the Company provided responses to certain data requests from the Division and OER. Please provide copies of those responses with attachments.

Response:

Please see the responses attached, along with Attachments DIV 1-23-1 through DIV 1-23-3 referenced therein.

REDACTED

SUMMARY ASSESSMENT OF LONG-TERM ECONOMICS BENEFITS FOR ELECTRIC CONSUMERS IN NEW ENGLAND – NORTHERN PASS AND MREI SOLUTIONS

DRAFT – PROPRIETARY AND CONFIDENTIAL
SUBJECT TO REVISION

PREPARED FOR NATIONAL GRID

BLACK & VEATCH
Building a world of difference.

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SUMMARY – SCENARIO DESCRIPTION

- Based on Information Request from the Division of Public Utilities and the Office of Energy Resources in Rhode Island, Black & Veatch developed two additional sensitivity reference cases to assess the impact of the ANE project.
- Sensitivity Reference Case A: Base Case with Northern Pass Project
  - 1,090 MW 6.9 TWH per year delivered [redacted]
  - No new natural gas pipeline resources from ANE
- Sensitivity Reference Case B: Base Case with Both Northern Pass and Maine Renewable Energy Interconnect (MREI)
  - Includes Northern Pass Project [redacted]

REDACTED

PROJECTED REDUCTION IN ISO-NE GAS CONSUMPTION – NORTHERN PASS AND MREI

[redacted]

DRAFT – PROPRIETARY AND CONFIDENTIAL

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SUMMARY IMPACT - BENEFITS COMPARISON

- Using the 7.06% discount rate, the ANE solution provides long-term benefits to New England electric consumers across all three reference cases
  - Under Sensitivity Reference Case A, the ANE project generates $0.4 Billion in annual levelized net benefits.
  - Under Sensitivity Reference Case B, the ANE project generates $0.4 Billion in annual levelized net benefits
- Across all three reference cases, the ANE solution generates significant long-term net benefits for electric consumers

Project Cost-Benefits Summary 2019-2038 ($ Billions)							
	Levelized			Present Value			
Project	Annual Benefits	Annual Costs	Annual Net Benefits	Total Benefits	Total Costs	Net Benefits	Benefit to Cost Ratio
Reference Case - With ANE Only	[redacted]	[redacted]	$1.1	[redacted]	[redacted]	$10.2	3.5
Sensitivity Reference Case A - With ANE	[redacted]	[redacted]	$0.4	[redacted]	[redacted]	$3.6	1.9
Sensitivity Reference Case B - With ANE	[redacted]	[redacted]	$0.4	[redacted]	[redacted]	$3.5	1.9

[redacted]

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SUMMARY IMPACT – GAS PRICES

- Across all three Reference Cases, the ANE solution reduces average monthly winter basis. The impact is lower in the initial time period when ANE is added to Reference Cases A and B.
- Below is summary table for winter basis impact at Algonquin, city-gates

	Algonquin City Gates ($/MMBtu)			
	2019 - 2028		2029-2038	
	Average Monthly Winter (Dec-Feb) Basis	Differential to Reference Case	Average Monthly Winter (Dec-Feb) Basis	Differential to Reference Case
Reference Case	$ 4.07		$ 6.79	
With ANE Only	$ 1.57	$ (2.50)	$ 3.55	$ (3.24)
Sensitivity Reference Case A - With Northern Pass	$ 2.59		$ 5.69	
With ANE	$ 1.34	$ (1.25)	$ 1.72	$ (3.97)
Sensitivity Reference Case B - With Northern Pass and MREI	$ 2.58		$ 5.68	
With ANE	$ 1.33	$ (1.24)	$ 1.70	$ (3.98)

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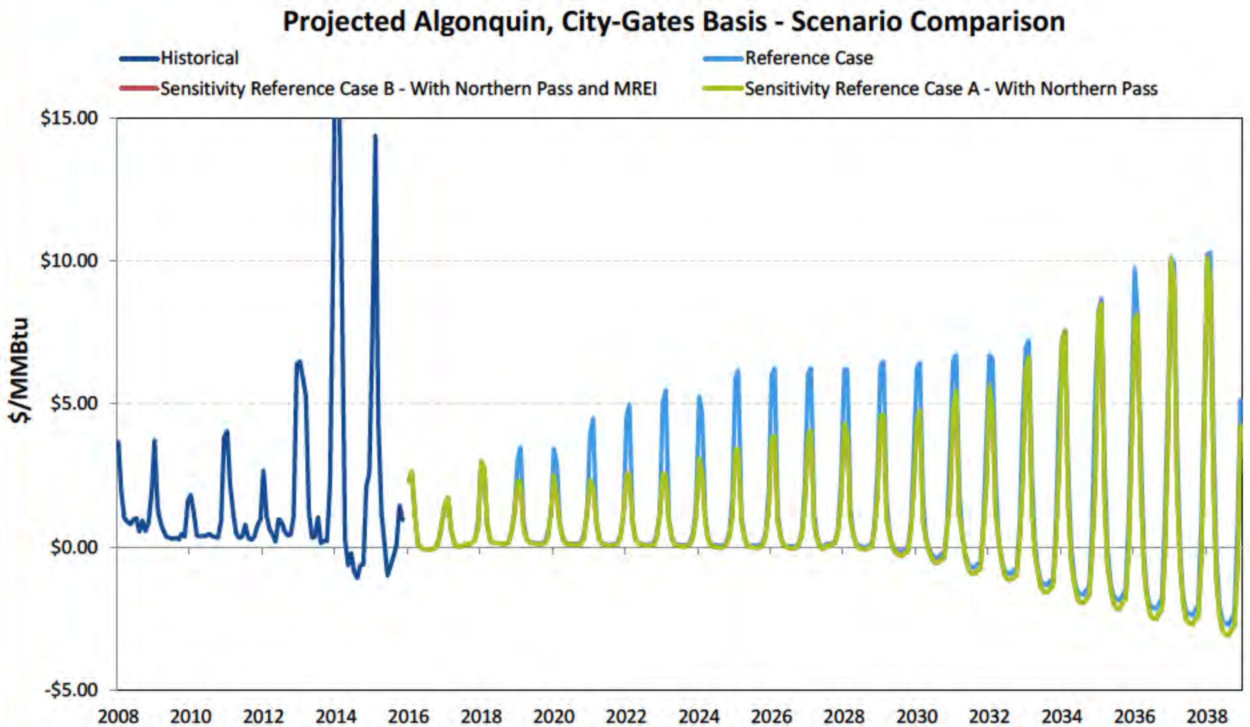
PROJECTED ALGONQUIN CITY-GATE BASIS – REFERENCE CASE COMPARISON



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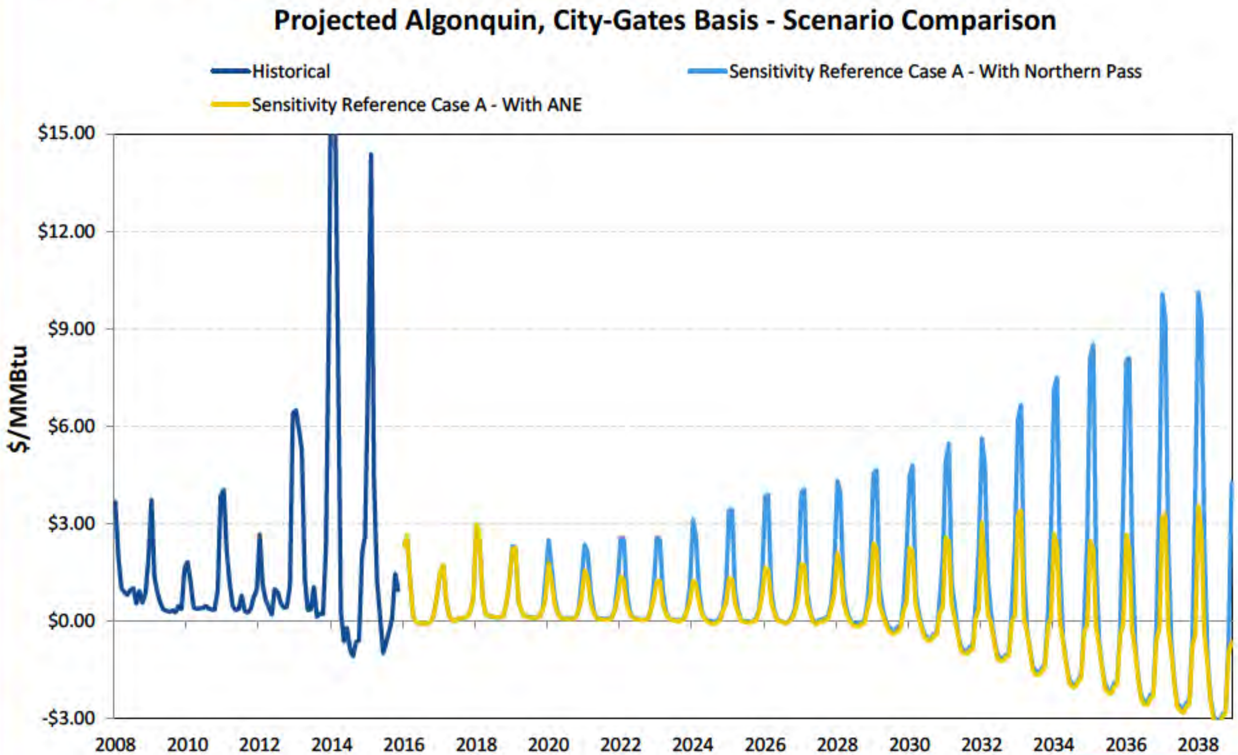
DRAFT – PROPRIETARY AND CONFIDENTIAL

PROJECTED ALGONQUIN CITY-GATE BASIS – INFRASTRUCTURE COMPARISON



REDACTED

Source: Black & Veatch Annual Benefits and Costs
Nominal$$ (M)
DRAFT - SUBJECT TO REVISION

Discount Rate 7.06%

Total Benefits ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

REDACTED

Annual Costs ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		[redacted]
Average Annual (2019-2038)	$	
Cumulative Present Value (2016$)	$	
Annual Levelized	$	

REDACTED

Annual Net Benefits ($ Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$ -	$ -	$ -	$ [redacted]	$ [redacted]	$ -	$ -
2017	$ -	$ -	$ -	$ [redacted]	$ [redacted]	$ -	$ -
2018	$ -	$ -	$ -	$ [redacted]	$ [redacted]	$ -	$ -
2019	$ 261	$ 37	$ 160	$ [redacted]	$ [redacted]	$ 125	$ 11
2020	$ 290	$ 289	$ 112	$ [redacted]	$ [redacted]	$ 37	$ 11
2021	$ 621	$ 419	$ 193	$ [redacted]	$ [redacted]	$ (187)	$ (163)
2022	$ 1,009	$ 848	$ 604	$ [redacted]	$ [redacted]	$ (135)	$ (144)
2023	$ 1,182	$ 1,003	$ 804	$ [redacted]	$ [redacted]	$ (125)	$ (136)
2024	$ 1,255	$ 1,051	$ 883	$ [redacted]	$ [redacted]	$ (12)	$ (19)
2025	$ 1,572	$ 1,339	$ 1,242	$ [redacted]	$ [redacted]	$ 78	$ 67
2026	$ 1,602	$ 1,358	$ 1,347	$ [redacted]	$ [redacted]	$ 141	$ 156
2027	$ 1,835	$ 1,560	$ 1,585	$ [redacted]	$ [redacted]	$ 225	$ 219
2028	$ 1,749	$ 1,481	$ 1,518	$ [redacted]	$ [redacted]	$ 257	$ 260
2029	$ 1,887	$ 1,540	$ 1,748	$ [redacted]	$ [redacted]	$ 322	$ 329
2030	$ 1,991	$ 1,710	$ 1,868	$ [redacted]	$ [redacted]	$ 378	$ 372
2031	$ 1,986	$ 1,583	$ 1,914	$ [redacted]	$ [redacted]	$ 514	$ 529
2032	$ 2,168	$ 1,861	$ 2,207	$ [redacted]	$ [redacted]	$ 697	$ 698
2033	$ 2,191	$ 1,745	$ 2,271	$ [redacted]	$ [redacted]	$ 869	$ 889
2034	$ 2,251	$ 1,862	$ 2,412	$ [redacted]	$ [redacted]	$ 1,362	$ 1,363
2035	$ 2,130	$ 1,656	$ 2,556	$ [redacted]	$ [redacted]	$ 1,899	$ 1,880
2036	$ 1,987	$ 1,716	$ 2,526	$ [redacted]	$ [redacted]	$ 2,036	$ 2,033
2037	$ 1,746	$ 1,866	$ 2,340	$ [redacted]	$ [redacted]	$ 2,324	$ 2,361
2038	$ 1,711	$ 2,007	$ 2,384	$ [redacted]	$ [redacted]	$ 2,580	$ 2,569

	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$ 1,571	$ 1,347	$ 1,534	$ [redacted]	$ [redacted]	$ 669	$ 664
Cumulative Present Value (2016$)	$ 12,108	$ 10,157	$ 10,882	$ [redacted]	$ [redacted]	$ 3,571	$ 3,475
Annual Levelized	$ 1,361	$ 1,142	$ 1,224	$ [redacted]	$ [redacted]	$ 402	$ 391

REDACTED

Source: Black & Veatch Annual Benefits and Costs
Nominal$$ (M)
DRAFT - SUBJECT TO REVISION

Discount Rate	7.06%
Rhode Island Benefit Share	6.50%
Rhode Island Cost Share	7.20%

Total Benefits for Rhode Island ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

REDACTED

Annual Costs for Rhode Island ($Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$ [redacted]						
2017	$ [redacted]						
2018	$ [redacted]						
2019	$ [redacted]						
2020	$ [redacted]						
2021	$ [redacted]						
2022	$ [redacted]						
2023	$ [redacted]						
2024	$ [redacted]						
2025	$ [redacted]						
2026	$ [redacted]						
2027	$ [redacted]						
2028	$ [redacted]						
2029	$ [redacted]						
2030	$ [redacted]						
2031	$ [redacted]						
2032	$ [redacted]						
2033	$ [redacted]						
2034	$ [redacted]						
2035	$ [redacted]						
2036	$ [redacted]						
2037	$ [redacted]						
2038	$ [redacted]						

	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$ [redacted]						
Cumulative Present Value (2016$)	$ [redacted]						
Annual Levelized	$ [redacted]						

REDACTED

Annual Net Benefits for Rhode Island ($ Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$ -	$ -	$ -	$ [redacted]	$ [redacted]	$ -	$ -
2017	$ -	$ -	$ -	$ [redacted]	$ [redacted]	$ -	$ -
2018	$ -	$ -	$ -	$ [redacted]	$ [redacted]	$ -	$ -
2019	$ 14	$ 2	$ 7	$ [redacted]	$ [redacted]	$ 8	$ 0
2020	$ 16	$ 18	$ 4	$ [redacted]	$ [redacted]	$ 1	$ (1)
2021	$ 38	$ 24	$ 7	$ [redacted]	$ [redacted]	$ (15)	$ (14)
2022	$ 63	$ 51	$ 33	$ [redacted]	$ [redacted]	$ (12)	$ (13)
2023	$ 74	$ 61	$ 46	$ [redacted]	$ [redacted]	$ (12)	$ (13)
2024	$ 79	$ 65	$ 51	$ [redacted]	$ [redacted]	$ (4)	$ (5)
2025	$ 100	$ 83	$ 74	$ [redacted]	$ [redacted]	$ 1	$ 1
2026	$ 102	$ 85	$ 81	$ [redacted]	$ [redacted]	$ 5	$ 6
2027	$ 117	$ 98	$ 97	$ [redacted]	$ [redacted]	$ 11	$ 11
2028	$ 111	$ 93	$ 92	$ [redacted]	$ [redacted]	$ 13	$ 13
2029	$ 120	$ 96	$ 107	$ [redacted]	$ [redacted]	$ 17	$ 18
2030	$ 127	$ 107	$ 115	$ [redacted]	$ [redacted]	$ 21	$ 21
2031	$ 127	$ 99	$ 118	$ [redacted]	$ [redacted]	$ 30	$ 31
2032	$ 138	$ 117	$ 137	$ [redacted]	$ [redacted]	$ 42	$ 42
2033	$ 140	$ 110	$ 141	$ [redacted]	$ [redacted]	$ 53	$ 54
2034	$ 144	$ 117	$ 151	$ [redacted]	$ [redacted]	$ 85	$ 85
2035	$ 136	$ 104	$ 160	$ [redacted]	$ [redacted]	$ 120	$ 119
2036	$ 127	$ 108	$ 158	$ [redacted]	$ [redacted]	$ 129	$ 128
2037	$ 111	$ 118	$ 146	$ [redacted]	$ [redacted]	$ 147	$ 150
2038	$ 109	$ 127	$ 149	$ [redacted]	$ [redacted]	$ 164	$ 163

	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$ 100	$ 84	$ 94	$ [redacted]	$ [redacted]	$ 40	$ 40
Cumulative Present Value (2016$)	$ 764	$ 632	$ 657	$ [redacted]	$ [redacted]	$ 204	$ 198
Annual Levelized	$ 86	$ 71	$ 74	$ [redacted]	$ [redacted]	$ 23	$ 22

Source: Black & Veatch Annual Benefits and Costs
Nominal$$ (M)
DRAFT - SUBJECT TO REVISION

Discount Rate	7.06%
Rhode Island Benefit	Determined by LMP
Rhode Island Cost Share	7.20%

Total Benefits for Rhode Island ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

REDACTED

Annual Costs for Rhode Island ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

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Annual Net Benefits for Rhode Island ($ Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$ -	$ -	$ -	[redacted]	[redacted]	$ -	$ -
2017	$ -	$ -	$ -	[redacted]	[redacted]	$ -	$ -
2018	$ -	$ -	$ -	[redacted]	[redacted]	$ -	$ -
2019	$ 28	$ 3	$ 19	[redacted]	[redacted]	$ 4	$ 3
2020	$ 30	$ 27	$ 17	[redacted]	[redacted]	$ 5	$ 4
2021	$ 58	$ 42	$ 28	[redacted]	[redacted]	$ (6)	$ (6)
2022	$ 91	$ 80	$ 64	[redacted]	[redacted]	$ (1)	$ 0
2023	$ 107	$ 94	$ 81	[redacted]	[redacted]	$ 2	$ (2)
2024	$ 115	$ 100	$ 90	[redacted]	[redacted]	$ 11	$ 10
2025	$ 140	$ 123	$ 118	[redacted]	[redacted]	$ 20	$ 22
2026	$ 140	$ 123	$ 124	[redacted]	[redacted]	$ 24	$ 26
2027	$ 163	$ 142	$ 148	[redacted]	[redacted]	$ 32	$ 33
2028	$ 157	$ 139	$ 144	[redacted]	[redacted]	$ 34	$ 35
2029	$ 168	$ 146	$ 162	[redacted]	[redacted]	$ 46	$ 44
2030	$ 178	$ 164	$ 174	[redacted]	[redacted]	$ 47	$ 46
2031	$ 176	$ 150	$ 176	[redacted]	[redacted]	$ 62	$ 61
2032	$ 194	$ 179	$ 204	[redacted]	[redacted]	$ 74	$ 73
2033	$ 194	$ 169	$ 207	[redacted]	[redacted]	$ 93	$ 90
2034	$ 194	$ 175	$ 213	[redacted]	[redacted]	$ 131	$ 133
2035	$ 187	$ 162	$ 228	[redacted]	[redacted]	$ 186	$ 191
2036	$ 172	$ 172	$ 226	[redacted]	[redacted]	$ 191	$ 191
2037	$ 157	$ 185	$ 210	[redacted]	[redacted]	$ 217	$ 222
2038	$ 155	$ 197	$ 208	[redacted]	[redacted]	$ 243	$ 245

	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$ 140	$ 129	$ 142	[redacted]	[redacted]	$ 71	$ 71
Cumulative Present Value (2016$)	$ 1,086	$ 965	$ 1,027	[redacted]	[redacted]	$ 406	$ 406
Annual Levelized	$ 122	$ 109	$ 115	[redacted]	[redacted]	$ 46	$ 46

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DIV 1-24

Request:

In a May 11, 2016 email, the Company provided responses to certain data requests from the Division and OER. Please provide copies of those responses with attachments.

Response:

Please see the Company's response, provided as Attachment DIV 1-24-A (Highly Sensitive Confidential Information) and the supporting attachments to the Company's response provided as Attachments DIV 1-24-A-1 through DIV 1-24-A-5, including Attachment DIV 1-24-A-3 (Supplemental) (all containing Highly Sensitive Confidential Information).

Prepared by or under the supervision of: Counsel

NATIONAL GRID RESPONSES TO INFORMAL QUESTIONS FROM RHODE ISLAND DIVISION OF PUBLIC UTILITIES AND CARRIERS

Follow-up Questions from May 12th Conference Call:

- **Explain the displaced gas burn trend lines on slide 3 of the presentation reviewed with RI on 5/12/16.**
    - *In reference to Slide 3, the gas burn is lower starting in 2019 due to the introduction of the full schedule of NPT. Gas burn drops again in 2020 with the introduction of MREI. While MREI maintains its full schedule throughout the study period, the full schedule of NPT is lowered to a reduced schedule in 2026, which increases gas burn. Gas burn rises due to load growth in the system until approximately 2032. At that point and beyond new generic highly efficient combined cycles enter the system lowering gas demand throughout the remainder of the study period.*

- **Add the original reference case line to the chart on slide 7 of the presentation reviewed with RI on 5/12/16.**

    - *Please see Attachment 1 (CONFIDENTIAL).*

D.P.U. 16-05/D.P.U. 16-07: Additional Questions 05 16 2016

1) **Please provide in excel readable format with all cell formulae and links intact, a set of tables that illustrate the potential Narragansett customer annual bill impacts - by customer class and usage levels - relative to the company's proposed contract with ANE using the same format as MA DPU 16-07 Exhibit NG-AEL-4. Please specify all assumptions utilized for Rhode Island's proposed share of benefits and costs.**

Please see Attachment 2 (CONFIDENTIAL). The Current Bills are based on all delivery charges effective April 1, 2016. For the Residential and Commercial Standard Offer Service Rate (SOS), the Company used an average SOS rate based on the period April 2016 through March 2017. The Company included an estimated SOS rate for the period October 2016 through March 2017 based on the Standard Offer Supply already procured for the October 2016 through March 2017 time period. For Industrial customers, the Company used an average SOS rate for the period July 2015 through June 2016. The derivation of Capacity Cost Recovery (CCR) Factor and Energy Savings Factor were provided in the file labeled "Exhibit NG-AEL-3 for RI CONFIDENTIAL.XLS" which was provided in response to an earlier set of questions on March 25, 2016. The calculation of the share of benefits and costs accruing to National Grid's MA and RI customers was done based on ISO-NE load share data. All investor-owned EDCs are assumed to bear a portion of the total pipeline costs proportional to their ISO-NE load share, while all ISO-NE retail electric *customers (including those of municipal/coop/etc. utilities) are assumed to benefit proportional to their load share. The actual calculation of Rhode Island's share of benefits and costs was provided in the Company response to the first set of questions from the Division and OER (issued 1/28/16).*

2) Please provide an analysis in excel readable format with all cell formulae and links intact, a set of tables that illustrate the potential Narraganset customer annual bill impacts on Narragansett's 20 largest customers based upon their annual consumption between 2012 and 2015.

   a. **Provide the analysis on an annual basis for each customer.**
   b. **Separately break out impacts of the capacity cost recovery factor and the innovation incentive, and all costs combined.**
   c. **Provide a calculation of net impact of the costs and benefits on these consumers.**

Please see Attachment 3(CONFIDENTIAL). The Company identified the top twenty customers by comparing the total usage of all its G-32 and G-62 customers for the period 2012 through 2015. The Company then sorted the total kWh for the 2012-2015 period from highest to lowest. Once the Company had identified the top twenty customers, the Company calculated their annual bill based on their 2015 calendar year billing determinants and the current delivery rates effective April 1, 2016. The Company averaged the Industrial SOS rate for the period July 2015 through June 2016. The Company then calculated the annual bill increase due to the Capacity Cost Recovery Factor (CCR) (with the innovation incentive separately identified) offset by the decrease associated with the projected levelized energy savings factor to derive the overall net benefit. The derivation of Capacity Cost Recovery (CCR) Factor and Energy Savings Factor were provided in the file labeled "Exhibit NG-AEL-3 for RI CONFIDENTIAL.XLS," which was provided in response to an earlier set of questions on March 25, 2016.

3) Please provide a spreadsheet with the total anticipated "innovation incentive" that would be charged to Narragansett customers, on an annual basis, over the life of the proposed ANE contract. Provide all calculations and assumptions.

See Attachment 4 (CONFIDENTIAL). Attachment 4 presents the annual ANE contract costs used in Black & Veatch's economic analysis and calculates 2.75% of those costs as the innovation incentive. Attachment 4 also calculates the innovation incentive as a share of net benefits to RI customers from ANE.

4) **Please perform a sensitivity case that includes cost and benefits of Northern Pass & MREI, and no other changes, examined both with and without ANE, as requested on 3-30-16. Please do not remove any generic wind projects assumed to be built to comply with RPS when the MREI project is included.**

See Attachment 1 (CONFIDENTIAL).

5) **Does the Company's analysis of the ANE project include the cost of the capacity manager? If so, please separately identify these costs. If not, please provide an estimate of these costs.**

The Company's analysis does not include the cost of the capacity manager. The capacity manager's cost will be a fixed annual fee determined through a competitive bid process which will be offset by the capacity release revenue received. Although the economic analysis conducted by Black & Veatch for the Company did not include a cost for the capacity manager, it also did not include revenue from the capacity releases, which will more than offset the cost of the capacity manager. It is anticipated that the cost of the capacity manager will be allocated to all of the EDCs based on the total capacity managed by the capacity manager and each EDC's total contracted capacity. This sharing will be dependent on which EDCs decide to use a common capacity manager; therefore, it is difficult to provide an estimate of the cost of the capacity manager.

6) **Will NGRID be an equity investor in ANE? If so, will NGRID be an equity in the entire ANE project, or will its equity ownership be only in a portion of the ANE project (such as the pipeline portion, the storage portion, etc.). Please describe in as much detail as possible. Also, please provide the capital structure assumed for this project, its total estimated equity, the amount of equity to be invested or owned by the Company. Also explain how this level of equity ownership was determined.**

Response provided separately.

7) **On May 11, 2016, the Company provided a spreadsheet named "Attachment 2 - CONFIDENTIAL - Rhode Island Costs and Benefits 051116.xlsx". This spreadsheet provided a summary of total benefits (i.e., without ANE costs), ANE costs, and net benefits (i.e., with ANE costs). The numbers for total benefits appear to be the difference between reference cases without ANE and similar cases with ANE. Please provide the actual annual results for the reference cases and the cases with ANE that yielded the benefits shown. Also, please separately identify the portion of the annual benefits that are due to the price volatility**

analysis that is described in excel file named "Black Veatch - Sample Gas Daily Volatility Savings Calculations 032516.xlsx" that was provided on March 25th.

See Attachment 5 (CONFIDENTIAL).

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CONFIDENTIAL

NATIONAL GRID RESPONSES TO INFORMAL QUESTIONS FROM RHODE ISLAND DIVISION OF PUBLIC UTILITIES AND CARRIERS

Request No. 6:

Will NGRID be an equity investor in ANE? If so, will NGRID be an equity in the entire ANE project, or will its equity ownership be only in a portion of the ANE project (such as the pipeline portion, the storage portion, etc.). Please describe in as much detail as possible. Also, please provide the capital structure assumed for this project, its total estimated equity, the amount of equity to be invested or owned by the Company. Also explain how this level of equity ownership was determined.

Response from National Grid Algonquin LLC:

The equity of Algonquin Gas Transmission, LLC is divided into two classes – A and B. The Class A membership interests are 100% held by Spectra Algonquin Holdings, LLC, while the Class B membership interests are held 40% by Spectra Algonquin Holdings, LLC ("Spectra"), 40% by Eversource Gas Transmission LLC ("Eversource"), and 20% by National Grid Algonquin LLC ("National Grid"), an indirect subsidiary of National Grid USA. The percentage of Class B membership interest held by each of Spectra, Eversource and National Grid were arrived at through negotiations among these parties and were issued in connection with the project to expand the existing Algonquin gas pipeline. The existing business of Algonquin Gas Transmission, LLC belongs to the Class A members, and the new (and yet-to-be-built) expansion and LNG storage capacity, *i.e.*, the AN Business, belongs to the Class B members.

National Grid provided [redacted] n Pre-Formation Reimbursable Costs for its equity interest in the ANE Project. As of March 31, 2016, the value of National Grid Algonquin's cumulative capital contributions to Algonquin Gas Transmission LLC was [redacted]

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SUMMARY ASSESSMENT OF LONG-TERM ECONOMICS BENEFITS FOR ELECTRIC CONSUMERS IN NEW ENGLAND – NORTHERN PASS AND MREI SOLUTIONS

DRAFT – PROPRIETARY AND CONFIDENTIAL
SUBJECT TO REVISION

PREPARED FOR NATIONAL GRID

BLACK & VEATCH
Building a world of difference.

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DRAFT – PROPRIETARY AND CONFIDENTIAL

SUMMARY – SCENARIO DESCRIPTION

- Based on Information Request from the Division of Public Utilities and the Office of Energy Resources in Rhode Island, Black & Veatch developed two additional sensitivity reference cases to assess the impact of the ANE project.
- Sensitivity Reference Case A: Base Case with Northern Pass Project
  - 1,090 MW 6.9 TWH per year delivered [redacted]
  - No new natural gas pipeline resources from ANE
- Sensitivity Reference Case B: Base Case with Both Northern Pass and Maine Renewable Energy Interconnect (MREI)
  - Includes Northern Pass Project [redacted]

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PROJECTED REDUCTION IN ISO-NE GAS CONSUMPTION – NORTHERN PASS AND MREI

[redacted]

SUMMARY IMPACT - BENEFITS COMPARISON

- Using the 7.06% discount rate, the ANE solution provides long-term benefits to New England electric consumers across all three reference cases
  - Under Sensitivity Reference Case A, the ANE project generates $0.39 Billion in annual levelized net benefits.
  - Under Sensitivity Reference Case B, the ANE project generates $0.39 Billion in annual levelized net benefits
- Across all three reference cases, the ANE solution generates significant long-term net benefits for electric consumers

Project Cost-Benefits Summary 2019-2038 ($ Billions)							
	Levelized			Present Value			
Project	Annual Benefits	Annual Costs	Annual Net Benefits	Total Benefits	Total Costs	Net Benefits	Benefit to Cost Ratio
Reference Case - With ANE Only	[redacted]	[redacted]	$1.14	[redacted]	[redacted]	$10.16	3.5
Sensitivity Reference Case A - With ANE	[redacted]	[redacted]	$0.39	[redacted]	[redacted]	$3.49	1.9
Sensitivity Reference Case B - With ANE	[redacted]	[redacted]	$0.39	[redacted]	[redacted]	$3.48	1.9

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DRAFT – PROPRIETARY AND CONFIDENTIAL

SUMMARY IMPACT – GAS PRICES

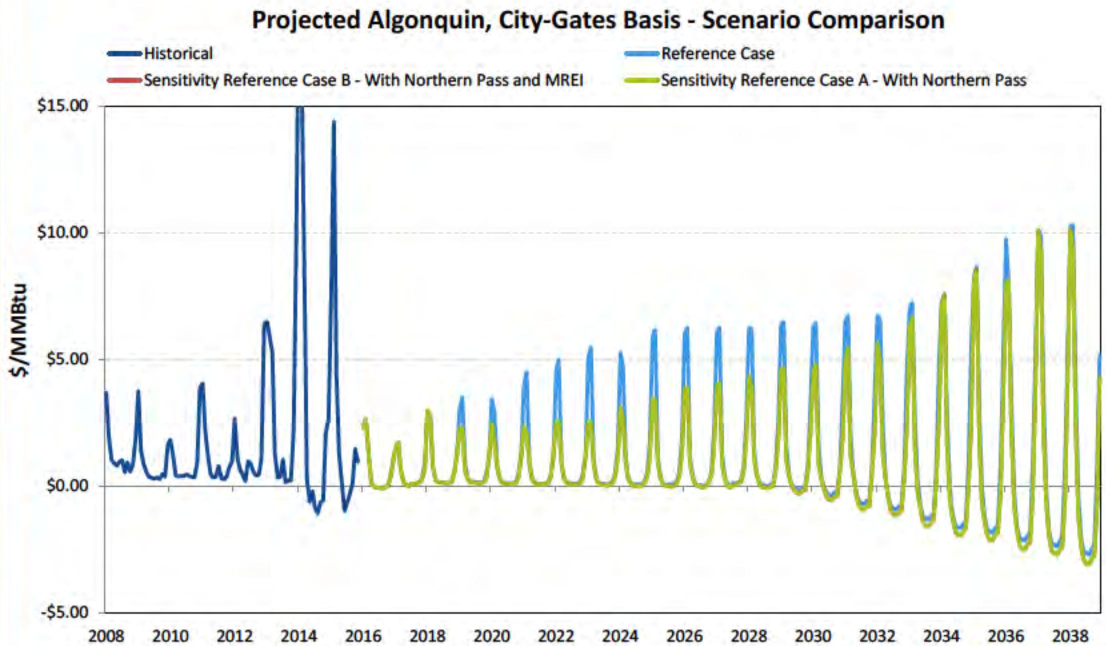
- Across all three Reference Cases, the ANE solution reduces average monthly winter basis. The impact is lower in the initial time period when ANE is added to Reference Cases A and B.
- Below is summary table for winter basis impact at Algonquin, city-gates

	Algonquin City Gates ($/MMBtu)			
	2019 - 2028		2029-2038	
	Average Monthly Winter (Dec-Feb) Basis	Differential to Reference Case	Average Monthly Winter (Dec-Feb) Basis	Differential to Reference Case
Reference Case	$ 4.07		$ 6.79	
With ANE Only	$ 1.57	$ (2.50)	$ 3.55	$ (3.24)
Sensitivity Reference Case A - With Northern Pass	$ 2.59		$ 5.69	
With ANE	$ 1.34	$ (1.25)	$ 1.72	$ (3.97)
Sensitivity Reference Case B - With Northern Pass and MREI	$ 2.54		$ 5.64	
With ANE	$ 1.29	$ (1.24)	$ 1.66	$ (3.98)

REDACTED

DRAFT – PROPRIETARY AND CONFIDENTIAL

PROJECTED ALGONQUIN CITY-GATE BASIS – REFERENCE CASE COMPARISON



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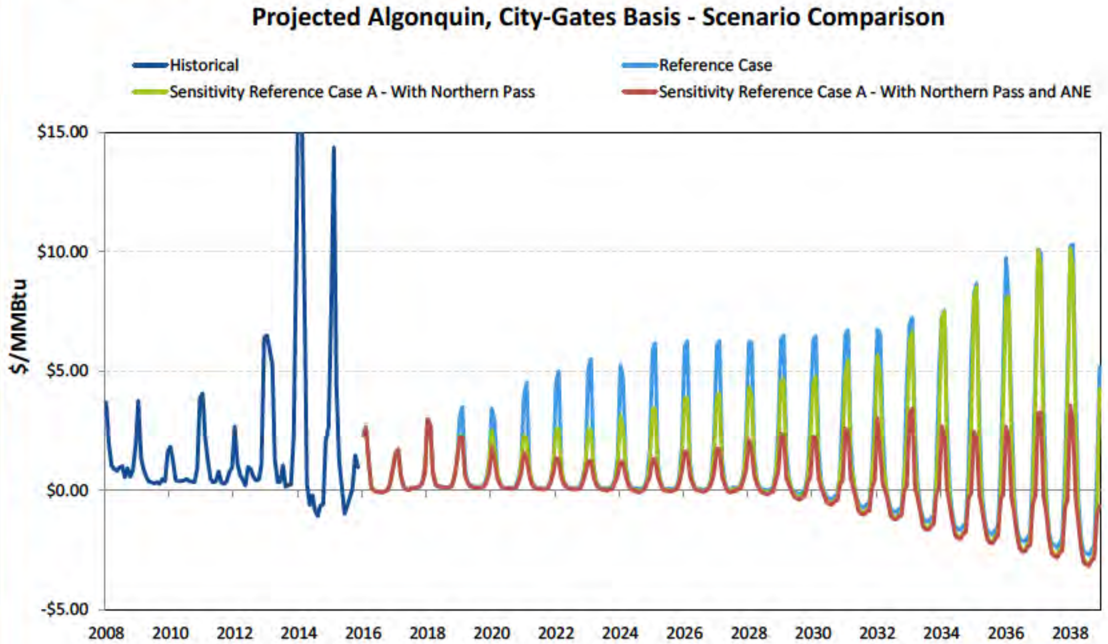
DRAFT – PROPRIETARY AND CONFIDENTIAL

PROJECTED ALGONQUIN CITY-GATE BASIS – INFRASTRUCTURE COMPARISON



CONFIDENTIAL

Narragansett Electric Company
Capacity Cost Recovery - Illustrative Typical Levelized Bill Impacts
Rates A-16 and A-60 Basic Service Customers

Capacity Cost Recovery Factor (CCRF) Energy Savings Factor Net Impact		[redacted]	
Monthly kWh	Current Total Bill [1]	Increase (Decrease) Amount	%
Rate A-16			
150	$32.42	($1.43)	-4.4%
300	$58.69	($2.87)	-4.9%
400	$76.20	($3.82)	-5.0%
500	$93.72	($4.78)	-5.1%
600	$111.23	($5.73)	-5.2%
700	$128.75	($6.69)	-5.2%
1,200	$216.33	($11.46)	-5.3%
2,000	$356.44	($19.10)	-5.4%
Rate A-60			
150	$25.11	($1.43)	-5.7%
300	$49.28	($2.87)	-5.8%
400	$65.38	($3.82)	-5.8%
500	$81.50	($4.78)	-5.9%
600	$97.60	($5.73)	-5.9%
700	$113.72	($6.69)	-5.9%
1,200	$194.28	($11.46)	-5.9%
2,000	$323.17	($19.10)	-5.9%

[1] Current Bill reflects current delivery rates, and annualized Standard Offer Service Rate based on period April 2016 through March 2017.

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Narragansett Electric Company
Capacity Cost Recovery - Illustrative Typical Levelized Bill Impacts
Rate C-06 Basic Service Customers

Capacity Cost Recovery Factor (CCRF) Energy Savings Factor Net Impact		ANE [redacted]	
Monthly kWh	Current Total Bill [1]	Increase (Decrease) Amount	 %
250	$53.59	($2.39)	-4.5%
500	$95.75	($4.78)	-5.0%
1,000	$180.04	($9.55)	-5.3%
1,500	$264.35	($14.33)	-5.4%
2,000	$348.64	($19.10)	-5.5%

[1]Current Bill reflects current delivery rates, and annualized Standard Offer Service Rate based on period April 2016 through March 2017.

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Narragansett Electric Company
Capacity Cost Recovery - Illustrative Typical Levelized Bill Impacts
Rate G-02 Basic Service Customers

			ANE	
Capacity Cost Recovery Factor (CCRF) Energy Savings Factor Net Impact			[redacted]	
Monthly kW	Monthly kWh	Current Total Bill [1]	Increase (Decrease) Amount	%
200	Hours Use			
20	4,000	$758.55	($38.21)	-5.0%
50	10,000	$1,767.62	($95.52)	-5.4%
100	20,000	$3,449.43	($191.04)	-5.5%
150	30,000	$5,131.23	($286.56)	-5.6%
300	Hours Use			
20	6,000	$999.38	($57.31)	-5.7%
50	15,000	$2,369.72	($143.28)	-6.0%
100	30,000	$4,653.62	($286.56)	-6.2%
150	45,000	$6,937.52	($429.84)	-6.2%
400	Hours Use			
20	8,000	$1,240.22	($76.42)	-6.2%
50	20,000	$2,971.82	($191.04)	-6.4%
100	40,000	$5,857.81	($382.08)	-6.5%
150	60,000	$8,743.82	($573.13)	-6.6%
500	Hours Use			
20	10,000	$1,481.06	($95.52)	-6.4%
50	25,000	$3,573.92	($238.80)	-6.7%
100	50,000	$7,062.02	($477.60)	-6.8%
150	75,000	$10,550.11	($716.41)	-6.8%
600	Hours Use			
20	12,000	$1,721.90	($114.63)	-6.7%
50	30,000	$4,176.02	($275.10)	-6.6%
100	60,000	$8,266.21	($550.20)	-6.7%
150	90,000	$12,356.41	($825.30)	-6.7%

[1] Current Bill reflects current delivery rates, and annualized Standard Offer Service Rate based on period April 2016 through March 2017.

REDACTED

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Narragansett Electric Company
Capacity Cost Recovery - Illustrative Typical Levelized Bill Impacts
Rate G-32 Basic Service Customers

			ANE	
Capacity Cost Recovery Factor (CCRF) Energy Savings Factor Net Impact			[redacted]	
Monthly kW	Monthly kWh	Current Total Bill[1]	Increase (Decrease) Amount	%
200	Hours Use			
200	40,000	$6,043.63	($382.08)	-6.3%
750	150,000	$22,791.03	($1,432.81)	-6.3%
1,000	200,000	$30,403.49	($1,910.42)	-6.3%
1,500	300,000	$45,628.40	($2,865.63)	-6.3%
2,500	500,000	$76,078.23	($4,776.04)	-6.3%
300	Hours Use			
200	60,000	$8,212.56	($573.13)	-7.0%
750	225,000	$30,924.56	($2,149.22)	-6.9%
1,000	300,000	$41,248.19	($2,865.63)	-6.9%
1,500	450,000	$61,895.45	($4,298.44)	-6.9%
2,500	750,000	$103,189.99	($7,164.06)	-6.9%
400	Hours Use			
200	80,000	$10,381.50	($764.17)	-7.4%
750	300,000	$39,058.08	($2,865.63)	-7.3%
1,000	400,000	$52,092.89	($3,820.83)	-7.3%
1,500	600,000	$78,162.51	($5,731.25)	-7.3%
2,500	1,000,000	$130,301.74	($9,552.08)	-7.3%
500	Hours Use			
200	100,000	$12,550.44	($955.21)	-7.6%
750	375,000	$47,191.61	($3,582.03)	-7.6%
1,000	500,000	$62,937.60	($4,776.04)	-7.6%
1,500	750,000	$94,429.57	($7,164.06)	-7.6%
2,500	1,250,000	$157,413.50	($11,940.10)	-7.6%
600	Hours Use			
200	120,000	$14,719.39	($1,146.25)	-7.8%
750	450,000	$55,325.14	($4,298.44)	-7.8%
1,000	600,000	$73,782.30	($5,731.25)	-7.8%
1,500	900,000	$110,696.63	($8,596.88)	-7.8%
2,500	1,500,000	$184,525.27	($14,328.13)	-7.8%

[1]Current Bill reflects current delivery rates, and annualized Standard Offer Service Rate based on period July 2015 through June 2016.

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Narragansett Electric Company
Capacity Cost Recovery - Illustrative Typical Levelized Bill Impacts
Rate G-62 Basic Service Customers

			ANE	
Capacity Cost Recovery Factor (CCRF)			[redacted]	
Energy Savings Factor				
Net Impact				
Monthly kW	Monthly kWh	Current Total Bill [1]	Increase (Decrease) Amount	%
200	Hours Use			
3,000	600,000	$103,288.86	($5,731.25)	-5.5%
5,000	1,000,000	$160,101.01	($9,552.08)	-6.0%
7,500	1,500,000	$231,116.20	($14,328.13)	-6.2%
10,000	2,000,000	$302,131.39	($19,104.17)	-6.3%
20,000	4,000,000	$586,192.16	($38,208.33)	-6.5%
300	Hours Use			
3,000	900,000	$134,913.60	($8,596.88)	-6.4%
5,000	1,500,000	$212,808.91	($14,328.13)	-6.7%
7,500	2,250,000	$310,178.05	($21,492.19)	-6.9%
10,000	3,000,000	$407,547.19	($28,656.25)	-7.0%
20,000	6,000,000	$797,023.75	($57,312.50)	-7.2%
400	Hours Use			
3,000	1,200,000	$166,538.34	($11,462.50)	-6.9%
5,000	2,000,000	$265,516.80	($19,104.17)	-7.2%
7,500	3,000,000	$389,239.90	($28,656.25)	-7.4%
10,000	4,000,000	$512,962.99	($38,208.33)	-7.4%
20,000	8,000,000	$1,007,855.35	($76,416.67)	-7.6%
500	Hours Use			
3,000	1,500,000	$198,163.08	($14,328.13)	-7.2%
5,000	2,500,000	$318,224.71	($23,880.21)	-7.5%
7,500	3,750,000	$468,301.74	($35,820.31)	-7.6%
10,000	5,000,000	$618,378.79	($47,760.42)	-7.7%
20,000	10,000,000	$1,218,686.95	($95,520.83)	-7.8%
600	Hours Use			
3,000	1,800,000	$229,787.82	($17,193.75)	-7.5%
5,000	3,000,000	$370,932.61	($28,656.25)	-7.7%
7,500	4,500,000	$547,363.59	($42,984.38)	-7.9%
10,000	6,000,000	$723,794.58	($57,312.50)	-7.9%
20,000	12,000,000	$1,429,518.54	($114,625.00)	-8.0%

[1]Current Bill reflects current delivery rates, and annualized Standard Offer Service Rate based on period July 2015 through June 2016.

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	Rate Class	ANE

Capacity Cost Recovery Factor (CCRF)

(1)	A-16/A-60	[redacted]
(2)	C06	
(3)	G02	
(4)	G32	
(5)	G62	

Prior Period Capacity Reconciling Factor (PPCRF)

(1)	A-16/A-60	[redacted]
(2)	C06	
(3)	G02	
(4)	G32	
(5)	G62	

Energy Price Reduction

(1)	A-16/A-60	[redacted]
(2)	C06	
(3)	G02	
(4)	G32	
(5)	G62	

REDACTED

Jul-2015	[redacted]
Aug-2015	
Sep-2015	
Oct-2015	
Nov-2015	
Dec-2015	
Jan-2016	
Feb-2016	
Mar-2016	
Apr-2016	
May-2016	
Jun-2016	
Average	

REDACTED

Adjustments Input Section:

		April 1 2016	April 1 2016
Energy Efficiency Program Charge	Energy Efficiency Program Charge	[redacted]	
Base Transmission Charge A16-A60	Base Transmission Charge A16-A60		
Base Transmission Charge C06	Base Transmission Charge C06		
Base Transmission Charge G02	Base Transmission Charge G02		
Base Transmission Charge G32	Base Transmission Charge G32		
Base Transmission Charge G62	Base Transmission Charge G62		
Transmission Demand Charge G-02	Transmission Demand Charge G-02		
Transmission Demand Charge G32	Transmission Demand Charge G32		
Transmission Demand Charge G62	Transmission Demand Charge G62		
Transmission Adj Factor - A16/A60	Transmission Adj Factor - A16/A60		
Transmission Adj Factor - C06	Transmission Adj Factor - C06		
Transmission Adj Factor - G02	Transmission Adj Factor - G02		
Transmission Adj Factor - B/G32	Transmission Adj Factor - B/G32		
Transmission Adj Factor - B/G62	Transmission Adj Factor - B/G62		
Transmission Uncollectible Factor - A16, A60	Transmission Uncollectible Factor - A16, A60		
Transmission Uncollectible Factor - C06	Transmission Uncollectible Factor - C06		
Transmission Uncollectible Factor - G-02	Transmission Uncollectible Factor - G-02		
Transmission Uncollectible Factor - G-32	Transmission Uncollectible Factor - B/G32		
Transmission Uncollectible Factor - B/G62	Transmission Uncollectible Factor - B/G62		
Renewable Energy Standard Charge	Renewable Energy Standard Charge		
Standard Offer Charge - Residential Group (base	Standard Offer Charge - Residential Group (bas		
Standard Offer Charge - Commercial Group (bas	Standard Offer Charge - Commercial Group (ba		
Standard Offer Charge - Industrial Group (base c	Standard Offer Charge - Industrial Group (base		
S O Adj Factor - Residential Group	S O Adj Factor - Residential Group		
S O Adj Factor - Commercial Group	S O Adj Factor - Commercial Group		
S O Adj Factor - Industrial Group	S O Adj Factor - Industrial Group		
Standard Offer Service Admin Cost Factor - Residential Group	Standard Offer Service Admin Cost Factor - Residential Group		
Standard Offer Service Admin Cost Factor - Commercial Group	Standard Offer Service Admin Cost Factor - Commercial Group		
Standard Offer Service Admin Cost Factor - Industrial Group	Standard Offer Service Admin Cost Factor - Industrial Group		
Net Metering Charge	Net Metering Charge		
Long Term Contracting for Renewable Energy Resource	Long Term Contracting for Renewable Energy Resource		
Renewable Energy Distribution Charge (5)	Renewable Energy Distribution Charge (6)		
RDM Adj Factor	RDM Adj Factor		
Pension/PBOP Adjustment Factor	Pension/PBOP Adjustment Factor		
CapEx Reconciliation Factor	CapEx Reconciling Factor - A16/A60		
CapEx Reconciliation Factor	CapEx Reconciling Factor - C-06		
CapEx Reconciliation Factor	CapEx Reconciling Factor - G-02		
CapEx Reconciliation Factor	CapEx Reconciling Factor - G32		
CapEx Reconciliation Factor	CapEx Reconciling Factor - G62		
O&M Reconciling Factor	O&M Reconciling Factor - All		
Transition Energy Charge (3)	Transition Energy Charge (4)		

Distribution, Transmission, Transition and Standard Offer Input Section:

Rates As of 07/1/2015

				April 1 2016	April 1 2016
A-16	A-16	Customer Charge	Customer Charge	[redacted]	
		RE Growth Factor	RE Growth Factor		
		LIHEAP Charge	LIHEAP Charge		
		Transmission Energy Charge (1)	Transmission Energy Charge (2)		
		Distribution Energy Charge	Distribution Energy Charge		
		Standard Offer Charge (7)	Standard Offer Charge (8)		
		Transition Energy Charge (3)	Transition Energy Charge (4)		
		O&M Factor	O&M Factor		
		CapEx Factor	CapEx Factor		
		O&M Reconciling Factor	O&M Reconciling Factor		
		CapEx Reconciling Factor	CapEx Reconciling Factor		
A-60	A-60	Customer Charge	Customer Charge		
		RE Growth Factor	RE Growth Factor		
		LIHEAP Charge	LIHEAP Charge		
		Transmission Energy Charge (1)	Transmission Energy Charge (2)		
		Distribution Energy Charge	Distribution Energy Charge		

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		Standard Offer Charge (7)	Standard Offer Charge (8)
		Transition Energy Charge (3)	Transition Energy Charge (4)
		O&M Factor	O&M Factor
		CapEx Factor	CapEx Factor
		O&M Reconciling Factor	O&M Reconciling Factor
		CapEx Reconciling Factor	CapEx Reconciling Factor
C-06	C-06	Unmetered Charge	Unmetered Charge
		Customer Charge	Customer Charge
		RE Growth Factor	RE Growth Factor
		LIHEAP Charge	LIHEAP Charge
		Transmission Energy Charge (1)	Transmission Energy Charge (2)
		Distribution Energy Charge	Distribution Energy Charge
		Standard Offer Charge (7)	Standard Offer Charge (8)
		Transition Energy Charge (3)	Transition Energy Charge (4)
		O&M Factor	O&M Factor
		CapEx Factor	CapEx Factor
		O&M Reconciling Factor	O&M Reconciling Factor
		CapEx Reconciling Factor	CapEx Reconciling Factor
G-02	G-02	Customer Charge	Customer Charge
		RE Growth Factor	RE Growth Factor
		LIHEAP Charge	LIHEAP Charge
		Transmission Demand Charge (1)	Transmission Demand Charge (2)
		Transmission Energy Charge (3)	Transmission Energy Charge (4)
		Distribution Demand Charge-xcs 10 kW	Distribution Demand Charge-xcs 10 kW
		Distribution Energy Charge	Distribution Energy Charge
		Standard Offer Charge (9)	Standard Offer Charge (10)
		Transition Energy Charge (7)	Transition Energy Charge (8)
		O&M Factor	O&M Factor
		CapEx Factor	CapEx Factor
		O&M Reconciling Factor	O&M Reconciling Factor
		CapEx Reconciling Factor	CapEx Reconciling Factor
G-32	G-32	Customer Charge	Customer Charge
		RE Growth Factor	RE Growth Factor
		LIHEAP Charge	LIHEAP Charge
		Transmission Demand Charge (1)	Transmission Demand Charge (2)
		Transmission Energy Charge (3)	Transmission Energy Charge (4)
		Distribution Demand Charge - > 200 kW	Distribution Demand Charge - > 200 kW
		Distribution Energy Charge	Distribution Energy Charge
		Standard Offer Charge (9)	Standard Offer Charge (10)
		Transition Energy Charge (7)	Transition Energy Charge (8)
		O&M Factor	O&M Factor
		CapEx Factor	CapEx kW Charge
		O&M Reconciling Factor	O&M Reconciling Factor
		CapEx Reconciling Factor	CapEx Reconciling Factor
G-62	G-62	Customer Charge	Customer Charge
		RE Growth Factor	RE Growth Factor
		LIHEAP Charge	LIHEAP Charge
		Transmission Demand Charge (1)	Transmission Demand Charge (2)
		Transmission Energy Charge (3)	Transmission Energy Charge (4)
		Distribution Demand Charge	Distribution Demand Charge
		Distribution Energy Charge	Distribution Energy Charge
		Standard Offer Charge (9)	Standard Offer Charge (10)
		Transition Energy Charge (7)	Transition Energy Charge (8)
		O&M kW Charge	O&M kW Charge
		CapEx kW Charge	CapEx kW Charge
		O&M Reconciling Factor	O&M Reconciling Factor
		CapEx Reconciling Factor	CapEx Reconciling Factor

[redacted]

REDACTED

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

Monthly kWh	Present Rates Total	Present Rates Standard Offer	Present Rates Delivery	Proposed Rates Total	Proposed Rates Standard Offer	Proposed Rates Delivery	Increase/(Decrease) Amount	Increase/(Decrease) % of Total	Percentage of Customers
150	$32 42	$13 33	$19 09	$32 42	$13 33	$19 09	$0 00	0 0%	13 7%
300	$58 69	$26 66	$32 03	$58 69	$26 66	$32 03	$0 00	0 0%	17 5%
400	$76 20	$35 54	$40 66	$76 20	$35 54	$40 66	$0 00	0 0%	11 8%
500	$93 72	$44 43	$49 29	$93 72	$44 43	$49 29	$0 00	0 0%	10 8%
600	$111 23	$53 31	$57 92	$111 23	$53 31	$57 92	$0 00	0 0%	9 4%
700	$128 75	$62 20	$66 55	$128 75	$62 20	$66 55	$0 00	0 0%	7 7%
1,200	$216 33	$106 63	$109 70	$216 33	$106 63	$109 70	$0 00	0 0%	15 0%
2,000	$356 44	$177 71	$178 73	$356 44	$177 71	$178 73	$0 00	0 0%	14 1%

Present Rates

Customer Charge		$5 00
RE Growth Factor		$0 17
LIHEAP Charge		$0 73
Transmission Energy Charge (1)	kWh x	$0 02705
Distribution Energy Charge	kWh x	$0 04289
Transition Energy Charge (3)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (7)	kWh x	$0 08530

Proposed Rates

Customer Charge		$5 00
RE Growth Factor		$0 17
LIHEAP Charge		$0 73
Transmission Energy Charge (2)	kWh x	$0 02705
Distribution Energy Charge	kWh x	$0 04289
Transition Energy Charge (4)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (8)	kWh x	$0 08530

Note (1): includes the Base Transmission Charge of 2 596¢/kWh, the Transmission Adjustment Factor of 0 030¢/kWh and the Transmission Uncollectible Factor of 0 035¢/kWh

Note (2): includes the proposed Base Transmission Charge of 2 596¢/kWh, the proposed Transmission Adjustment Factor of 0 074¢/kWh and the proposed Transmission Uncollectible Factor of 0 035¢/kWh

Note (3): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (4): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the base Standard Offer Service Charge of 8 269¢/kWh, the Standard Offer Service Adjustment Charge of (0 318¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 291¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (8): includes the base Standard Offer Service Charge of 8 269¢/kWh, the proposed Standard Offer Service Adjustment Charge of (0 318¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 291¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to A-60 Rate Customers

Monthly kWh	Present Rates Total	Present Rates Standard Offer	Present Rates Delivery	Proposed Rates Total	Proposed Rates Standard Offer	Proposed Rates Delivery	Increase/(Decrease) Amount	Increase/(Decrease) % of Total	Percentage of Customers
150	$25 11	$13 33	$11 78	$25 11	$13 33	$11 78	$0 00	0 0%	10 7%
300	$49 28	$26 66	$22 62	$49 28	$26 66	$22 62	$0 00	0 0%	23 2%
400	$65 38	$35 54	$29 84	$65 38	$35 54	$29 84	$0 00	0 0%	14 9%
500	$81 50	$44 43	$37 07	$81 50	$44 43	$37 07	$0 00	0 0%	12 2%
600	$97 60	$53 31	$44 29	$97 60	$53 31	$44 29	$0 00	0 0%	9 6%
700	$113 72	$62 20	$51 52	$113 72	$62 20	$51 52	$0 00	0 0%	7 3%
1,200	$194 28	$106 63	$87 65	$194 28	$106 63	$87 65	$0 00	0 0%	12 3%
2,000	$323 17	$177 71	$145 46	$323 17	$177 71	$145 46	$0 00	0 0%	9 8%

Present Rates

Customer Charge		$0 00
RE Growth Factor		$0 17
LIHEAP Charge		$0 73
Transmission Energy Charge (1)	kWh x	$0 02705
Distribution Energy Charge	kWh x	$0 02942
Transition Energy Charge (3)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (7)	kWh x	$0 08530

Proposed Rates

Customer Charge		$0 00
RE Growth Factor		$0 17
LIHEAP Charge		$0 73
Transmission Energy Charge (2)	kWh x	$0 02705
Distribution Energy Charge	kWh x	$0 02942
Transition Energy Charge (4)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (8)	kWh x	$0 08530

Note (1): includes the Base Transmission Charge of 2 596¢/kWh, the Transmission Adjustment Factor of 0 030¢/kWh and the Transmission Uncollectible Factor of 0 035¢/kWh

Note (2): includes the proposed Base Transmission Charge of 2 596¢/kWh, the proposed Transmission Adjustment Factor of 0 074¢/kWh and the proposed Transmission Uncollectible Factor of 0 035¢/kWh

Note (3): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (4): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the base Standard Offer Service Charge of 8 269¢/kWh, the Standard Offer Service Adjustment Charge of (0 318¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 291¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (8): includes the base Standard Offer Service Charge of 8 269¢/kWh, the proposed Standard Offer Service Adjustment Charge of (0 318¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 291¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

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

Monthly kWh	Present Rates Total	Present Rates Standard Offer	Present Rates Delivery	Proposed Rates Total	Proposed Rates Standard Offer	Proposed Rates Delivery	Increase/(Decrease) Amount	Increase/(Decrease) % of Total	Percentage of Customers
250	$53.59	$22.05	$31.54	$53.59	$22.05	$31.54	$0.00	0.0%	35.2%
500	$95.75	$44.11	$51.64	$95.75	$44.11	$51.64	$0.00	0.0%	17.0%
1,000	$180.04	$88.21	$91.83	$180.04	$88.21	$91.83	$0.00	0.0%	19.0%
1,500	$264.35	$132.32	$132.03	$264.35	$132.32	$132.03	$0.00	0.0%	9.8%
2,000	$348.64	$176.42	$172.22	$348.64	$176.42	$172.22	$0.00	0.0%	19.1%

<u>Present Rates</u>

Customer Charge		$10.00
RE Growth Factor		$0.26
LIHEAP Charge		$0.73
Transmission Energy Charge (1)	kWh x	$0.02566
Distribution Energy Charge	kWh x	$0.03861
Transition Energy Charge (3)	kWh x	($0.00058)
Energy Efficiency Program Charge	kWh x	$0.01107
Renewable Energy Distribution Charge (5)	kWh x	$0.00241
Gross Earnings Tax		4.00%
Standard Offer Charge (7)	kWh x	$0.08468

<u>Proposed Rates</u>

Customer Charge		$10.00
RE Growth Factor		$0.26
LIHEAP Charge		$0.73
Transmission Energy Charge (2)	kWh x	$0.02566
Distribution Energy Charge	kWh x	$0.03861
Transition Energy Charge (4)	kWh x	($0.00058)
Energy Efficiency Program Charge	kWh x	$0.01107
Renewable Energy Distribution Charge (5)	kWh x	$0.00241
Gross Earnings Tax		4.00%
Standard Offer Charge (8)	kWh x	$0.08468

Note (1): includes the Base Transmission Charge of 2.607¢/kWh, the Transmission Adjustment Factor of (0.073¢)/kWh and the Transmission Uncollectible Factor of 0.032¢/kWh

Note (2): includes the proposed Base Transmission Charge of 2.607¢/kWh, the proposed Transmission Adjustment Factor of (0.073¢)/kWh and the proposed Transmission Uncollectible Factor of 0.032¢/kWh

Note (3): includes the current Transition Energy Charge of (0.058¢)/kWh

Note (4): includes the proposed Transition Energy Charge of (0.058¢)/kWh

Note (5): includes the Net Metering Charge of 0.007¢/kWh and the Long Term Contracting for Renewable Energy Resource Charge of 0.234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0.007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0.234¢/kWh

Note (7): includes the base Standard Offer Service Charge of 7.696¢/kWh, the Standard Offer Service Adjustment Charge of 0.206¢/kWh, the Standard Offer Service Administrative Cost Factor of 0.278¢/kWh and the Renewable Energy Standard Charge of 0.288¢/kWh

Note (8): includes the base Standard Offer Service Charge of 7.696¢/kWh, the proposed Standard Offer Service Adjustment Charge of 0.206¢/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0.278¢/kWh and the Renewable Energy Standard Charge of 0.288¢/kWh

REDACTED

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

Hours Use: 200

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
20	4,000	$758 55	$352 85	$405 70	$758 55	$352 85	$405 70	$0 00	0 0%
50	10,000	$1,767 62	$882 11	$885 51	$1,767 62	$882 11	$885 51	$0 00	0 0%
100	20,000	$3,449 43	$1,764 23	$1,685 20	$3,449 43	$1,764 23	$1,685 20	$0 00	0 0%
150	30,000	$5,131 23	$2,646 34	$2,484 89	$5,131 23	$2,646 34	$2,484 89	$0 00	0 0%

Present Rates

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 59
Transmission Energy Charge (3)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (9)	kWh x	$0 08468

Proposed Rates

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 59
Transmission Energy Charge (4)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (10)	kWh x	$0 08468

Note (1): includes the current Transmission Demand Charge of $3 59/kW

Note (2): includes the proposed Transmission Demand Charge of $3 59/kW

Note (3): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (4): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 696¢/kWh, the Standard Offer Service Adjustment Charge of 0 206¢/kWh, the Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 696¢/kWh, the proposed Standard Offer Service Adjustment Charge of 0 206¢/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

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

Hours Use: 300

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
20	6,000	$999 38	$529 27	$470 11	$999 38	$529 27	$470 11	$0 00	0 0%
50	15,000	$2,369 72	$1,323 17	$1,046 55	$2,369 72	$1,323 17	$1,046 55	$0 00	0 0%
100	30,000	$4,653 62	$2,646 34	$2,007 28	$4,653 62	$2,646 34	$2,007 28	$0 00	0 0%
150	45,000	$6,937 52	$3,969 51	$2,968 01	$6,937 52	$3,969 51	$2,968 01	$0 00	0 0%

Present Rates

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 59
Transmission Energy Charge (3)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (9)	kWh x	$0 08468

Proposed Rates

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 59
Transmission Energy Charge (4)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (10)	kWh x	$0 08468

Note (1): includes the current Transmission Demand Charge of $3 59/kW

Note (2): includes the proposed Transmission Demand Charge of $3 59/kW

Note (3): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (4): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 696¢/kWh, the Standard Offer Service Adjustment Charge of 0 206¢/kWh, the Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 696¢/kWh, the proposed Standard Offer Service Adjustment Charge of 0 206¢/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

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

Hours Use: 400

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
20	8,000	$1,240 22	$705 69	$534 53	$1,240 22	$705 69	$534 53	$0 00	0 0%
50	20,000	$2,971 82	$1,764 23	$1,207 59	$2,971 82	$1,764 23	$1,207 59	$0 00	0 0%
100	40,000	$5,857 81	$3,528 45	$2,329 36	$5,857 81	$3,528 45	$2,329 36	$0 00	0 0%
150	60,000	$8,743 82	$5,292 68	$3,451 14	$8,743 82	$5,292 68	$3,451 14	$0 00	0 0%

<u>Present Rates</u>

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 59
Transmission Energy Charge (3)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (9)	kWh x	$0 08468

<u>Proposed Rates</u>

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 59
Transmission Energy Charge (4)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (10)	kWh x	$0 08468

Note (1): includes the current Transmission Demand Charge of $3 59/kW

Note (2): includes the proposed Transmission Demand Charge of $3 59/kW

Note (3): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (4): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 696¢/kWh, the Standard Offer Service Adjustment Charge of 0 206¢/kWh, the Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 696¢/kWh, the proposed Standard Offer Service Adjustment Charge of 0 206¢/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

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

Hours Use: 500

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
20	10,000	$1,481 06	$882 11	$598 95	$1,481 06	$882 11	$598 95	$0 00	0 0%
50	25,000	$3,573 92	$2,205 28	$1,368 64	$3,573 92	$2,205 28	$1,368 64	$0 00	0 0%
100	50,000	$7,062 02	$4,410 57	$2,651 45	$7,062 02	$4,410 57	$2,651 45	$0 00	0 0%
150	75,000	$10,550 11	$6,615 85	$3,934 26	$10,550 11	$6,615 85	$3,934 26	$0 00	0 0%

Present Rates

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 59
Transmission Energy Charge (3)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (9)	kWh x	$0 08468

Proposed Rates

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 59
Transmission Energy Charge (4)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (10)	kWh x	$0 08468

Note (1): includes the current Transmission Demand Charge of $3 59/kW

Note (2): includes the proposed Transmission Demand Charge of $3 59/kW

Note (3): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (4): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 696¢/kWh, the Standard Offer Service Adjustment Charge of 0 206¢/kWh, the Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 696¢/kWh, the proposed Standard Offer Service Adjustment Charge of 0 206¢/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

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

Hours Use: 600

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
20	12,000	$1,721 90	$1,058 54	$663 36	$1,721 90	$1,058 54	$663 36	$0 00	0 0%
50	30,000	$4,176 02	$2,646 34	$1,529 68	$4,176 02	$2,646 34	$1,529 68	$0 00	0 0%
100	60,000	$8,266 21	$5,292 68	$2,973 53	$8,266 21	$5,292 68	$2,973 53	$0 00	0 0%
150	90,000	$12,356 41	$7,939 02	$4,417 39	$12,356 41	$7,939 02	$4,417 39	$0 00	0 0%

<u>Present Rates</u>

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 59
Transmission Energy Charge (3)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (9)	kWh x	$0 08468

<u>Proposed Rates</u>

Customer Charge		$135 00
RE Growth Factor		$2 46
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 59
Transmission Energy Charge (4)	kWh x	$0 01068
Distribution Demand Charge-xcs 10 kW	kW x	$5 58
Distribution Energy Charge	kWh x	$0 00734
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kWh x	$0 00241
Gross Earnings Tax		4 00%
Standard Offer Charge (10)	kWh x	$0 08468

Note (1): includes the current Transmission Demand Charge of $3 59/kW

Note (2): includes the proposed Transmission Demand Charge of $3 59/kW

Note (3): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (4): includes the Base Transmission Charge of 1 031¢/kWh, the Transmission Adjustment Factor of 0 007¢/kWh and the Transmission Uncollectible Factor of 0 030¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 696¢/kWh, the Standard Offer Service Adjustment Charge of 0 206¢/kWh, the Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 696¢/kWh, the proposed Standard Offer Service Adjustment Charge of 0 206¢/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 278¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-32 Rate Customers

Hours Use: 200

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
200	40,000	$6,043 63	$3,054 97	$2,988 66	$6,043 63	$3,054 97	$2,988 66	$0 00	0 0%
750	150,000	$22,791 03	$11,456 12	$11,334 91	$22,791 03	$11,456 12	$11,334 91	$0 00	0 0%
1,000	200,000	$30,403 49	$15,274 83	$15,128 66	$30,403 49	$15,274 83	$15,128 66	$0 00	0 0%
1,500	300,000	$45,628 40	$22,912 24	$22,716 16	$45,628 40	$22,912 24	$22,716 16	$0 00	0 0%
2,500	500,000	$76,078 23	$38,187 07	$37,891 16	$76,078 23	$38,187 07	$37,891 16	$0 00	0 0%

Present Rates

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 97
Transmission Energy Charge (3)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

Proposed Rates

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 97
Transmission Energy Charge (4)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 97/kW

Note (2): includes the proposed Transmission Demand Charge of $3 97/kW

Note (3): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-32 Rate Customers

Hours Use: 300

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
200	60,000	$8,212 56	$4,582 45	$3,630 11	$8,212 56	$4,582 45	$3,630 11	$0 00	0 0%
750	225,000	$30,924 56	$17,184 18	$13,740 38	$30,924 56	$17,184 18	$13,740 38	$0 00	0 0%
1,000	300,000	$41,248 19	$22,912 24	$18,335 95	$41,248 19	$22,912 24	$18,335 95	$0 00	0 0%
1,500	450,000	$61,895 45	$34,368 36	$27,527 09	$61,895 45	$34,368 36	$27,527 09	$0 00	0 0%
2,500	750,000	$103,189 99	$57,280 60	$45,909 39	$103,189 99	$57,280 60	$45,909 39	$0 00	0 0%

Present Rates

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 97
Transmission Energy Charge (3)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

Proposed Rates

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 97
Transmission Energy Charge (4)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 97/kW

Note (2): includes the proposed Transmission Demand Charge of $3 97/kW

Note (3): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-32 Rate Customers

Hours Use: 400

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
200	80,000	$10,381 50	$6,109 93	$4,271 57	$10,381 50	$6,109 93	$4,271 57	$0 00	0 0%
750	300,000	$39,058 08	$22,912 24	$16,145 84	$39,058 08	$22,912 24	$16,145 84	$0 00	0 0%
1,000	400,000	$52,092 89	$30,549 65	$21,543 24	$52,092 89	$30,549 65	$21,543 24	$0 00	0 0%
1,500	600,000	$78,162 51	$45,824 48	$32,338 03	$78,162 51	$45,824 48	$32,338 03	$0 00	0 0%
2,500	1,000,000	$130,301 74	$76,374 13	$53,927 61	$130,301 74	$76,374 13	$53,927 61	$0 00	0 0%

Present Rates

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 97
Transmission Energy Charge (3)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

Proposed Rates

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 97
Transmission Energy Charge (4)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 97/kW

Note (2): includes the proposed Transmission Demand Charge of $3 97/kW

Note (3): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-32 Rate Customers

Hours Use: 500

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
200	100,000	$12,550 44	$7,637 41	$4,913 03	$12,550 44	$7,637 41	$4,913 03	$0 00	0 0%
750	375,000	$47,191 61	$28,640 30	$18,551 31	$47,191 61	$28,640 30	$18,551 31	$0 00	0 0%
1,000	500,000	$62,937 60	$38,187 07	$24,750 53	$62,937 60	$38,187 07	$24,750 53	$0 00	0 0%
1,500	750,000	$94,429 57	$57,280 60	$37,148 97	$94,429 57	$57,280 60	$37,148 97	$0 00	0 0%
2,500	1,250,000	$157,413 50	$95,467 66	$61,945 84	$157,413 50	$95,467 66	$61,945 84	$0 00	0 0%

Present Rates

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 97
Transmission Energy Charge (3)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

Proposed Rates

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 97
Transmission Energy Charge (4)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 97/kW

Note (2): includes the proposed Transmission Demand Charge of $3 97/kW

Note (3): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-32 Rate Customers

Hours Use: 600

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
200	120,000	$14,719 39	$9,164 90	$5,554 49	$14,719 39	$9,164 90	$5,554 49	$0 00	0 0%
750	450,000	$55,325 14	$34,368 36	$20,956 78	$55,325 14	$34,368 36	$20,956 78	$0 00	0 0%
1,000	600,000	$73,782 30	$45,824 48	$27,957 82	$73,782 30	$45,824 48	$27,957 82	$0 00	0 0%
1,500	900,000	$110,696 63	$68,736 72	$41,959 91	$110,696 63	$68,736 72	$41,959 91	$0 00	0 0%
2,500	1,500,000	$184,525 27	$114,561 20	$69,964 07	$184,525 27	$114,561 20	$69,964 07	$0 00	0 0%

<u>Present Rates</u>

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 97
Transmission Energy Charge (3)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

<u>Proposed Rates</u>

Customer Charge		$825 00
RE Growth Factor		$17 78
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 97
Transmission Energy Charge (4)	kWh x	$0 01047
Distribution Demand Charge - > 200 kW	kW x	$4 44
Distribution Energy Charge	kWh x	$0 00742
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (6)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 97/kW

Note (2): includes the proposed Transmission Demand Charge of $3 97/kW

Note (3): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the Base Transmission Charge of 0 905¢/kWh, the Transmission Adjustment Factor of 0 114¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-62 Rate Customers

Hours Use: 200

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
3,000	600,000	$103,288 86	$45,824 48	$57,464 38	$103,288 86	$45,824 48	$57,464 38	$0 00	0 0%
5,000	1,000,000	$160,101 01	$76,374 13	$83,726 88	$160,101 01	$76,374 13	$83,726 88	$0 00	0 0%
7,500	1,500,000	$231,116 20	$114,561 20	$116,555 00	$231,116 20	$114,561 20	$116,555 00	$0 00	0 0%
10,000	2,000,000	$302,131 39	$152,748 26	$149,383 13	$302,131 39	$152,748 26	$149,383 13	$0 00	0 0%
20,000	4,000,000	$586,192 16	$305,496 53	$280,695 63	$586,192 16	$305,496 53	$280,695 63	$0 00	0 0%

Present Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 22
Transmission Energy Charge (3)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

Proposed Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 22
Transmission Energy Charge (4)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 22/kW

Note (2): includes the proposed Transmission Demand Charge of $3 22/kW

Note (3): includes the Base Transmission Charge of 1 114¢/kWh, the Transmission Adjustment Factor of 0 236¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the proposed Base Transmission Charge of 1 114¢/kWh, the proposed Transmission Adjustment Factor of 0 236¢/kWh and the proposed Transmission Uncollectible Factor of 0 028¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-62 Rate Customers

Hours Use: 300

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
3,000	900,000	$134,913 60	$68,736 72	$66,176 88	$134,913 60	$68,736 72	$66,176 88	$0 00	0 0%
5,000	1,500,000	$212,808 91	$114,561 20	$98,247 71	$212,808 91	$114,561 20	$98,247 71	$0 00	0 0%
7,500	2,250,000	$310,178 05	$171,841 80	$138,336 25	$310,178 05	$171,841 80	$138,336 25	$0 00	0 0%
10,000	3,000,000	$407,547 19	$229,122 40	$178,424 79	$407,547 19	$229,122 40	$178,424 79	$0 00	0 0%
20,000	6,000,000	$797,023 75	$458,244 79	$338,778 96	$797,023 75	$458,244 79	$338,778 96	$0 00	0 0%

Present Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 22
Transmission Energy Charge (3)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

Proposed Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 22
Transmission Energy Charge (4)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 22/kW

Note (2): includes the proposed Transmission Demand Charge of $3 22/kW

Note (3): includes the Base Transmission Charge of 1 114¢/kWh, the Transmission Adjustment Factor of 0 236¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the proposed Base Transmission Charge of 1 114¢/kWh, the proposed Transmission Adjustment Factor of 0 236¢/kWh and the proposed Transmission Uncollectible Factor of 0 028¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-62 Rate Customers

Hours Use: 400

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
3,000	1,200,000	$166,538 34	$91,648 96	$74,889 38	$166,538 34	$91,648 96	$74,889 38	$0 00	0 0%
5,000	2,000,000	$265,516 80	$152,748 26	$112,768 54	$265,516 80	$152,748 26	$112,768 54	$0 00	0 0%
7,500	3,000,000	$389,239 90	$229,122 40	$160,117 50	$389,239 90	$229,122 40	$160,117 50	$0 00	0 0%
10,000	4,000,000	$512,962 99	$305,496 53	$207,466 46	$512,962 99	$305,496 53	$207,466 46	$0 00	0 0%
20,000	8,000,000	$1,007,855 35	$610,993 06	$396,862 29	$1,007,855 35	$610,993 06	$396,862 29	$0 00	0 0%

Present Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 22
Transmission Energy Charge (3)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

Proposed Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 22
Transmission Energy Charge (4)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 22/kW

Note (2): includes the proposed Transmission Demand Charge of $3 22/kW

Note (3): includes the Base Transmission Charge of 1 114¢/kWh, the Transmission Adjustment Factor of 0 236¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the proposed Base Transmission Charge of 1 114¢/kWh, the proposed Transmission Adjustment Factor of 0 236¢/kWh and the proposed Transmission Uncollectible Factor of 0 028¢/kWh

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Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-62 Rate Customers

Hours Use: 500

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
3,000	1,500,000	$198,163 08	$114,561 20	$83,601 88	$198,163 08	$114,561 20	$83,601 88	$0 00	0 0%
5,000	2,500,000	$318,224 71	$190,935 33	$127,289 38	$318,224 71	$190,935 33	$127,289 38	$0 00	0 0%
7,500	3,750,000	$468,301 74	$286,402 99	$181,898 75	$468,301 74	$286,402 99	$181,898 75	$0 00	0 0%
10,000	5,000,000	$618,378 79	$381,870 66	$236,508 13	$618,378 79	$381,870 66	$236,508 13	$0 00	0 0%
20,000	10,000,000	$1,218,686 95	$763,741 32	$454,945 63	$1,218,686 95	$763,741 32	$454,945 63	$0 00	0 0%

Present Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 22
Transmission Energy Charge (3)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

Proposed Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 22
Transmission Energy Charge (4)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 22/kW

Note (2): includes the proposed Transmission Demand Charge of $3 22/kW

Note (3): includes the Base Transmission Charge of 1 114¢/kWh, the Transmission Adjustment Factor of 0 236¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the proposed Base Transmission Charge of 1 114¢/kWh, the proposed Transmission Adjustment Factor of 0 236¢/kWh and the proposed Transmission Uncollectible Factor of 0 028¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

Calculation of Monthly Typical Bill
Total Bill Impact of Proposed
Rates Applicable to G-62 Rate Customers

Hours Use: 600

Monthly Power		Present Rates			Proposed Rates			Increase/(Decrease)	
kW	kWh	Total	Standard Offer	Delivery	Total	Standard Offer	Delivery	Amount	% of Total
3,000	1,800,000	$229,787 82	$137,473 44	$92,314 38	$229,787 82	$137,473 44	$92,314 38	$0 00	0 0%
5,000	3,000,000	$370,932 61	$229,122 40	$141,810 21	$370,932 61	$229,122 40	$141,810 21	$0 00	0 0%
7,500	4,500,000	$547,363 59	$343,683 59	$203,680 00	$547,363 59	$343,683 59	$203,680 00	$0 00	0 0%
10,000	6,000,000	$723,794 58	$458,244 79	$265,549 79	$723,794 58	$458,244 79	$265,549 79	$0 00	0 0%
20,000	12,000,000	$1,429,518 54	$916,489 58	$513,028 96	$1,429,518 54	$916,489 58	$513,028 96	$0 00	0 0%

Present Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (1)	kW x	$3 22
Transmission Energy Charge (3)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (7)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kWh x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (9)	kWh x	$0 07332

Proposed Rates

Customer Charge		$17,000 00
RE Growth Factor		$347 07
LIHEAP Charge		$0 73
Transmission Demand Charge (2)	kW x	$3 22
Transmission Energy Charge (4)	kWh x	$0 01378
Distribution Demand Charge	kW x	$3 81
Distribution Energy Charge	kWh x	$0 00120
Transition Energy Charge (8)	kWh x	($0 00058)
Energy Efficiency Program Charge	kWh x	$0 01107
Renewable Energy Distribution Charge (5)	kW x	$0 00241
Gross Earnings Tax		4%
Standard Offer Charge (10)	kWh x	$0 07332

Note (1): includes the current Transmission Demand Charge of $3 22/kW

Note (2): includes the proposed Transmission Demand Charge of $3 22/kW

Note (3): includes the Base Transmission Charge of 1 114¢/kWh, the Transmission Adjustment Factor of 0 236¢/kWh and the Transmission Uncollectible Factor of 0 028¢/kWh

Note (4): includes the proposed Base Transmission Charge of 1 114¢/kWh, the proposed Transmission Adjustment Factor of 0 236¢/kWh and the proposed Transmission Uncollectible Factor of 0 028¢/kWh

Note (5): includes the Net Metering Charge of 0 007¢/kWh and the Long Term Contracting Recovery Factor of 0 234¢/kWh

Note (6): includes the proposed Net Metering Charge of 0 007¢/kWh and the proposed Long Term Contracting for Renewable Energy Resource Charge of 0 234¢/kWh

Note (7): includes the current Transition Energy Charge of (0 058¢)/kWh

Note (8): includes the proposed Transition Energy Charge of (0 058¢)/kWh

Note (9): includes the base Standard Offer Service Charge of 7 699¢/kWh, the Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

Note (10): includes the base Standard Offer Service Charge of 7 699¢/kWh, the proposed Standard Offer Service Adjustment Charge of (1 014¢)/kWh, the proposed Standard Offer Service Administrative Cost Factor of 0 359¢/kWh and the Renewable Energy Standard Charge of 0 288¢/kWh

REDACTED

The Narragansett Electric Company
d/b/a National Grid
Illustrative Capacity Cost Recovery Factor (CCR)

Line No.	**Levelized Costs (2019-2038) ($)**	NE Levelized Costs ($) (a)	NGrid's Cost Share (b)	National Grid Levelized Costs ($)[3] (c)	Annual kWh (d)	CCR Factor $/kWh (e)
1	NED [1] (Stand-Alone)	[redacted]	7.2%	[redacted]	7,648,490,366	[redacted]
2	ANE [2] (Stand-Alone)	[redacted]	7.2%	[redacted]	7,648,490,366	[redacted]
3	Combined ANE and NED	[redacted]	7.2%	[redacted]	7,648,490,366	[redacted]
4	GDF Suez	[redacted]	7.2%	[redacted]	7,648,490,366	[redacted]
5	Repsol	[redacted]	7.2%	[redacted]	7,648,490,366	[redacted]
	Levelized Benefits (2019-2038) ($)	NE Levelized Benefits ($)	NGrid's Benefit Share	National Grid Levelized Benefits ($)	Annual kWh	Energy Savings Factor $/kWh
6	NED (Stand-Alone)	[redacted]	6.5%	[redacted]	7,648,490,366	[redacted]
7	ANE (Stand-Alone)	[redacted]	6.5%	[redacted]	7,648,490,366	[redacted]
8	Combined ANE and NED	[redacted]	6.5%	[redacted]	7,648,490,366	[redacted]
9	GDF Suez	[redacted]	6.5%	[redacted]	7,648,490,366	[redacted]
10	Repsol	[redacted]	6.5%	[redacted]	7,648,490,366	[redacted]
	Levelized Net Benefits (2019-2038) ($)	NE Levelized Net Benefits($)		National Grid Levelized Net Benefits($)	Annual kWh	Net Benefit $/kWh
11	NED (Stand-Alone)	[redacted]		[redacted]	7,648,490,366	($0.01114)
12	ANE (Stand-Alone)	[redacted]		[redacted]	7,648,490,366	($0.00917)
13	Combined ANE and NED	[redacted]		[redacted]	7,648,490,366	($0.00944)
14	GDF Suez	[redacted]		[redacted]	7,648,490,366	($0.00421)
15	Repsol	[redacted]		[redacted]	7,648,490,366	($0.00161)

[1] Kinder Morgan Northeast Energy Direct
[2] Spectra Access Northeast
[3] Includes Innovation Incentive of 2.75% of Total Costs.

(a) See Exhibit NG-JNC-3 Table 3
(b) Narragansett Electric's share of total contract costs and benefits. Assumes Municipalities do not share in any of the projected costs.
(c) Column (a) * Column (b)
(d) Estimate/Forecast
(e) Column (c) ÷ Column (d)

REDACTED

The Narragansett Electric Company
Bill Impacts for G-62 Customers in the Top 20
HIGHLY SENSITIVE CONFIDENTIAL INFORMATION

	Rate Class	G62										
	Customer Rank		1	2	3	4	5	7	8	13	15	19
	Customer Identifier		690	167	129	646	374	164	990	982	833	875
			Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts
	Charges	Rates	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(k)
(1)	Customer Charge	$17,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00
(2)	LIHEAP	$0 73	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76
(3)	Distribution Energy Charge	$0 00120	$113,569 09	$88,893 96	$70,791 87	$67,284 13	$57,141 14	$31,303 44	$35,564 28	$19,126 31	$19,512 46	$15,181 00
(4)	Renewable Energy Dist Charge	$0 00241	$228,084 58	$178,528 71	$142,173 67	$135,128 97	$114,758 45	$62,867 73	$71,424 92	$38,412 01	$39,187 52	$30,488 51
(5)	Distribution Demand Charge	$3 81	$701,619 12	$557,460 15	$429,990 89	$430,971 96	$319,739 01	$283,730 32	$218,216 61	$120,472 20	$151,744 68	$138,668 76
(6)	Transmission Demand Charge	$3 22	$592,969 44	$471,134 30	$363,404 37	$364,233 52	$270,225 62	$239,793 08	$184,424 53	$101,816 40	$128,246 16	$117,195 12
(7)	Transmission Adj Charge	$0 01378	$1,304,151 67	$1,020,798 99	$812,926 63	$772,646 12	$656,170 75	$359,467 79	$408,396 45	$219,633 83	$224,068 05	$174,328 52
(8)	Transition Charge	($0 00058)	($54,891 72)	($42,965 41)	($34,216 07)	($32,520 66)	($27,618 22)	($15,129 99)	($17,189 40)	($9,244 38)	($9,431 02)	($7,337 48)
(9)	Energy Efficiency	$0 01107	$1,047,674 82	$820,046 79	$653,054 99	$620,696 12	$527,127 01	$288,774 20	$328,080 46	$176,440 24	$180,002 42	$140,044 75
(10)	RE Growth Factor	$347 07	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84
(11)	HVD	($0 42)	($77,343 84)	($61,452 30)	($47,400 57)	($47,508 72)	($35,246 82)	($31,277 36)	($24,055 37)	$0 00	($16,727 76)	($15,286 32)
(12)	SOS	$0 07039	$6,662,167 64	$5,214,680 27	$4,152,778 84	$3,947,008 67	$3,352,002 40	$1,836,316 10	$2,086,264 74	$1,121,984 04	$1,144,635 97	$890,545 06
(13)	RES	$0 00293	$276,824 65	$216,679 03	$172,555 18	$164,005 07	$139,281 53	$76,302 13	$86,687 93	$46,620 39	$47,561 61	$37,003 70
(14)	HVM	-1 0%	($110,029 99)	($86,719 78)	($69,242 33)	($66,301 19)	($55,817 54)	($33,403 21)	($35,859 89)	($20,434 35)	($21,169 74)	($17,290 05)
(15)	Paperless Bill Credit	($0 34)	$0 00	$0 00	$0 00	$0 00	$0 00	($4 08)	($4 08)	$0 00	($4 08)	$0 00
		$0 02788										
(16)	Subtotal		$10,892,969 05	$8,585,258 30	$6,854,991 06	$6,563,817 58	$5,525,936 92	$3,306,913 75	$3,550,124 78	$2,023,000 28	$2,095,799 87	$1,711,715 17
(17)	Gross Earning Tax	4 0%	$453,873 71	$357,719 10	$285,624 63	$273,492 40	$230,247 37	$137,788 07	$147,921 87	$84,291 68	$87,324 99	$71,321 47
(18)	Earnings Tax Credit	-3 8%	$0 00	$0 00	$0 00	(259,817 83)	(218,735 05)	$0 00	$0 00	(80,077 11)	(82,958 76)	(67,755 41)
(19)	Total Bill		$11,346,842 76	$8,942,977 40	$7,140,615 69	$6,577,492 15	$5,537,449 24	$3,444,701 82	$3,698,046 65	$2,027,214 85	$2,100,166 10	$1,715,281 23
(20)	Capacity Cost Recovery Factor	[redacted]										
(21)	Innovation Incentive											
(22)	Energy Savings Factor											
(23)	Gross Earning Tax	4 0%	($36,160 71)	($28,304 08)	($22,540 33)	($21,423 45)	($18,193 90)	($9,967 10)	($11,323 76)	($6,089 87)	($6,212 82)	($4,833 67)
(24)	Earnings Tax Credit	-3 8%	$0 00	$0 00	$0 00	$20,352 29	$17,284 21	$0 00	$0 00	$5,785 38	$5,902 18	$4,591 99
(25)	Adjusted Bill		$10,442,824 95	$8,235,375 30	$6,577,107 49	$6,062,258 08	$5,099,886 01	$3,195,524 29	$3,414,952 54	$1,880,753 46	$1,950,747 77	$1,599,031 38
(26)	Change		($904,017 81)	($707,602 10)	($563,508 19)	($515,234 07)	($437,563 23)	($249,177 53)	($283,094 11)	($146,461 40)	($149,418 33)	($116,249 85)
(27)	% Change		-8 0%	-7 9%	-7 9%	-7 8%	-7 9%	-7 2%	-7 7%	-7 2%	-7 1%	-6 8%

Column and Line Notes:
Column (b), Lines (1) - (11); (14), (16), (21): Current Rates as of 4/1/2016,
Column (b), Lines (12) and (13): Average of July 2015 through June 2016 Rates
Column (b), Lines (20) - (22) : Proposed Rates
Line (16): Sum of Lines (1) - (14)
Line (19): Sum of Lines (16) - (18)
Line (25): Sum of Lines (20) - (24)
Line (26): Line (25) - Line (19)
Line (27): Line (26) ÷ Line (19)

REDACTED

The Narragansett Electric Company
Bill Impacts for G-32 Customers in the Top 20
HIGHLY SENSITIVE CONFIDENTIAL INFORMATION

	Rate Class	G32										
	Customer Rank		6	9	10	11	12	14	16	17	18	20
	Customer Identifier		194	474	461	1264	712	643	1032	292	835	1144
			Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts	Bill Amounts
	Charges	Rates	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015	CY 2015
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(k)
(1)	Customer Charge	$825 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00
(2)	LIHEAP	$0 73	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76
(3)	Distribution Energy Charge	$0 00742 ##	$288,074 81	$171,698 80	$211,980 27	$132,366 86	$127,874 14	$134,702 68	$101,868 36	$102,342 58	$98,172 38	$100,778 44
(4)	Renewable Energy Dist Charge	$0 00241 ##	$93,566 08	$55,767 40	$68,850 74	$42,992 47	$41,533 24	$43,751 14	$33,086 62	$33,240 65	$31,886 18	$32,732 62
(5)	Distribution Demand Charge	$4 44 ##	$411,776 70	$196,914 00	$203,742 72	$121,425 12	$107,909 76	$181,005 48	$84,022 56	$149,623 56	$102,106 68	$113,175 60
(6)	Transmission Demand Charge	$3 97 ##	$377,715 73	$185,597 50	$191,703 36	$118,099 56	$106,014 88	$171,372 99	$84,656 28	$143,313 03	$100,826 09	$110,723 30
(7)	Transmission Adj Charge	$0 01047 ##	$406,488 32	$242,275 80	$299,115 02	$186,776 42	$180,436 95	$190,072 38	$143,741 48	$144,410 62	$138,526 26	$142,203 54
(8)	Transition Charge	($0 00058) ##	($22,517 98)	($13,421 20)	($16,569 89)	($10,346 74)	($9,995 55)	($10,529 32)	($7,962 76)	($7,999 82)	($7,673 85)	($7,877 56)
(9)	Energy Efficiency	$0 01107 ##	$429,782 78	$256,159 80	$316,256 28	$197,479 94	$190,777 18	$200,964 78	$151,978 81	$152,686 30	$146,464 72	$150,352 74
(10)	RE Growth Factor	$17 78 ##	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36
(11)	HVD	($0 42) ##	($39,959 85)	($19,635 00)	($20,280 96)	$0 00	$0 00	($18,130 14)	($8,956 08)	($15,161 58)	$0 00	($11,713 80)
(12)	SOS	$0 07039	$2,732,990 10	$1,628,921 02	$2,011,074 76	$1,255,775 62	$1,213,152 72	$1,277,935 70	$966,433 77	$970,932 66	$931,369 66	$956,093 57
(13)	RES	$0 00293	$113,560 49	$67,684 50	$83,563 65	$52,179 66	$50,408 60	$53,100 45	$40,157 00	$40,343 94	$38,700 03	$39,727 35
(14)	HVM	-1 0%	$0 00	($27,820 85)	($33,595 58)	$0 00	$0 00	($22,343 68)	$0 00	($17,238 54)	($15,905 00)	($16,363 18)
(15)	Second Feeder Charge	$2 75 ##	$0 00	$0 00	$0 00	$0 00	$89,710 50	$0 00	$0 00	$0 00	$90,420 00	$0 00
(16)	Paperless Bill Credit	($0 34)	$0 00	$0 00	($4 08)	$0 00	($4 08)	($4 08)	($4 08)	$0 00	$0 00	$0 00
		$0 03079										
(17)	Subtotal		$4,801,599 29	$2,754,263 89	$3,325,958 42	$2,106,871 05	$2,107,940 47	$2,212,020 50	$1,599,144 10	$1,706,615 50	$1,665,015 26	$1,619,954 74
(18)	Gross Earning Tax	4%	$200,066 64	$114,761 00	$138,581 60	$87,786 29	$87,830 85	$92,167 52	$66,631 00	$71,108 98	$69,375 64	$67,498 11
(19)	Earnings Tax Credit	-3 8%	$0 00	$0 00	$0 00	(83,397 00)	$0 00	(87,559 16)	$0 00	(67,553 54)		
(20)	Total Bill		$5,001,665 93	$2,869,024 89	$3,464,540 02	$2,111,260 34	$2,195,771 32	$2,216,628 86	$1,665,775 10	$1,710,170 94	$1,734,390 90	$1,687,452 85
(21)	Capacity Cost Recovery Factor	[redacted]										
(22)	Innovation Incentive	[redacted]										
(23)	Energy Savings Factor	[redacted]										
(24)	Gross Earning Tax	4%	($14,834 04)	($8,841 41)	($10,915 65)	($6,816 06)	($6,584 71)	($6,936 34)	($5,245 58)	($5,270 00)	($5,055 26)	($5,189 46)
(25)	Earnings Tax Credit	-3 8%	$0 00	$0 00	$0 00	$6,475 26	$0 00	$6,589 53	$0 00	$5,006 50		
(26)	Adjusted Bill		$4,630,814 90	$2,647,989 68	$3,191,648 75	$1,947,334 07	$2,031,153 48	$2,049,809 87	$1,534,635 60	$1,583,427 47	$1,608,009 40	$1,557,716 45
(27)	Change		($370,851 03)	($221,035 21)	($272,891 27)	($163,926 26)	($164,617 84)	($166,818 99)	($131,139 50)	($126,743 48)	($126,381 50)	($129,736 40)
(28)	% Change		-7 4%	-7 7%	-7 9%	-7 8%	-7 5%	-7 5%	-7 9%	-7 4%	-7 3%	-7 7%

Column and Line Notes:
Column (b), Lines (1) - (11); (13), (14), (15), (16): Current Rates as of 4/1/2016,
Column (b), Lines (12) and (13): Average of July 2015 through June 2016 Rates
Column (b), Lines (21) - (23) : Proposed Rates
Line (17): Sum of Lines (1) - (16)
Line (20): Sum of Lines (17) - (19)
Line (26): Sum of Lines (20) - (25)
Line (27): Line (26) - Line (20)
Line (28): Line (27) ÷ Line (20)

REDACTED

The Narragansett Electric Company
Bill Impacts for G-62 Customers in the Top 20
HIGHLY SENSITIVE CONFIDENTIAL INFORMATION

	Rate Class	G62										
	Customer Rank		1	2	3	4	5	7	8	13	15	19
	Customer Identifier		690	167	129	646	374	164	990	982	833	875
	Customer Name:		U S Navy Naval Station	Brown University	URI State of RI	Electric Boat Corporation	Immunex RI Corp	Rouse Prov LLC	Twin River	Raytheon Mfg Co	Teknor Apex Co	Immunex RI Corp
	Charges	Rates	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(k)
(1)	Customer Charge	$17,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00	$204,000 00
(2)	LIHEAP	$0 73	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76
(3)	Distribution Energy Charge	$0 00120	$113,569 09	$88,893 96	$70,791 87	$67,284 13	$57,141 14	$31,303 44	$35,564 28	$19,126 31	$19,512 46	$15,181 00
(4)	Renewable Energy Dist Charge	$0 00241	$228,084 58	$178,528 71	$142,173 67	$135,128 97	$114,758 45	$62,867 73	$71,424 92	$38,412 01	$39,187 52	$30,488 51
(5)	Distribution Demand Charge	$3 81	$701,619 12	$557,460 15	$429,990 89	$430,971 96	$319,739 01	$283,730 32	$218,216 61	$120,472 20	$151,744 68	$138,668 76
(6)	Transmission Demand Charge	$3 22	$592,969 44	$471,134 30	$363,404 37	$364,233 52	$270,225 62	$239,793 08	$184,424 53	$101,816 40	$128,246 16	$117,195 12
(7)	Transmission Adj Charge	$0 01378	$1,304,151 67	$1,020,798 99	$812,926 63	$772,646 12	$656,170 75	$359,467 79	$408,396 45	$219,633 83	$224,068 05	$174,328 52
(8)	Transition Charge	($0 00058)	($54,891 72)	($42,965 41)	($34,216 07)	($32,520 66)	($27,618 22)	($15,129 99)	($17,189 40)	($9,244 38)	($9,431 02)	($7,337 48)
(9)	Energy Efficiency	$0 01107	$1,047,674 82	$820,046 79	$653,054 99	$620,696 12	$527,127 01	$288,774 20	$328,080 46	$176,440 24	$180,002 42	$140,044 75
(10)	RE Growth Factor	$347 07	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84	$4,164 84
(11)	HVD	($0 42)	($77,343 84)	($61,452 30)	($47,400 57)	($47,508 72)	($35,246 82)	($31,277 36)	($24,055 37)	$0 00	($16,727 76)	($15,286 32)
(12)	SOS	$0 07039	$6,662,167 64	$5,214,680 27	$4,152,778 84	$3,947,008 67	$3,352,002 40	$1,836,316 10	$2,086,264 74	$1,121,984 04	$1,144,635 97	$890,545 06
(13)	RES	$0 00293	$276,824 65	$216,679 03	$172,555 18	$164,005 07	$139,281 53	$76,302 13	$86,687 93	$46,620 39	$47,561 61	$37,003 70
(14)	HVM	-1 0%	($110,029 99)	($86,719 78)	($69,242 33)	($66,301 19)	($55,817 54)	($33,403 21)	($35,859 89)	($20,434 35)	($21,169 74)	($17,290 05)
(15)	Paperless Bill Credit	($0 34)	$0 00	$0 00	$0 00	$0 00	$0 00	($4 08)	($4 08)	$0 00	($4 08)	$0 00
		$0 02788										
(16)	Subtotal		$10,892,969 05	$8,585,258 30	$6,854,991 06	$6,563,817 58	$5,525,936 92	$3,306,913 75	$3,550,124 78	$2,023,000 28	$2,095,799 87	$1,711,715 17
(17)	Gross Earning Tax	4 0%	$453,873 71	$357,719 10	$285,624 63	$273,492 40	$230,247 37	$137,788 07	$147,921 87	$84,291 68	$87,324 99	$71,321 47
(18)	Earnings Tax Credit	-3 8%	$0 00	$0 00	$0 00	(259,817 83)	(218,735 05)	$0 00	$0 00	(80,077 11)	(82,958 76)	(67,755 41)
(19)	Total Bill		$11,346,842 76	$8,942,977 40	$7,140,615 69	$6,577,492 15	$5,537,449 24	$3,444,701 82	$3,698,046 65	$2,027,214 85	$2,100,166 10	$1,715,281 23
(20)	Capacity Cost Recovery Factor	[redacted]										
(21)	Innovation Incentive											
(22)	Energy Savings Factor											
(23)	Gross Earning Tax	4 0%	($36,160 71)	($28,304 08)	($22,540 33)	($21,423 45)	($18,193 90)	($9,967 10)	($11,323 76)	($6,089 87)	($6,212 82)	($4,833 67)
(24)	Earnings Tax Credit	-3 8%	$0 00	$0 00	$0 00	$20,352 29	$17,284 21	$0 00	$0 00	$5,785 38	$5,902 18	$4,591 99
(25)	Adjusted Bill		$10,442,824 95	$8,235,375 30	$6,577,107 49	$6,062,258 08	$5,099,886 01	$3,195,524 29	$3,414,952 54	$1,880,753 46	$1,950,747 77	$1,599,031 38
(26)	Change		($904,017 81)	($707,602 10)	($563,508 19)	($515,234 07)	($437,563 23)	($249,177 53)	($283,094 11)	($146,461 40)	($149,418 33)	($116,249 85)
(27)	% Change		-8 0%	-7 9%	-7 9%	-7 8%	-7 9%	-7 2%	-7 7%	-7 2%	-7 1%	-6 8%

Column and Line Notes:
Column (b), Lines (1) - (11); (14), (16), (21): Current Rates as of 4/1/2016,
Column (b), Lines (12) and (13): Average of July 2015 through June 2016 Rates
Column (b), Lines (20) - (22) : Proposed Rates
Line (16): Sum of Lines (1) - (14)
Line (19): Sum of Lines (16) - (18)
Line (25): Sum of Lines (20) - (24)
Line (26): Line (25) - Line (19)
Line (27): Line (26) ÷ Line (19)

REDACTED

The Narragansett Electric Company
Bill Impacts for G-32 Customers in the Top 20
HIGHLY SENSITIVE CONFIDENTIAL INFORMATION

	Rate Class	G32										
	Customer Rank		6	9	10	11	12	14	16	17	18	20
	Customer Identifier		194	474	461	1264	712	643	1032	292	835	1144
	Customer Name:		Rhode Island Hospital	Providence College	Rhode Island LFG Genco LLC	Aspen Aerogels	CVS Care Mark	State of RI 355	Bell Atlantic	General Cable Corp	Woman & Infants Hospital	Veteran's Medical Center
	Charges	Rates	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015	Bill Amounts CY 2015
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(k)
(1)	Customer Charge	$825 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00	$9,900 00
(2)	LIHEAP	$0 73	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76	$8 76
(3)	Distribution Energy Charge	$0 00742	$288,074 81	$171,698 80	$211,980 27	$132,366 86	$127,874 14	$134,702 68	$101,868 36	$102,342 58	$98,172 38	$100,778 44
(4)	Renewable Energy Dist Charge	$0 00241	$93,566 08	$55,767 40	$68,850 74	$42,992 47	$41,533 24	$43,751 14	$33,086 62	$33,240 65	$31,886 18	$32,732 62
(5)	Distribution Demand Charge	$4 44	$411,776 70	$196,914 00	$203,742 72	$121,425 12	$107,909 76	$181,005 48	$84,022 56	$149,623 56	$102,106 68	$113,175 60
(6)	Transmission Demand Charge	$3 97	$377,715 73	$185,597 50	$191,703 36	$118,099 56	$106,014 88	$171,372 99	$84,656 28	$143,313 03	$100,826 09	$110,723 30
(7)	Transmission Adj Charge	$0 01047	$406,488 32	$242,275 80	$299,115 02	$186,776 42	$180,436 95	$190,072 38	$143,741 48	$144,410 62	$138,526 26	$142,203 54
(8)	Transition Charge	($0 00058)	($22,517 98)	($13,421 20)	($16,569 89)	($10,346 74)	($9,995 55)	($10,529 32)	($7,962 76)	($7,999 82)	($7,673 85)	($7,877 56)
(9)	Energy Efficiency	$0 01107	$429,782 78	$256,159 80	$316,256 28	$197,479 94	$190,777 18	$200,964 78	$151,978 81	$152,686 30	$146,464 72	$150,352 74
(10)	RE Growth Factor	$17 78	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36	$213 36
(11)	HVD	($0 42)	($39,959 85)	($19,635 00)	($20,280 96)	$0 00	$0 00	($18,130 14)	($8,956 08)	($15,161 58)	$0 00	($11,713 80)
(12)	SOS	$0 07039	$2,732,990 10	$1,628,921 02	$2,011,074 76	$1,255,775 62	$1,213,152 72	$1,277,935 70	$966,433 77	$970,932 66	$931,369 66	$956,093 57
(13)	RES	$0 00293	$113,560 49	$67,684 50	$83,563 65	$52,179 66	$50,408 60	$53,100 45	$40,157 00	$40,343 94	$38,700 03	$39,727 35
(14)	HVM	-1 0%	$0 00	($27,820 85)	($33,595 58)	$0 00	$0 00	($22,343 68)	$0 00	($17,238 54)	($15,905 00)	($16,363 18)
(15)	Second Feeder Charge	$2 75	$0 00	$0 00	$0 00	$0 00	$89,710 50	$0 00	$0 00	$0 00	$90,420 00	$0 00
(16)	Paperless Bill Credit	($0 34)	$0 00	$0 00	($4 08)	$0 00	($4 08)	($4 08)	($4 08)	$0 00	$0 00	$0 00
		$0 03079										
(17)	Subtotal		$4,801,599 29	$2,754,263 89	$3,325,958 42	$2,106,871 05	$2,107,940 47	$2,212,020 50	$1,599,144 10	$1,706,615 50	$1,665,015 26	$1,619,954 74
(18)	Gross Earning Tax	4%	$200,066 64	$114,761 00	$138,581 60	$87,786 29	$87,830 85	$92,167 52	$66,631 00	$71,108 98	$69,375 64	$67,498 11
(19)	Earnings Tax Credit	-3 8%	$0 00	$0 00	$0 00	(83,397 00)	$0 00	(87,559 16)	$0 00	(67,553 54)		
(20)	Total Bill		$5,001,665 93	$2,869,024 89	$3,464,540 02	$2,111,260 34	$2,195,771 32	$2,216,628 86	$1,665,775 10	$1,710,170 94	$1,734,390 90	$1,687,452 85
(21)	Capacity Cost Recovery Factor	[redacted]										
(22)	Innovation Incentive											
(23)	Energy Savings Factor											
(24)	Gross Earning Tax	4%	($14,834 04)	($8,841 41)	($10,915 65)	($6,816 06)	($6,584 71)	($6,936 34)	($5,245 58)	($5,270 00)	($5,055 26)	($5,189 46)
(25)	Earnings Tax Credit	-3 8%	$0 00	$0 00	$0 00	$6,475 26	$0 00	$6,589 53	$0 00	$5,006 50		
(26)	Adjusted Bill		$4,630,814 90	$2,647,989 68	$3,191,648 75	$1,947,334 07	$2,031,153 48	$2,049,809 87	$1,534,635 60	$1,583,427 47	$1,608,009 40	$1,557,716 45
(27)	Change		($370,851 03)	($221,035 21)	($272,891 27)	($163,926 26)	($164,617 84)	($166,818 99)	($131,139 50)	($126,743 48)	($126,381 50)	($129,736 40)
(28)	% Change		-7 4%	-7 7%	-7 9%	-7 8%	-7 5%	-7 5%	-7 9%	-7 4%	-7 3%	-7 7%

Column and Line Notes:
Column (b), Lines (1) - (11); (13), (14), (15), (16): Current Rates as of 4/1/2016,
Column (b), Lines (12) and (13): Average of July 2015 through June 2016 Rates
Column (b), Lines (21) - (23) : Proposed Rates
Line (17): Sum of Lines (1) - (16)
Line (20): Sum of Lines (17) - (19)
Line (26): Sum of Lines (20) - (25)
Line (27): Line (26) - Line (20)
Line (28): Line (27) ÷ Line (20)

REDACTED

Attachment 4

Rhode Island Benefit Share	6.50%
Rhode Island Cost Share	7.20%

($million, nominal)

Year	Total Annual Costs With ANE Only	Total Annual Benefits With ANE Only	Rhode Island Costs With ANE Only	Rhode Island Benefits With ANE Only	Rhode Island Net Benefits With ANE Only	Innovation Incentive as % of ANE Contract Costs	Annual Innovation Incentive for Narragansett Electric	Innovation Incentive as % of Net Benefits to RI
2016	[redacted]	[redacted]	[redacted]	[redacted]	$0.00			
2017	[redacted]	[redacted]	[redacted]	[redacted]	$0.00			
2018	[redacted]	[redacted]	[redacted]	[redacted]	$0.00			
2019	[redacted]	[redacted]	[redacted]	[redacted]	$1.96	2.75%	[redacted]	6.30%
2020	[redacted]	[redacted]	[redacted]	[redacted]	$17 55	2.75%	[redacted]	2.00%
2021	[redacted]	[redacted]	[redacted]	[redacted]	$24 08	2.75%	[redacted]	3.68%
2022	[redacted]	[redacted]	[redacted]	[redacted]	$51.45	2.75%	[redacted]	2.02%
2023	[redacted]	[redacted]	[redacted]	[redacted]	$61.48	2.75%	[redacted]	1.69%
2024	[redacted]	[redacted]	[redacted]	[redacted]	$64.61	2.75%	[redacted]	1.61%
2025	[redacted]	[redacted]	[redacted]	[redacted]	$83 37	2.75%	[redacted]	1.25%
2026	[redacted]	[redacted]	[redacted]	[redacted]	$84.61	2.75%	[redacted]	1.23%
2027	[redacted]	[redacted]	[redacted]	[redacted]	$97.75	2.75%	[redacted]	1.06%
2028	[redacted]	[redacted]	[redacted]	[redacted]	$92.61	2.75%	[redacted]	1.12%
2029	[redacted]	[redacted]	[redacted]	[redacted]	$96.40	2.75%	[redacted]	1.08%
2030	[redacted]	[redacted]	[redacted]	[redacted]	$107.45	2.75%	[redacted]	0.97%
2031	[redacted]	[redacted]	[redacted]	[redacted]	$99 23	2.75%	[redacted]	1.05%
2032	[redacted]	[redacted]	[redacted]	[redacted]	$117.28	2.75%	[redacted]	0.89%
2033	[redacted]	[redacted]	[redacted]	[redacted]	$109.74	2.75%	[redacted]	0.95%
2034	[redacted]	[redacted]	[redacted]	[redacted]	$117.35	2.75%	[redacted]	0.89%
2035	[redacted]	[redacted]	[redacted]	[redacted]	$103.93	2.75%	[redacted]	1.00%
2036	[redacted]	[redacted]	[redacted]	[redacted]	$107.83	2.75%	[redacted]	0.97%
2037	[redacted]	[redacted]	[redacted]	[redacted]	$117.63	2.75%	[redacted]	0.88%
2038	[redacted]	[redacted]	[redacted]	[redacted]	$126.78	2.75%	[redacted]	0.82%
Total (2019-2038)					**$1,683.09**		[redacted]	**1.13%**

REDACTED

Source: Black & Veatch Annual Benefits and Costs
Nominal$$ (M)
DRAFT - SUBJECT TO REVISION

Discount Rate	7.06%
Rhode Island Benefit Share	6.50%
Rhode Island Cost Share	7.20%

Total Benefits for Rhode Island ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

Annual Monthly Price Reduction Benefits ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

Annual Daily Price Volatility Reduction Benefits ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

Annual Costs for Rhode Island ($Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$ [redacted]						
2017	$ [redacted]						
2018	$ [redacted]						
2019	$ [redacted]						
2020	$ [redacted]						
2021	$ [redacted]						
2022	$ [redacted]						
2023	$ [redacted]						
2024	$ [redacted]						
2025	$ [redacted]						
2026	$ [redacted]						
2027	$ [redacted]						
2028	$ [redacted]						
2029	$ [redacted]						
2030	$ [redacted]						
2031	$ [redacted]						
2032	$ [redacted]						
2033	$ [redacted]						
2034	$ [redacted]						
2035	$ [redacted]						
2036	$ [redacted]						
2037	$ [redacted]						
2038	$ [redacted]						

	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$ [redacted]						
Cumulative Present Value (2016$)	$ [redacted]						
Annual Levelized	$ [redacted]						

Annual Net Benefits for Rhode Island ($ Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$ [redacted]						
2017	$						
2018	$						
2019	$						
2020	$						
2021	$						
2022	$						
2023	$						
2024	$						
2025	$						
2026	$						
2027	$						
2028	$						
2029	$						
2030	$						
2031	$						
2032	$						
2033	$						
2034	$						
2035	$						
2036	$						
2037	$						
2038	$						

	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$ [redacted]						
Cumulative Present Value (2016$)	$						
Annual Levelized	$						

REDACTED

Source: Black & Veatch Annual Benefits and Costs
Nominal$$ (M)
DRAFT - SUBJECT TO REVISION

Discount Rate	7.06%
Rhode Island Benefit Share	6.50%
Rhode Island Cost Share	7.20%

Total Benefits for Rhode Island ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

							Sensitivity Reference Case A -	Sensitivity Reference Case B -
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

Annual Monthly Price Reduction Benefits ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

REDACTED

Annual Daily Price Volatility Reduction Benefits ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

Annual Costs for Rhode Island ($Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$	[redacted]						
2017	$							
2018	$							
2019	$							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

		With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$	[redacted]						
Cumulative Present Value (2016$)	$							
Annual Levelized	$							

Annual Net Benefits for Rhode Island ($ Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2016	$ [redacted]						
2017	$						
2018	$						
2019	$						
2020	$						
2021	$						
2022	$						
2023	$						
2024	$						
2025	$						
2026	$						
2027	$						
2028	$						
2029	$						
2030	$						
2031	$						
2032	$						
2033	$						
2034	$						
2035	$						
2036	$						
2037	$						
2038	$						

	With NED Only	With ANE Only	With Both NED and ANE	With GDF Suez	With Repsol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
Average Annual (2019-2038)	$ [redacted]						
Cumulative Present Value (2016$)	$						
Annual Levelized	$						

REDACTED

Source: Black & Veatch Annual Benefits and Costs
DRAFT - SUBJECT TO REVISION

Annual New England Load Weighted LMP Prices (2015$/MWh)

Year	Reference Case	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A	Sensitivity Reference Case B	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]							
2020	$ [redacted]							
2021	$ [redacted]							
2022	$ [redacted]							
2023	$ [redacted]							
2024	$ [redacted]							
2025	$ [redacted]							
2026	$ [redacted]							
2027	$ [redacted]							
2028	$ [redacted]							
2029	$ [redacted]							
2030	$ [redacted]							
2031	$ [redacted]							
2032	$ [redacted]							
2033	$ [redacted]							
2034	$ [redacted]							
2035	$ [redacted]							
2036	$ [redacted]							
2037	$ [redacted]							
2038	$ [redacted]							

Annual RI Load Weighted LMP Prices (2015$/MWh)

Year	Reference Case	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A	Sensitivity Reference Case B	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]							
2020	$ [redacted]							
2021	$ [redacted]							
2022	$ [redacted]							
2023	$ [redacted]							
2024	$ [redacted]							
2025	$ [redacted]							
2026	$ [redacted]							
2027	$ [redacted]							
2028	$ [redacted]							
2029	$ [redacted]							
2030	$ [redacted]							
2031	$ [redacted]							
2032	$ [redacted]							
2033	$ [redacted]							
2034	$ [redacted]							
2035	$ [redacted]							
2036	$ [redacted]							
2037	$ [redacted]							
2038	$ [redacted]							

Annual Reduction in LMP Prices (2015$/MWh)

Year	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]				
2020	$ [redacted]				
2021	$ [redacted]				
2022	$ [redacted]				
2023	$ [redacted]				
2024	$ [redacted]				
2025	$ [redacted]				
2026	$ [redacted]				
2027	$ [redacted]				
2028	$ [redacted]				
2029	$ [redacted]				
2030	$ [redacted]				
2031	$ [redacted]				
2032	$ [redacted]				
2033	$ [redacted]				
2034	$ [redacted]				
2035	$ [redacted]				
2036	$ [redacted]				
2037	$ [redacted]				
2038	$ [redacted]				

Annual New England Electric Load

Year	ISO-NE
2019	128,785,942
2020	128,282,930
2021	127,905,945
2022	127,720,037
2023	127,660,017
2024	127,685,928
2025	127,568,027
2026	127,547,951
2027	127,499,924
2028	127,427,044
2029	127,396,024
2030	127,336,104
2031	127,285,129
2032	127,239,169
2033	127,181,944
2034	127,134,797
2035	127,082,907
2036	127,032,951
2037	126,981,901
2038	126,930,031

Annual RI Reduction in LMP Prices (2015$/MWh)

Year	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]				
2020	$ [redacted]				
2021	$ [redacted]				
2022	$ [redacted]				
2023	$ [redacted]				
2024	$ [redacted]				
2025	$ [redacted]				
2026	$ [redacted]				
2027	$ [redacted]				
2028	$ [redacted]				
2029	$ [redacted]				
2030	$ [redacted]				
2031	$ [redacted]				
2032	$ [redacted]				
2033	$ [redacted]				
2034	$ [redacted]				
2035	$ [redacted]				
2036	$ [redacted]				
2037	$ [redacted]				
2038	$ [redacted]				

Annual RI Electric Load

Year	RI
2019	10,834,970
2020	10,770,916
2021	10,719,949
2022	10,690,013
2023	10,681,045
2024	10,675,959
2025	10,656,993
2026	10,650,042
2027	10,636,975
2028	10,624,026
2029	10,613,989
2030	10,601,990
2031	10,589,992
2032	10,579,022
2033	10,566,997
2034	10,556,000
2035	10,543,984
2036	10,531,971
2037	10,520,959
2038	10,508,965

REDACTED

Annual New England Monthly Price Reduction Benefits (2015$Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]				
2020	$				
2021	$				
2022	$				
2023	$				
2024	$				
2025	$				
2026	$				
2027	$				
2028	$				
2029	$				
2030	$				
2031	$				
2032	$				
2033	$				
2034	$				
2035	$				
2036	$				
2037	$				
2038	$				

Annual New England Monthly Price Reduction Benefits (Nominal/$Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]				
2020	$				
2021	$				
2022	$				
2023	$				
2024	$				
2025	$				
2026	$				
2027	$				
2028	$				
2029	$				
2030	$				
2031	$				
2032	$				
2033	$				
2034	$				
2035	$				
2036	$				
2037	$				
2038	$				

GDP Deflator	
2015	1.105016
2018	1.167733
2019	1.189538
2020	1.210594
2021	1.23139
2022	1.251797
2023	1.272188
2024	1.292627
2025	1.314176
2026	1.336141
2027	1.358711
2028	1.381942
2029	1.405797
2030	1.430833
2031	1.457554
2032	1.484742
2033	1.512554
2034	1.540366
2035	1.568936
2036	1.59847
2037	1.62882
2038	1.660722

Annual RI Monthly Price Reduction Benefits (2015$Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]				
2020	$				
2021	$				
2022	$				
2023	$				
2024	$				
2025	$				
2026	$				
2027	$				
2028	$				
2029	$				
2030	$				
2031	$				
2032	$				
2033	$				
2034	$				
2035	$				
2036	$				
2037	$				
2038	$				

Annual RI Monthly Price Reduction Benefits (Nominal/$Millions)

Year	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]				
2020	$				
2021	$				
2022	$				
2023	$				
2024	$				
2025	$				
2026	$				
2027	$				
2028	$				
2029	$				
2030	$				
2031	$				
2032	$				
2033	$				
2034	$				
2035	$				
2036	$				
2037	$				
2038	$				

GDP Deflator	
2015	1.105016
2018	1.167733
2019	1.189538
2020	1.210594
2021	1.23139
2022	1.251797
2023	1.272188
2024	1.292627
2025	1.314176
2026	1.336141
2027	1.358711
2028	1.381942
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2030	1.430833
2031	1.457554
2032	1.484742
2033	1.512554
2034	1.540366
2035	1.568936
2036	1.59847
2037	1.62882
2038	1.660722

Source: Black & Veatch Annual Benefits and Costs
DRAFT - SUBJECT TO REVISION

Annual New England Load Weighted LMP Prices (2015$/MWh)

Year	Reference Case	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A	Sensitivity Reference Case B	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

Annual RI Load Weighted LMP Prices (2015$/MWh)

Year	Reference Case	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A	Sensitivity Reference Case B	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]							
2020	$							
2021	$							
2022	$							
2023	$							
2024	$							
2025	$							
2026	$							
2027	$							
2028	$							
2029	$							
2030	$							
2031	$							
2032	$							
2033	$							
2034	$							
2035	$							
2036	$							
2037	$							
2038	$							

Annual Reduction in LMP Prices (2015$/MWh)

Year	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]				
2020	$				
2021	$				
2022	$				
2023	$				
2024	$				
2025	$				
2026	$				
2027	$				
2028	$				
2029	$				
2030	$				
2031	$				
2032	$				
2033	$				
2034	$				
2035	$				
2036	$				
2037	$				
2038	$				

Annual New England Electric Load

Year	ISO-NE
2019	128,785,942
2020	128,282,930
2021	127,905,945
2022	127,720,037
2023	127,660,017
2024	127,685,928
2025	127,568,027
2026	127,547,951
2027	127,499,924
2028	127,427,044
2029	127,396,024
2030	127,336,104
2031	127,285,129
2032	127,239,169
2033	127,181,944
2034	127,134,797
2035	127,082,907
2036	127,032,951
2037	126,981,901
2038	126,930,031

Annual RI Reduction in LMP Prices (2015$/MWh)

Year	With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$ [redacted]				
2020	$				
2021	$				
2022	$				
2023	$				
2024	$				
2025	$				
2026	$				
2027	$				
2028	$				
2029	$				
2030	$				
2031	$				
2032	$				
2033	$				
2034	$				
2035	$				
2036	$				
2037	$				
2038	$				

Annual RI Electric Load

Year	RI
2019	10,834,970
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2021	10,719,949
2022	10,690,013
2023	10,681,045
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2029	10,613,989
2030	10,601,990
2031	10,589,992
2032	10,579,022
2033	10,566,997
2034	10,556,000
2035	10,543,984
2036	10,531,971
2037	10,520,959
2038	10,508,965

Annual New England Monthly Price Reduction Benefits (2015$Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$	[redacted]				
2020	$					
2021	$					
2022	$					
2023	$					
2024	$					
2025	$					
2026	$					
2027	$					
2028	$					
2029	$					
2030	$					
2031	$					
2032	$					
2033	$					
2034	$					
2035	$					
2036	$					
2037	$					
2038	$					

Annual New England Monthly Price Reduction Benefits (Nominal/$Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$	[redacted]				
2020	$					
2021	$					
2022	$					
2023	$					
2024	$					
2025	$					
2026	$					
2027	$					
2028	$					
2029	$					
2030	$					
2031	$					
2032	$					
2033	$					
2034	$					
2035	$					
2036	$					
2037	$					
2038	$					

GDP Deflator	
2015	1.105016
2018	1.167733
2019	1.189538
2020	1.210594
2021	1.23139
2022	1.251797
2023	1.272188
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2025	1.314176
2026	1.336141
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2028	1.381942
2029	1.405797
2030	1.430833
2031	1.457554
2032	1.484742
2033	1.512554
2034	1.540366
2035	1.568936
2036	1.59847
2037	1.62882
2038	1.660722

Annual RI Monthly Price Reduction Benefits (2015$Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$	[redacted]				
2020	$					
2021	$					
2022	$					
2023	$					
2024	$					
2025	$					
2026	$					
2027	$					
2028	$					
2029	$					
2030	$					
2031	$					
2032	$					
2033	$					
2034	$					
2035	$					
2036	$					
2037	$					
2038	$					

Annual RI Monthly Price Reduction Benefits (Nominal/$Millions)

Year		With NED Only	With ANE Only	With Both NED and ANE	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
2019	$					
2020	$	[redacted]				
2021	$					
2022	$					
2023	$					
2024	$					
2025	$					
2026	$					
2027	$					
2028	$					
2029	$					
2030	$					
2031	$					
2032	$					
2033	$					
2034	$					
2035	$					
2036	$					
2037	$					
2038	$					

GDP Deflator	
2015	1.105016
2018	1.167733
2019	1.189538
2020	1.210594
2021	1.23139
2022	1.251797
2023	1.272188
2024	1.292627
2025	1.314176
2026	1.336141
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2030	1.430833
2031	1.457554
2032	1.484742
2033	1.512554
2034	1.540366
2035	1.568936
2036	1.59847
2037	1.62882
2038	1.660722

DIV 1-25

Request:

In a May 26, 2016 email, the Company provided responses to certain data requests from the Division and OER. Please provide copies of those responses with attachments.

Response:

Please see Attachment DIV-1-24-A-3 (Highly Sensitive Confidential Information) (Supplemental) submitted in response to data request DIV-1-24.

Prepared by or under the supervision of: Counsel

REDACTED

DIV 1-26

Request:

The CONFIDENTIAL table below provides a summary of the information provided on May 11, 2016 and May 26, 2016.

			CNPV (2016$)					
								Average
							Estimated RI	Reduction in
				Monthly		RI Costs @	Costs @ 9%	Electric NG
Basis of RI		Date Results		Model	Daily Volatility	7.2% EDC	Share (RI,	Usage

[redacted]

a. Please review the accuracy of the numbers in this table, and correct any entries, if appropriate.

Prepared by or under the supervision of: Gary J Wilmes and Denny K Yeung

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b. Please replace any table entries currently noted as "N/A" with the appropriate values.
c. In comparing the results of Sensitivity A from 5/11/2016 with the results of Sensitivity A from 5/26/2016 when RI LMPs are used to derive RI benefits, please explain why the total benefits changed.
d. In comparing the results of Sensitivity B from 5/11/2016 with the results of Sensitivity B-1 from 5/26/2016 when RI load ratio share is used to derive RI benefits, please explain with the total benefits are essentially equal while the gas usage is very different.

Response:

a) Black & Veatch has reviewed the accuracy of the table. Black & Veatch notes that previous results submitted to the Division on May 11, 2016 and May 26, 2016 were labeled Draft-Subject to Revision.

b) Black & Veatch has replaced table entries noted as "N/A" with the appropriate values.

c) As part of the iterative process between gas and power models, Black & Veatch completed a second iteration which had minor impacts to LMP prices. As noted in part a, Black & Veatch labeled these results DRAFT-Subject to Revision.

d) In comparing the results of Sensitivity B from 5/11/2016 with the results of Sensitivity B-1, the total benefits remained relatively unchanged as the impact of the ANE project was comparable under Sensitivity B and Sensitivity B-1.