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September 7, 2018

Via Electronic Mail and Hand Delivery

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

**RE: Docket 4755 – 2018 Energy Efficiency Program Plan
Responses to Division Data Requests – Set 7**

Dear Ms. Massaro:

I have enclosed ten copies of National Grid's¹ responses to the seventh set of data requests issued by the Rhode Island Division of Public Utilities and Carriers (Division) in the above-referenced docket.

Please be advised that the response to data request Division 7-6 is pending.

Thank you for your attention to this filing. If you have any questions concerning this matter, please contact me at 401-457-5164.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'Adam M. Ramos'.

Adam M. Ramos
Enclosures

cc: Docket 4755 Service List
Jon Hagopian, Esq.

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

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4755
In Re: 2018 Energy Efficiency Plan
Notification of an Energy Efficiency Incentive Greater Than \$3,000,000
Responses to the Division's Seventh Set of Data Requests
Issued on August 20, 2018

Division 7-1

Request:

Referring to the response to Division 2-2, the response indicates that the "Gas \$ Benefits" are taken from the avoided cost table "to arrive at a net present value (NPV) of negative \$79.690,920." However, the table in the same response contains a title of "Year 1 Avoided Cost — In Nominal Dollars." Please explain why the title refers to the data as a calculation in Nominal Dollars if the data is being presented as an NPV.

Response:

The Year 1 Avoided Cost table is in 2018 dollars. The 2015 Avoided Cost Study values were provided in 2017 dollars, and these dollars were converted to 2018 dollars. To calculate the "Gas \$ Benefits" the cumulative net present value (in 2018 dollars) of the avoided costs for each year over the life of the measure is taken. For example, the avoided value component for a measure with an expected life of ten years for any given benefit component is the sum of the net present value of the annual avoided costs for that component in Year 1, Year 2, Year 3, etc., through Year 10.

The Narragansett Electric Company
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Division 7-2

Request:

Referring to Division 2-3, the response refers to "a distribution system reinforcement project to be constructed to offset the impact on distribution system capacity of the project during winter months."

- (a) What is the cost of this project?
- (b) Is this reinforcement project the same project as the "gas upgrades" noted in the notification or is it a separate project?
- (c) Is the cost included in the BCA analysis? If yes, please show how it is included. If not, please explain why not.

Response:

- (a) The cost of the project was estimated at \$724,499.
- (b) This distribution system reinforcement project is included as part of the "gas upgrades" noted in the notification. A new gas service line is also part of the "gas upgrades" noted in the notification.
- (c) The cost of the project is not included in the BCA analysis because the project costs will be offset by the incremental gas distribution revenues resulting in a zero CIAC for the customer.

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Division 7-3

Request:

The response to Division 2-8 contains a table that specifies that the CHP project will have a "CHP yearly operating efficiency" of 58%. In contrast, corrected Attachment 3-1 contains a tab labeled "budget project cost" and identifies the "Selected project" in row 6. This row appears to indicate that the selected project has an efficiency of only 55.9%. Please explain this difference and confirm the efficiency of the unit that is now proposed. If the proposed project efficiency has decreased since the notification was filed on May 31, please explain why.

Response:

In this response, the Company assumes that the Division intended to ask about "Attachment DIV 1-3 Corrected," as opposed to "Attachment 3-1".

The 55.9% efficiency shown in the Budget Project Cost tab of DIV 1-3 Corrected was an earlier estimate of the efficiency of a proposed CHP system from the contractor before the Company had a chance to review the model and make adjustments, which included recommending more operating hours at lower thermal efficiency and more kWh generation than was part of the filed project. This tab contains early information that was used to help the Navy make a decision on what iteration of project design both met its requirements and made the most sense for the Company to screen and incent. During the course of project development between the Company and the customer's project team, the operating parameters were discussed and modified to improve the efficiency to 58% of the final system configuration, using the same proposed hardware. Based on the final energy modeling, the efficiency is forecast to be 58% in the final project savings estimate, and will be verified as part of project commissioning.

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Division 7-4

Request:

Corrected Attachment 3-1 contains text in a cell that states:

"Project cost: \$17.5 million project cost refers to BQ engineer's estimate based on detailed information provided. See 'budget project cost' tab for source detail. Black Start capability is being procured for resiliency, so associated costs could be excluded."

Please elaborate and explain what this text intends to convey. What is the total "Black Start capability" cost. Is the cost of Black Start capability included or excluded from the \$17.5 million project cost? If not included, please explain why not in light of the fact that the Navy has described the entire CHP project as intending to address "resiliency" at the base.

Response:

In this response, the Company assumes that the Division intended to ask about "Attachment DIV 1-3 Corrected," as opposed to "Attachment 3-1."

Black Start capability is the ability to initiate an electrical waveform in the absence of service from the Company, and it will allow the Navy base to use the CHP system as back-up power for resiliency. The Black Start capability cost was not individually itemized in the detailed cost estimate provided as Attachment DIV 6-14 part (b). BQ's engineering consultant has confirmed Black Start capability is included in the \$17.5 project cost estimate. The Company did not include the resiliency benefit in the benefit cost ratio because it was difficult to quantify, though the Company recognizes it as a benefit. The text is intended to clarify that this feature for resiliency is included in the costs and not the benefits.

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Division 7-5

Request:

Corrected Attachment 3-1 contains text in a cell that states:

"Gas/Oil fuel ratio: Navy switches from gas to oil at central plant boilers when greater than 40 HDDs."

Please elaborate and explain this statement. Also explain why this is relevant to the BCA calculation, how it affects the calculation, and indicate whether this is a change in the project since the notification was filed on May 31. If it is a change from May 31, please explain why. If it is not a change, why was this not disclosed in the original Attachment 3-1?

Response:

Attachment DIV 1-3 Corrected includes the note to differentiate what changed in the corrected version compared to previous versions. The Navy CHP project involves three-way fuel switching (electricity, gas, & oil).

In previous versions of the BCA, the energy model upon which it relied assumed that the existing central steam plant was on firm gas supply, with the annual gas/oil fuel split proportioned based on winter 2016-2017 usage. BQ updated its energy model to assume that the central steam plant would remain on interruptible gas supply. That changes the gas/oil split and, therefore, the avoided costs used in the BCA calculation because winter heating gas has a different avoided cost than #4 & #6 oil.

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Division 7-7

Request:

Referring to the response to Division 5-6, please explain why the January offer letter was revised in April and elaborate on the circumstances of what took place regarding the need for a revision.

Response:

The January offer letter in was directed to the Navy. The Navy requested that the Company revise the offer letter so that it was directed to BQ. The Company made this revision, which is the April offer letter.

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Division 7-8

Request:

Please provide copies of all offer letters and any minimum requirement documents between the Company, the Navy, and/or the contractor.

Response:

Please see Attachment DIV 7-8(a) (the offer letter MRD to the Navy in January of 2018) and Attachment DIV 7-8(b) (the offer letter MRD sent to BQ in April of 2018).



January 29, 2018

Ms. Debra K. Kemp
Realty Specialist/Real Estate Contracting Officer
Resilient Energy Program Office/PW8
1322 Patterson Ave, SE, Suite 1001
Washington, DC 20003

**RE: Energy Efficiency Incentive Offer Letter for 7,000 KW Combined Heat and Power
("CHP") System**

Account #: 504043500 App#: 7798641

Dear Ms. Kemp:

National Grid¹ is pleased to inform you that it has pre-approved your Energy Efficiency Retrofit Incentive for Naval Station Newport ("NSN") to install a 7MW Combined Heat and Power System ("CHP System" or "Project") at NSN located at 7 Industrial Street Newport, Rhode Island; adjacent to building 7CC (Central Steam Plant) (the "Facility"). After a review of Custom Application #7798641 ("Application") for the Facility, we have determined that your Project will qualify for a total incentive package of \$7,242,200 (the "Incentive Package") if the CHP System is installed prior to November 1st, 2019 in accordance with the Program Materials.

The Incentive Package consists of the following incentive payments:

- \$7,000,000 installation incentive (the "Installation Incentive") from National Grid's 2018 Energy Efficiency Program Plan ("EEPP");
- \$242,200 as an estimated amount performance-based incentive as provided in National Grid's 2018 EEPP (the "Performance Based Incentive"); and
- The Performance-Based Incentive and the Installation Incentive are collectively referred to herein as the "EE Incentives").

Please note that this offer letter ("Offer Letter") does not contain all of the terms and conditions for this Project. Additional terms and conditions shall be as set forth in the Program Materials (as defined in the Application). The Program Materials included the following: customer report, entitled "Combined Heat and Power Technical Assistance Study prepared for Naval Station Newport, Newport, Rhode Island & National Grid, Providence, Rhode Island"

¹The Narragansett Electric Company d/b/a National Grid (referred to herein as "National Grid" or the "Company").

(“TA Study”), the Minimum Requirements Document (“MRD”), and the Application . The MRD is attached to this Offer Letter as Attachment 1. The Application is attached to this offer letter as Attachment 2. In the event of a conflict among the foregoing Program Materials, the order of precedence shall be as follows:

- Offer Letter;
- The MRD;
- The TA Study;
- The Application; and

NSN’s performance in connection with the Project as well as its receipt and use of the Incentive Package is subject to the terms and conditions of the Program Materials. If NSN fails to comply with terms and conditions of the Program Materials, NSN may not receive the Incentive Package (or a portion thereof) or, in the event that National Grid has provided payment, may be required to refund the Incentive Package (or a portion thereof).

The Public Utility Commission approved 2018 EE Annual Plan articulates what the Company can qualify for CHP. The Plan states “The overall minimum total system efficiency of the proposed CHP units must be 55% or greater. System efficiency is calculated as Annual Useful Energy/Annual Natural Gas Input where

Annual useful energy = Net Annual kWh*3,413/100,000 + utilized thermal output (Therms).

Annual natural gas input = CHP gas input in Therms (HHV).

As discussed and documented, this Project is being designed very close to the 55% system efficiency. National Grid requires, under regulatory guidelines, in order to qualify for an incentive in our program, the system must run above 55%. National Grid will conduct a post inspection and commissioning of the project. If National Grid inspectors determine the average system efficiency is not greater than or equal to 55% system efficiency, your organization must address the issue and fix the deficiency within six months or an agreed upon timeline with a National Grid representative. If your organization does not adhere to National Grid’s requirements of the program, your organization will not be entitled to receive the incentive amount.

1. Incentive Payment Intervals:

a. Installation Incentive:

i. Demonstration of Operability of CHP System

Completion of Milestone Nos. 1, 2A and 2B of the MRD is required for this portion of the Installation Incentive. NSN will receive \$5,600,000.

ii. Final Commissioning of CHP

Completion of Milestone Nos. 3 and 4 of the MRD is required for the payment of the remaining portion of the Installation Incentive. NSN will receive \$1,400,000. For the avoidance of doubt, "final commissioning" of the CHP System will occur upon National Grid's verification that Milestone Nos. 3 and 4 of the MRD are satisfactorily completed.

b. Performance-Based Incentive: \$20/kW per net year up to a maximum of \$242,200 (present value in 2018 dollars). The first Performance-Based Incentive will be calculated by averaging the metered demand for the next six (6) months following final commissioning completion for an average kW net.

The Performance-Based Incentive payments will be paid semi-annually until either the maximum amount of \$242,200 (2018 dollars) has been paid, or ten years following the date on which final commissioning occurs of the CHP System, whichever is first to occur. The maximum amount is not a guaranteed amount and subject to the CHP System's performance. The first payment for Performance-Based Incentives will not be calculated until six months following the completion of Milestones No. 3 and 4 of the MRD.

Incentive payments may be delayed or reduced if certain milestones or requirements are not completed as set forth in the Program Materials.

2. **Credits and Payments:**

Other than the energy savings realized by NSN, National Grid has the unilateral right to apply for any credits or payments resulting from the Project, including without limitation, ISO-NE capacity payments and environmental credits. NSN may not file for such payments or credits directly or indirectly, and agrees it will not consent to any third party's rights to such payments or credits. As noted in the 2018 EEPP, kW-demand savings achieved via the electric energy efficiency programs, including CHP, will continue to be reported by the Company to ISONE as Other Demand Resources and the revenue generated will be used to fund future energy efficiency projects through the Company's programs.

3. **Post-installation Verification:**

The Company's representatives may conduct periodic inspections and a post-installation verification of the newly installed equipment to ensure that the installation is consistent with the application as pre-approved, represents sound engineering practices, and complies with the Program Materials.

4. Project Changes After Pre-approval:

Any changes in the Project after pre-approval require notification to the Company prior to beginning construction. The Company will determine, in its sole discretion, whether the proposed change(s) will require any revision to any Program Documents or the Incentive Package as pre-approved.

5. Long Term Underperformance - 10 Year Required Period of Operation:

The Incentive Package contained in this offer letter is based upon the understanding that the cogeneration equipment will remain in operation as a primary source of energy for the Facility for a minimum period of ten (10) years. NSN will be required to repay a portion of the Incentive Package to the Company if the Project is abandoned, removed from the premises, or sold, within ten (10) years from the date of final incentive payment authorization. The repayment will be the Installation Incentives times the number of years remaining until the required ten (10) years of service divided by ten (10). Any refund shall be due and payable within 30 days of notification by National Grid.

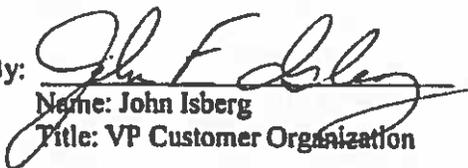
Payment of the Incentive Package (or any part thereof) is subject to NSN's compliance with the terms and conditions of the Program Documents.

If the above terms are acceptable, kindly acknowledge your acceptance by executing this Offer Letter where indicated below, and return one duplicate original to Jeff Dunham. This letter does not commit NSN to proceed with the Project. However, by signing this letter, you are agreeing to the terms should NSN decide to proceed with the Project.

Thank you for your support of National Grid's programs. If you have any questions, please contact Jeff Dunham at 401-527-4055 or jeffrey.dunham@nationalgrid.com.

Sincerely,

NATIONAL GRID

By: 
Name: John Isberg
Title: VP Customer Organization

ACKNOWLEDGED AND ACCEPTED
ON _____ [Insert date]

By: _____
Name: Debra K. Kemp
Title:
Date:

CC: National Grid- Jeffrey Dunham; Jed Ferris; Fred Paine, Andrea Moshier

Minimum Requirements Document



Customer	U.S. Navy, Newport RI	EI or D2	EI
Location	Building 7CC	Application	7798641
ECM:	Install one 7.965 MW Gas Turbine Generator with Heat Recovery Steam Generator		

This document specifies the agreed upon minimum equipment specifications and operational requirements of the proposed system. These requirements shall address the criteria necessary to be met to achieve the demand and energy savings estimated in the engineering analysis for this project. (Use additional sheets if necessary).

Pre-Construction	<p>SEQUENCE OF OPERATION: Provide a description of equipment operating sequences, setpoints, operating schedules, balancing requirements (flow, velocity, head, etc) or any other required operating parameters</p> <p>Submittals: Provide major equipment data sheets</p>
Yes <input type="checkbox"/> No <input type="checkbox"/>	<p>Milestone 1. Equipment submittal and approval of Sequence of Operation (SOO). Required Completion Date: Before the start of the combined heat and power (CHP) installation at the site and prior to approving submittals for the major equipment.</p> <ol style="list-style-type: none"> 1. The 7.965 MWe (ISO rating) Gas Turbine Generator (GTG) (calculations based on Solar Taurus 70 model or equal) shall operate to serve Thermal loads through a heat recovery steam generator (HRSG) and duct burner when the site's steam distribution system is active. The GTG is expected to have an exhaust diverter valve to allow partial thermal utilization of the HRSG during part load conditions, but sustained use of 100% heat rejection for more than 1 week beyond the site's winter heating steam load is considered not meeting this MRD. The GTG, HRSG, and duct burner compose the main components of the CHP plant, and shall be used as the lead boiler at the Building 7CC boiler plant, which is the central plant for the site's steam distribution system. Note: the CHP system may require a gas compressor, so a 150 kW parasitic load was included in the savings analysis. 2. Provide a process and instrument diagram (PID) showing all GTG plant equipment, electrical connections, fuel gas, and instruments including Btu meters. P&ID to show all the sensors and meter locations as required for measuring thermal and electrical efficiency, net of parasitic loads. 3. Provide a copy of equipment submittals including performance ratings. 4. Provide documentation that the National Grid gas account for the GTG is on a firm delivery rate (non-interruptible), and that gas will be the primary fuel (over 95%, unless gas becomes unavailable from National Grid) used to generate steam. 5. Sequence of Operation: <ol style="list-style-type: none"> a. The CHP plant shall operate continuously from Mid-October through Mid-May while the site's steam heating distribution system is active. The CHP system is not expected to operate Mid-May to Mid-October when the steam distribution system is not active. The estimated annual operating time is 4,500 hours, not counting forced outages of the unit. b. The exhaust from the GTG shall be routed to the Heat Recovery Steam Generator (HRSG). The GTG exhaust will be supplemented as needed with additional heat input from a natural gas fired duct burner installed on the inlet to the HRSG, up to 100% of the site steam load. c. The existing boiler plant may be operated in parallel with the HRSG for back-up / redundancy reasons, but the CHP is expected to be the first run large boiler, and is expected to be used to keep the existing boiler plant in warm stand-by. The existing boilers may be used to meet peak heating loads, should the peak loads exceed the CHP plant capacity. 6. Minimum kW import: The electrical output of the generator should not reach within 500 kW of the demand of the site's grid connected electrical loads, such that the site will always import 500 kW as a minimum, independent of the thermal loads. If need be, the output of the GTG shall be reduced so there will always be at least 500 kW delivered to the site from the grid. 7. BTU meters shall be installed to quantify the delivered thermal output of the HRSG and duct burner. 8. All electric and gas meters shall be utility grade; provide cut sheets to verify. 9. The 7,965 kWe GTG is designed to meet the following performance criteria for the year: <ol style="list-style-type: none"> a. Annual Production of 36,156,000 kWh (net of parasitic loads; see Milestone 2a below) b. Gas fuel increase 300,000 MMBTUs HHV (fuel fired for cogen minus boiler fuel saved) c. Oil usage reduction of 33,500 MMBTUs d. Boiler fuel offset of 165,600 MMBTUs e. Electrical efficiency modeled at 29% HHV (net output to the site, less CHP plant parasitics) f. Thermal efficiency modeled at 30% HHV (net output to the site, less CHP plant parasitics) g. Plant overall efficiency modeled at 59% HHV h. Minimum overall plant efficiency to receive incentive: 55% HHV

Post Inspection Yes <input type="checkbox"/> No <input type="checkbox"/>	Installation Completion: Provide a list of equipment or materials installed as part of this project. Include mfr, model, HP, kW, efficiency ratings, etc .and confirm completion Milestone 2a. Installation Completion <ol style="list-style-type: none"> 1. Install one 7,965 kWe Gas turbine generator (GTG) at ISO rating; Solar Taurus 70 model or equal. 2. Install one HRSG with a natural gas fired duct burner installed on the inlet, Rentech GTB-XFL-1205 or equal. The GTG exhaust to steam efficiency is expected be 97% or higher. The efficiency of the duct burner is estimated to be 96%. When bolted to the outlet of the GTG, the HRSG & duct burner system shall be capable of delivering 60,000 lbs/hr of 150 psig steam at 32.1 MMBTU/hr of fuel input. 3. GTG unit shall meet the following criteria derived from the product selection sheets. Performance is based on 60F degree inlet air temperature at sea level, 4" inlet & 10" exhaust pressure losses, 150 psig steam, with 228F degree feedwater: <ol style="list-style-type: none"> a. electric output at the generator terminals: 7,692 kW b. thermal output, 32.0 kpph c. overall efficiency: 67% at full load based on 86.9 MMBTUh of fuel input (using HHV) d. GTG gross HHV performance at 60F as follows: <table border="1" data-bbox="555 646 1396 861"> <thead> <tr> <th></th> <th>100%</th> <th>75%</th> <th>50%</th> </tr> </thead> <tbody> <tr> <td>Electrical output</td> <td>7,692 kW</td> <td>5,769 kW</td> <td>3,846 kW</td> </tr> <tr> <td>Fuel input (HHV)</td> <td>86.9 MMBTUh</td> <td>71.4 MMBTUh</td> <td>57.3 MMBTUh</td> </tr> <tr> <td>HRSG steam (GTG)</td> <td>32.0 kpph</td> <td>25.5 kpph</td> <td>20.5 kpph</td> </tr> <tr> <td>Electrical efficiency</td> <td>30.2%</td> <td>27%</td> <td>23%</td> </tr> <tr> <td>Thermal efficiency</td> <td>36.8%</td> <td>36%</td> <td>35%</td> </tr> </tbody> </table> e. Generator gross kW vs Outdoor Air Temperature <div data-bbox="555 892 1388 1348" data-label="Figure"> <p style="text-align: center;">Proposed Generator Output vs OAT (full load gross kW vs inlet air temperature)</p> <p style="text-align: center;">$y = -11.514x^2 - 141.5x + 9222.3$</p> </div> f. Parasitic loads: estimated at 213 kW during full-load operation; inclusive of gas compressor, all pumps and fans; accounting for expected added CHP parasitic equipment loading at these conditions and deducting diminished boiler loads, as applicable. 4. Install a Btu meter to measure the thermal output of the CHP unit(s). 5. Provide meters as required to monitor energy output, waste heat utilization and electrical power production. Both electric meters and gas meters shall have accuracy equal to utility grade meters. 6. Energy monitoring accuracy shall meet: <ol style="list-style-type: none"> a. As a minimum the system shall be able to capture 15-minute interval data for electricity produced, utility kW import, waste heat utilization (Steam production), outdoor air temperature, HRSG inlet & outlet temperatures, fuel input and power consumed by all auxiliary equipment. b. Fifteen-minute trends for gas input and engine run hours shall be provided. c. The control system should be capable of trending and archiving this data for a period of five year before overwriting. d. Archived data shall be capable of being exported to a National Grid designated ftp server via CSV compatible electronic files on a daily basis. 7. During post inspection confirm that data collection system is installed, connected to properly calibrated metering and reporting and archiving data properly. 		100%	75%	50%	Electrical output	7,692 kW	5,769 kW	3,846 kW	Fuel input (HHV)	86.9 MMBTUh	71.4 MMBTUh	57.3 MMBTUh	HRSG steam (GTG)	32.0 kpph	25.5 kpph	20.5 kpph	Electrical efficiency	30.2%	27%	23%	Thermal efficiency	36.8%	36%	35%
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Electrical efficiency	30.2%	27%	23%																						
Thermal efficiency	36.8%	36%	35%																						

<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>Milestone 2b. Demonstration of Operability <u>(Completion of Milestone 2A and 2b is required for the payment of 80% of the incentive)</u> Confirm that the above noted equipment is installed and operational for completing Milestone 2b. Installed and operational is defined as :</p> <ol style="list-style-type: none"> 1. All components of the new GTG including all meters are installed, calibrated and connected to their respective building systems. Start-up and commissioning of the system is complete in accordance with equipment supplier recommendations and industry practice. 2. All equipment, piping, electrical and control wiring is completed, so that all CHP units can run in an automatic mode. The minimum performance shall be the following: <ol style="list-style-type: none"> a. Annual net Production of 36,156,000 kWh (accounting for parasitics; see Milestone 2a below) b. Boiler fuel offset of 165,600 therms (based on 82% overall boiler efficiency) c. Plant overall efficiency of 59% 3. Interconnection facilities are completed and accepted by Retail Connections Engineering, and insurance certificates are in place. This does not absolve the customer from meeting any other jurisdictional permits or other regulatory requirements. 4. All instrumentation and meters required are installed and are working properly and porting data to remote website. 5. 15-minute interval data shall be made available and exported to remote website for access to National Grid in CSV format. 6. Customer and its vendors have completed their own commissioning with reports on major pieces of equipment provided.
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<p>Post Operational Assessment</p>	<p>DOCUMENTATION: List written documentation required to train, verify, operate, or maintain the equipment being installed or controlled. This may include specification sheets, test reports, construction drawings, etc.: Provide a list of Trending Requirements required to verify proper system operation. Trends should document operational sequences, setpoints and scheduling of equipment as described in TA Study</p>
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<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>Milestone 3. (Completion of Milestone 3 & 4 is required for the payment of the remaining 20% of the incentive.) Validate the following items:</p> <ol style="list-style-type: none"> A. O&M manuals and documentation on site <ol style="list-style-type: none"> 1. O&M manuals for the following equipment: <ol style="list-style-type: none"> a. Combustion gas turbine b. Heat recovery Steam Generator c. Duct burner d. Gas compressor, as applicable e. Metering equipment (gas, electric) 2. Design Drawings (Process and & Instrument Diagrams and Mechanical Piping Drawings, Instrumentation List and equipment Data Sheets) are available on site: <ol style="list-style-type: none"> a. Facility layout drawings b. Process & Instrument Diagrams c. One line diagrams d. Instrument list e. Equipment data sheets 3. Meter calibration data has been provided for all meters identified in this MRD B. Availability of trend data and confirming of its exportability. <ol style="list-style-type: none"> 1. Provide 15-minute interval data for the following points as a minimum. Provide the capacity for and enable trend data archiving for a period of at least one year. <ol style="list-style-type: none"> a. Gross and net (after parasitics) kW and kWh electrical output – including parasitic consumption measurements b. Fuel input to CHP plant (therms or MMBtu) c. Flow/temperature on heat recovery supply/return d. Any point necessary to determine other parasitic loads, based on the final plant design 2. Provide ability to export weekly data electronically to third party via email or FTP at all times. 3. Post operational assessment process will require functional testing of the CHP and the thermal and
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	<p>electrical interface to the buildings, a minimum 2 weeks and up to 6 months of concurrent 15 minute interval data for all points noted above. If equipment fails to meet expected sequences of operations and corrections are needed, additional trend data shall be provided to confirm any seasonal changes in operations.</p> <p>4. Install, maintain, and calibrate measurement, monitoring and data recording equipment for the lifetime of the project in compliance with ISO-New England's Manual for Measurement and Verification of Demand Resources, including:</p> <ol style="list-style-type: none"> a. Meet or exceed the relevant American National Standard Institute or equivalent standard for the equipment. b. Meet the relevant Institute of Electrical and Electronics Engineers standards for equipment installed and measuring electric demand on electric circuits with significant harmonics and have a digital sampling rate of at least 2.6 kHz. c. Utilize a pulse rate within the resolution capabilities of the recorder, if recording pulses from measurement and monitoring devices. d. Have an accuracy of no less than +/-2% using a true Root Mean Square measurement device to measure electrical demand or using any measurement or monitoring equipment for proxy variables to calculate electrical demand. e. Install measurement or monitoring devices that direct measure electrical demand from three-phase devices such that measurements are taken on all three-phases to account for any phase imbalance or an equivalent method that can measure electrical demand using two phases. f. Include the power factor of the end-uses in the demand calculations if measuring current and nominal voltage to calculate electrical demand. g. Synchronize data recorders with the National Institute of Standards and Technology to an accuracy of +/- 2 minutes per month. h. Calibrate to meet or exceed Federal Energy Management Program Measurement and Verification Guidelines, applicable American Society of Heating, Refrigeration and Air Conditioning Engineers standards, National Institute of Standards and Technology, or equivalent standard for the equipment and provide meter calibration data. i. Ensure all measurement, monitoring and data logging equipment is maintained to meet or exceed industry and manufacturer maintenance standards and maintain documentation on all such calibration activities. j. Collect electricity usage data at a frequency of 15 minute intervals or less. <p>C. Sequence of operation is working as outlined in MRD, TA report and supporting energy saving calculations.</p>
Post Inspection	OTHER REQUIRMENTS: Describe any requirements for demolition, removal, etc of existing equipment.
Yes <input type="checkbox"/> No <input type="checkbox"/>	<p>Milestone 4</p> <ol style="list-style-type: none"> 1. Customer will have a minimum 3 year or first major overhaul maintenance contract to help achieve long term proposed operational strategies and energy cost savings. Normal planned /routine maintenance shall be conducted where possible during the summer shutdown period. 2. The minimum requirements described in this MRD must be met for the project to receive the EE incentive; missing or underperforming characteristics may result in a diminished incentive, or no incentive. 3. Provide detailed project cost breakdown by major system components. Provide copies of paid invoices to support the project costs.

The pre-approved incentive is subject to Retail Companies' POST INSPECTION of final specifications, drawings and operation of the proposed equipment. In the event the proposed system is altered from the above description, notify the Company of the change prior to the equipment purchase and installation as the change in design and operation may impact the available incentive.

MOS hia	<small>Digitally signed by Moshia DN: CN = Moshia Date: 2018.01.29 09:33:04 -0400'</small>		
National Grid Technical Support Consultant	Date	Customer Agreement Signature	Date
Post Inspection Signature	Date	Customer Sign Off	Date



April 12, 2018

Paul F Curran, PE
Managing Director
BQ Energy LLC
400 Market Industrial Park
Suite 32
Wappingers Falls, NY 12590

RE: Energy Efficiency Incentive Offer Letter for 7,000 KW Combined Heat and Power (“CHP”) System

Account #: 504043500 App#: 7798641

Dear Mr. Curran:

National Grid¹ is pleased to inform BQ Energy, LLC. (“BQ”) that it has pre-approved your Energy Efficiency Retrofit Incentive for the installation of the 7MW Combined Heat and Power System (“CHP System”) at the Naval Station Newport (“NSN”) located at 7 Industrial Street Newport, Rhode Island; adjacent to building 7CC, the Central Steam Plant, (the “Facility”) (collectively, the “Project”). After a review of Custom Application #7798641 (“Application”) for the Facility, we have determined that your Project will qualify for a total incentive package of \$7,242,200 (the “Incentive Package”), provided the CHP System is installed prior to November 1st, 2019 in accordance with the Program Materials.

The Incentive Package consists of the following incentive payments:

- \$7,000,000 installation incentive (the “Installation Incentive”) from National Grid’s 2018 Energy Efficiency Program Plan (“EEPP”);
- \$242,200 as an estimated amount performance-based incentive as provided in National Grid’s 2018 EEPP (the “Performance Based Incentive”); the Performance-Based Incentive and the Installation Incentive are collectively referred to herein as the “EE Incentives”).

Please note that this offer letter (“Offer Letter”) does not contain all of the terms and conditions for this Project. Additional terms and conditions shall be as set forth in the Program Materials (as defined in the Application). The Program Materials included the following: customer report, entitled “Combined Heat and Power Technical Assistance Study prepared for Naval Station Newport, Newport, Rhode Island & National Grid, Providence, Rhode Island” (“TA Study”), the Minimum Requirements Document (“MRD”), and the Application . The MRD is attached to this Offer Letter as Attachment 1. The Application is attached to this Offer Letter as Attachment 2. In the event of a conflict among this Offer Letter and Program Materials, the order of precedence shall be as follows:

¹The Narragansett Electric Company d/b/a National Grid (referred to herein as “National Grid” or the “Company”).

- Offer Letter;
- The MRD;
- The TA Study;
- The Application;

BQ's performance in connection with the Project, as well as its receipt and use of the Incentive Package, is subject to the terms and conditions of this Offer Letter and the Program Materials. If BQ fails to comply with terms and conditions of this Offer Letter and the Program Materials, National Grid may, in its sole determination, not provide BQ with the Incentive Package (or a portion thereof) or, in the event that National Grid has provided payment, BQ will be required to refund the Incentive Package (or a portion thereof).

The 2018 EEPP, which the Rhode Island Public Utility Commission (PUC) approved, articulates what the Company can qualify for CHP. The Plan states "The overall minimum total system efficiency of the proposed CHP units must be 55% or greater. System efficiency is calculated as Annual Useful Energy/Annual Natural Gas Input where

Annual useful energy = Net Annual kWh*3,413/100,000 + utilized thermal output (Therms).

Annual natural gas input = CHP gas input in Therms (HHV).

This Project is being designed very close to the 55% system efficiency. National Grid requires, under regulatory guidelines, in order to qualify for an incentive in our program, the CHP System must run above 55%. National Grid will conduct a post inspection and commissioning of the Project. If National Grid inspectors determine the average system efficiency is not greater than or equal to 55% system efficiency, BQ must address and resolve the issue and fix the deficiency within six (6) months or an agreed upon timeline with a National Grid representative. If BQ does not adhere to National Grid's requirements, BQ will not be allowed to retain the Incentive Package and shall refund any Incentive Package Funds back to the Company.

1. Incentive Package Payment Intervals:

a.- Installation Incentive:

i. Demonstration of Operability of CHP System

Completion of Milestone Nos. 1, 2A and 2B of the MRD is required for this portion of the Installation Incentive. BQ will receive \$5,600,000.

ii. Final Commissioning of CHP

Completion of Milestone Nos. 3 and 4 of the MRD is required for the payment of the remaining portion of the Installation Incentive. BQ will receive \$1,400,000. For the avoidance of doubt, "final commissioning" of the CHP System will occur upon National Grid's verification that Milestone Nos. 3 and 4 of the MRD are satisfactorily completed.

b. Performance-Based Incentive: \$20/kW per net year up to a maximum of \$242,200 (present value in 2018 dollars). The first Performance-Based Incentive will be calculated by averaging the metered demand for the next six (6) months following final commissioning completion for an average kW net.

The Performance-Based Incentive payments will be paid semi-annually until either the maximum amount of \$242,200 (2018 dollars) has been paid, or ten years following the date on which final commissioning occurs of the CHP System, whichever is first to occur. The maximum amount is not a guaranteed amount and subject to the CHP System's performance. The first payment for Performance-Based Incentives will not be calculated until six months following the completion of Milestones No. 3 and 4 of the MRD.

c. Incentive payments may be delayed or reduced if certain milestones or requirements are not completed as set forth in the Program Materials.

2. Credits and Payments:

Other than the energy savings realized by BQ, National Grid has the unilateral right to apply for any credits or payments resulting from the Project, including without limitation, ISO-NE capacity payments and environmental credits. BQ may not file for such payments or credits directly or indirectly, and agrees it will not consent to any third party's rights to such payments or credits. As noted in the 2018 EEPP, kW-demand savings achieved via the electric energy efficiency programs, including CHP, will continue to be reported by the Company to ISONE as Other Demand Resources and the revenue generated will be used to fund future energy efficiency projects through the Company's programs.

3. Post-installation Verification:

BQ understands and agrees that the Company's representatives may conduct periodic inspections and a post-installation verification of the newly installed equipment to ensure that the installation is consistent with the application as pre-approved, represents sound engineering practices, and complies with the Program Materials. Failure by BQ to allow Company to perform periodic inspections and/or post-installation verification will result in a breach under this Offer Letter.

4. Project Changes After Pre-approval:

Any changes in the Project after pre-approval require notification to the Company prior to beginning construction. The Company will determine, in its sole discretion, whether the proposed change(s) will require any revision to any Program Documents or the Incentive Package as pre-approved.

5. Long Term Nonperformance - 10 Year Required Period of Operation:

The Incentive Package contained in this Offer Letter is based upon the understanding that the CHP System will remain (i) in operation as a primary source of energy for the Facility and (ii) in accordance with the terms and conditions hereunder for a minimum period of ten (10) years. BQ will be required to repay a portion of the Incentive Package to the Company if the Project is abandoned, removed from the premises, or sold, within ten (10) years from the date of final incentive payment authorization. The repayment will be the Installation Incentives times the number of years remaining until the required ten (10) years of service divided by ten (10). Any refund from BQ to National Grid shall be due and payable within thirty (30) days of notification

by National Grid. As security for such repayment, BQ shall provide to National Grid a Performance Guaranty in a form and with terms acceptable to National Grid in accordance with Section 9 "Security" below. .

6. Indemnification

BQ agrees to indemnify, defend and hold harmless National Grid, its parent and its affiliates and their respective officers, directors, shareholders, employees, agents, contractors, successors and assigns (each, an "Indemnified Party" and, collectively, the "Indemnified Parties"), to the full extent permitted by applicable law, from and against any and all costs, losses, expenses, damages, claims, liens, fines, penalties, encumbrances, obligations, actions and causes of action, of any kind whatsoever, in law and in equity, including personal injury or property damage, diminution of property value and remediation costs, in each case to the extent arising from or in connection with the CHP System or Project brought by or for third parties ("Claims") , including, without limitation, Claims arising from (i) BQ's possession, use, transfer or disposal of the CHP System, including but not limited to any actions, claims, or demands brought by any person, including NSN, relating to the CHP System or Project and any subsequent owner or possessor of such CHP System, (ii) any acts or omissions of NSN and/or BQ, its affiliates or their respective affiliates' officers, directors, employees, agents, contractors, customers, clients or invitees in connection with the CHP System, the Project or this Offer Letter, (iii) any negligence, willful misconduct, or breach of law (including any noncompliance with applicable environmental laws) of or by NSN and/or BQ, its agents, employees, Subcontractors, and suppliers, (iv) the release or threat of release of hazardous substances from or in connection with the CHP System or Project and (v) the processing of, or disposal of, hazardous substances in connection with or relating to the CHP System or Project by NSN and/or BQ, their affiliates or their respective officers, directors, employees, agents contractors or invitees.

7. Release of Claims

BQ hereby waives and releases National Grid, its parent and its affiliates' and their respective officers, directors, employees, agents, contractors and representatives from liability for any loss, injury, or damage, whether personal or property, arising from or in connection with the CHP System, the Project or this Offer Letter.

8. Authority

BQ represents and warrants that it is validly existing and in good standing under the laws of the state in which it is organized and has all requisite power and authority, including specific authority from Naval Station Newport, to execute and deliver this Offer Letter and undertake and execute in connection with the Project and under this Offer Letter. BQ further represents and warrants that it has the authority to provide National Grid with access to the CHP System.

9. Security

BQ agrees to provide security in the following manner:

BQ shall obtain and provide to National Grid, prior to May 12th, 2018, at BQ's sole discretion, either a Letter of Credit² or a Surety Bond³, (BQ's choice of security referred to herein as a "Performance Guaranty") in the amount of **\$7,000,000.00**, which shall be obtained and maintained at BQ's sole cost and expense, through the end of the ten year period as described under Section 5 above ("Performance Guaranty End Date"). Receipt of the Performance Guaranty by National Grid is a condition of the offer to BQ under this Offer Letter.

BQ shall be eligible to annually reduce the amount of its Performance Guaranty on or after the anniversary date following commissioning date of the CHP System. National Grid shall cooperate with BQ, as reasonably requested, in providing notices to the issuer of the Performance Guaranty, to effectuate any such permitted reduction.

If the credit rating of the bank issuing any Letter of Credit falls below the level set forth below² at any time prior to the expiration date of the Letter of Credit, or, if the bank repudiates its obligations under, or fails to honor or pay against, the Letter of Credit before the Performance Guaranty End Date, BQ shall furnish or cause to be furnished to National Grid one or more substitute Letters of Credit from a bank meeting the credit rating level set forth in this Offer Letter (a "Substitute Letter of Credit") within two weeks after the occurrence of such event. If the Letter of Credit is terminated before the Performance Guaranty End Date, BQ shall furnish or cause to be furnished to National Grid one or more Substitute Letters of Credit from a bank meeting the credit rating level set forth in this Offer Letter at least thirty (30) days before such expiration. In the event that the BQ fails to comply with the provisions of this paragraph, National Grid may drawdown on the entire Letter of Credit.

If the credit rating of the Surety issuing any Surety Bond falls below the level set forth below³ at any time prior to the expiration date of the Surety Bond, or, if the Surety repudiates its obligations under, or fails to honor or pay against, the Surety Bond before the Performance Guaranty End Date, BQ shall furnish or cause to be furnished to National Grid one or more substitute Surety Bonds from a Surety meeting the credit rating level set forth in this Offer Letter (a "Substitute Surety Bond") within five (5) business days after the occurrence of such event. If the Surety Bond is terminated before the Performance Guaranty End Date, BQ shall furnish or cause to be furnished to National Grid one or more substitute Surety Bonds from a Surety meeting the credit rating level set forth in this Offer Letter at least thirty (30) days before such expiration. If the Surety is declared bankrupt or becomes insolvent, or if its right to do business is terminated, or if

² "Letter(s) of Credit" means an irrevocable, unconditional and nontransferable standby letter of credit, in the form attached hereto as Appendix A, which is issued by a major U.S. commercial bank or the U.S. branch office of a foreign bank with, in either case, a Credit Rating of at least (a) "A-" by Standard & Poor's Rating Group (a division of McGraw-Hill, Inc.) or its successors ("S&P") and "A3" by Moody's Investor Services Inc. or its successor ("Moody's"), if such entity is rated by both S&P and Moody's or (b) "A" by S&P or "A2" by Moody's, if such entity is rated by either S&P or Moody's, but not both.

³ "Surety Bond(s)" means the form attached hereto as Appendix B, which shall be considered as security for the faithful performance of all of the BQ's contractual obligations contained in this Agreement, issued by a major insurance carrier ("Surety") with a credit rating of at least (a) "B+-" by A.M. Best & National Grid; or (b) "A-" by Standard & Poor's Rating Group (a division of McGraw-Hill, Inc.) or its successors ("S&P").

its status for any other reason is rendered inadequate for the BQ to meet its obligations hereunder, BQ shall furnish or cause to be furnished to National Grid one or more substitute Surety Bonds from a Surety meeting the credit rating level set forth in this Offer Letter within fifteen (15) days after the occurrence of such event. In the event that the BQ fails to comply with the provisions of this paragraph, National Grid may make a claim against the entire Surety Bond.

In the event the BQ supplies a Surety Bond and/or a Letter of Credit and to the extent National Grid makes a claim against the Surety Bond and/or Letter of Credit for any performance obligation under this Offer Letter and in the event the Surety and/or the issuing bank of the Letter of Credit does not honor it, either in whole or in part (the "Rejected Claim"), then BQ understands and agrees that it shall remain financially responsible to National Grid for such Rejected Claim. In addition, BQ's right to reduce the Surety Bond or the Letter of Credit amount pursuant to this Offer Letter shall be suspended until such time as the BQ satisfies the Rejected Claim.

National Grid will notify the PUC of this Offer Letter. The Project, the Incentive Package, and any other related proposals are authorized to proceed within thirty (30) days by the PUC if the PUC does not suspend or issue an order.

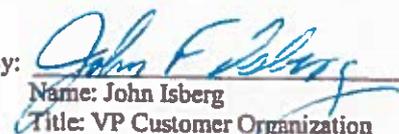
Payment of the Incentive Package (or any part thereof) is subject to BQ's compliance with the terms and conditions of the Program Documents.

If the above terms are acceptable, kindly acknowledge your acceptance by executing this Offer Letter by signing below. Return one duplicate original to Jeff Dunham, Lead Sales Representative, Customer Group at 280 Melrose Street, Providence Rhode Island 02907. This letter does not commit BQ to proceed with the Project. However, by signing this letter, you are agreeing to the terms and conditions of the offer should BQ decide to proceed with the Project.

Thank you for your support of National Grid's programs. If you have any questions, please contact Jeff Dunham at 401-527-4055 or jeffrey.dunham@nationalgrid.com.

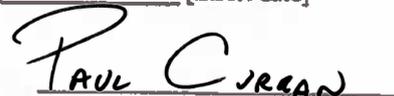
Sincerely,

THE NARRAGANSETTE ELECTRIC
COMPANY D/B/A NATIONAL GRID

By: 
Name: John Isberg
Title: VP Customer Organization

ACCEPTED AND AGREED

ON 2 May 2018 [Insert date]

By: 
Name: Paul Curran

Title:
Date:

CC: National Grid- Jeffrey Dunham; Jed Ferris; Fred Paine, Andrea Moshier

Appendix A

SPECIMEN LETTER OF CREDIT

_____ Bank

(address)

IRREVOCABLE STANDBY LETTER OF CREDIT

DATE: _____
AMOUNT U.S. \$7,000,000.00
EFFECTIVE DATE: _____

FOR INTERNAL IDENTIFICATION PURPOSES ONLY

Our No. _____

Beneficiary:

**The Narragansett Electric Company
D/B/A National Grid
300 Erie Boulevard West, D-1
Syracuse, NY 13202**

Attn:
Commercial Credit & Collections Manager

Applicant:

**BQ Energy LLC
400 Market Industrial Park
Suite 32
Wappingers Falls, NY 12590**

At the request of:

Reference: This letter of credit supports the “Energy Efficiency Incentive Offer Letter for 7,000 KW Combined Heat and Power (“CHP”) System” by and between the Narragansett Electric Company d/b/a National Grid and BQ Energy LLC.”, by and between Applicant and Beneficiary dated _____.

LADIES AND GENTLEMEN:

WE HEREBY ESTABLISH THIS IRREVOCABLE, AND UNCONDITIONAL, EXCEPT AS STATED HEREIN, LETTER OF CREDIT NUMBER _____ (LETTER OF CREDIT), BY ORDER OF, FOR THE ACCOUNT OF, AND ON BEHALF OF BQ ENERGY LLC. (APPLICANT) IN FAVOR OF THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID (BENEFICIARY) FOR DRAWINGS, IN ONE OR MORE DRAFTS, UP TO AN AGGREGATE AMOUNT NOT EXCEEDING U.S. \$7,000,000.00 EFFECTIVE IMMEDIATELY. THE TERM ‘BENEFICIARY’ INCLUDES ANY SUCCESSOR OF THE NAMED BENEFICIARY.

THIS LETTER OF CREDIT CANNOT BE AMENDED, MODIFIED OR REVOKED WITHOUT THE PRIOR WRITTEN CONSENT OF BOTH THE BANK AND THE BENEFICIARY. THE BENEFICIARY SHALL NOT BE DEEMED TO HAVE WAIVED ANY RIGHTS UNDER THIS LETTER OF CREDIT, UNLESS AN OFFICER OF THE BENEFICIARY SHALL HAVE SIGNED A WRITTEN WAIVER EXPRESSLY REFERENCING THE RIGHT TO BE WAIVED. NO SUCH WAIVER SHALL BE EFFECTIVE AS TO ANY TRANSACTION THAT OCCURS SUBSEQUENT TO THE DATE OF THE WAIVER, OR WITH RESPECT TO ANY CONTINUANCE OF A BREACH AFTER THE WAIVER.

WE HEREBY UNDERTAKE TO PROMPTLY HONOR YOUR DRAFT(S) DRAWN ON US, INDICATING OUR LETTER OF CREDIT NUMBER _____, FOR ALL OR ANY PART OF THIS LETTER OF CREDIT. THIS LETTER OF CREDIT IS ISSUED, PRESENTABLE AND PAYABLE AND WE GUARANTY TO THE DRAWERS, ENDORSERS, AND BONE FIDE HOLDERS OF THIS LETTER OF CREDIT, THAT DRAFTS UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS LETTER OF CREDIT WILL BE HONORED. THIS LETTER OF CREDIT MAY NOT BE TRANSFERRED OR ASSIGNED BY US.

PARTIAL DRAWINGS ARE PERMITTED.

SUBJECT TO THE EXPRESS TERMS AND CONDITIONS HEREIN, FUNDS UNDER THIS LETTER OF CREDIT ARE AVAILABLE TO YOU BY PRESENTATION AT OUR OFFICES LOCATED AT [_____] OF BENEFICIARY'S DRAWING CERTIFICATE ISSUED SUBSTANTIALLY IN THE FORM OF ANNEX 1 ATTACHED HERETO AND WHICH FORMS AN INTEGRAL PART HEREOF, DULY COMPLETED AND PURPORTEDLY BEARING THE ORIGINAL SIGNATURE OF AN OFFICER OF THE BENEFICIARY. PRESENTATION OF ANY DRAWING CERTIFICATE UNDER THIS LETTER OF CREDIT MAY BE MADE IN PERSON TO US OR MAY BE SENT TO US BY OVERNIGHT COURIER OR BY FACSIMILE TRANSMISSION TO FACSIMILE TELEPHONE NUMBER [_____].

ALL COMMISSIONS AND CHARGES WILL BE BORNE BY THE APPLICANT.

IF DOCUMENTS, IN COMPLIANCE WITH THE TERMS OF THIS LETTER OF CREDIT, ARE RECEIVED BEFORE 10:00 AM (EASTERN TIME) ON A BANKING DAY (AS SUCH TERM IS DEFINED IN THE UNIFORM CUSTOMS DEFINED BELOW), PAYMENT WILL BE EFFECTED ON OR BEFORE 5:00 PM (EASTERN TIME) ON THE NEXT BANKING DAY. IF DOCUMENTS, IN COMPLIANCE WITH THE TERMS OF THIS LETTER OF CREDIT ARE RECEIVED AFTER 10:00 AM ON A BANKING DAY, PAYMENT WILL BE EFFECTED ON OR BEFORE 5:00 PM ON THE SECOND BANKING DAY FOLLOWING SUCH DATE OF RECEIPT.

PRESENTATION OF DOCUMENT(S) THAT ARE NOT IN COMPLIANCE WITH THE APPLICABLE ANTI-BOYCOTT, ANTI-MONEY LAUNDERING, ANTI-TERRORISM, ANTI-DRUG TRAFFICKING, EXPORT DENIAL OR ECONOMIC SANCTIONS LAWS, REGULATIONS OR ORDERS (COLLECTIVELY "THE REGULATIONS") IS NOT ACCEPTABLE. APPLICABLE LAWS VARY DEPENDING ON THE TRANSACTION AND MAY INCLUDE UNITED NATIONS, UNITED STATES AND/OR LOCAL LAWS.

IN THE EVENT THAT A DRAWING CERTIFICATE FAILS TO COMPLY WITH THE TERMS OF THIS LETTER OF CREDIT INCLUDING THE REGULATIONS, WE SHALL PROVIDE THE BENEFICIARY PROMPT NOTICE THEREOF STATING THE REASONS THAT THE CERTIFICATE WAS DETERMINED TO BE NON-COMPLIANT AND SHALL UPON BENEFICIARY'S INSTRUCTIONS HOLD ANY NON-CONFORMING DRAWING CERTIFICATE AND OTHER RELATED DOCUMENTS AT BENEFICIARY'S DISPOSAL OR RETURN ANY NON-CONFORMING DRAWING CERTIFICATE AND OTHER RELATED DOCUMENTS TO THE BENEFICIARY BY DELIVERY IN PERSON OR FACSIMILE TRANSMISSION (WITH ORIGINALS THEREOF SENT BY OVERNIGHT COURIER). UPON BEING NOTIFIED THAT THE DRAWING WAS NOT EFFECTED IN COMPLIANCE WITH THIS LETTER OF CREDIT, THE BENEFICIARY MAY ATTEMPT TO CORRECT SUCH NON-CONFORMING DRAWING CERTIFICATE IN ACCORDANCE WITH THE TERMS OF THIS LETTER OF CREDIT.

EXCEPT AS EXPRESSLY STATED HEREIN, THIS UNDERTAKING IS NOT SUBJECT TO ANY AGREEMENT, CONDITION OR QUALIFICATION. THIS LETTER OF CREDIT DOES NOT INCORPORATE, AND SHALL NOT BE DEEMED MODIFIED OR AMENDED BY REFERENCE TO ANY DOCUMENT, INSTRUMENT OR AGREEMENT (A) THAT IS REFERRED TO HEREIN (EXCEPT FOR THE UNIFORM CUSTOMS, AS DEFINED BELOW), OR (B) IN WHICH THIS LETTER OF CREDIT IS REFERRED TO OR TO WHICH THIS LETTER OF CREDIT RELATES.

OUR OBLIGATION UNDER THIS LETTER OF CREDIT SHALL BE OUR INDIVIDUAL OBLIGATION AND IS IN NO WAY CONTINGENT UPON THE REIMBURSEMENT WITH RESPECT THERETO, OR UPON OUR ABILITY TO PERFECT ANY LIEN, SECURITY INTEREST OR ANY OTHER REIMBURSEMENT.

THIS LETTER OF CREDIT EXPIRES WITH OUR CLOSE OF BUSINESS ON THREE HUNDRED SIXTY FOUR (364) DAYS FROM THE EFFECTIVE DATE; HOWEVER, IT IS A CONDITION OF THIS LETTER OF CREDIT THAT IT SHALL BE DEEMED AUTOMATICALLY EXTENDED WITHOUT AMENDMENT FOR 364 DAYS FROM THE PRESENT OR ANY FUTURE EXPIRATION DATE HEREOF, UNLESS AT LEAST SIXTY (60) DAYS BEFORE ANY SUCH EXPIRATION DATE WE NOTIFY YOU BY REGISTERED MAIL / COURRIER ADDRESSED TO THE ADDRESS NOTED ABOVE, THAT WE ELECT NOT TO EXTEND THIS LETTER FOR SUCH ADDITIONAL PERIOD.

THIS LETTER OF CREDIT IS SUBJECT TO THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS (2007 REVISION) INTERNATIONAL CHAMBER OF COMMERCE, PUBLICATION NO. 600 (UNIFORM CUSTOMS), PROVIDED, HOWEVER, THAT: (A) WE SPECIFICALLY AGREE THAT A "REASONABLE TIME" WITHIN THE MEANING OF ARTICLE 14(b) OF THE UNIFORM CUSTOMS SHALL NOT EXCEED THREE (3) BANKING DAYS FOLLOWING THE DAY OF RECEIPT OF THE RELEVANT DOCUMENTS, AND (B) IF THIS LETTER OF CREDIT EXPIRES DURING THE INTERRUPTION OF BUSINESS AS DESCRIBED IN ARTICLE 36 OF THE UNIFORM CUSTOMS THEN THE EXPIRATION DATE OF THIS LETTER OF CREDIT SHALL BE AUTOMATICALLY EXTENDED WITHOUT AMENDMENT TO A DATE THIRTY (30) CALENDAR DAYS AFTER THE RESUMPTION OF BUSINESS AND WE HEREBY SPECIFICALLY AGREE TO EFFECT PAYMENT IF THE LETTER OF CREDIT IS DRAWN AGAINST WITHIN THIRTY (30) DAYS AFTER THE RESUMPTION OF BUSINESS.

SINCERELY YOURS,

[_____ BANK NAME _____]

BY: [INSERT NAME AND TITLE OF AUTHORIZED BANK REPRESENTATIVE]

AUTHORIZED SIGNATURE OF BANK REPRESENTATIVE

**ANNEX 1 TO
IRREVOCABLE LETTER OF CREDIT NO. _____
ISSUED BY _____ [BANK NAME]**

DATE: _____

[BANK NAME]
[ATTENTION]
[BANK ADDRESS1]
[BANK ADDRESS2]

APPLICANT: BQ ENERGY LLC

LADIES AND GENTLEMEN:

THE UNDERSIGNED _____, A DULY ELECTED AND ACTING OFFICER OF THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID (THE "BENEFICIARY"), HEREBY CERTIFIES TO _____ (THE "BANK"), WITH REFERENCE TO IRREVOCABLE LETTER OF CREDIT NO. _____ DATED _____ (THE "LETTER OF CREDIT"), ISSUED BY THE BANK ON BEHALF OF THE APPLICANT AND IN FAVOR OF THE BENEFICIARY, AS FOLLOWS, AS OF THE DATE HEREOF:

1. BENEFICIARY IS MAKING A DRAWING UNDER THE LETTER OF CREDIT IN THE AMOUNT OF \$ _____ BECAUSE [CHECK APPLICABLE PROVISION]:

(A) APPLICANT HAS FAILED TO PERFORM AS REQUIRED BY THE AGREEMENT TITLED "ENERGY EFFICIENCY INCENTIVE OFFER LETTER FOR 7,000 KW COMBINED HEAT AND POWER ("CHP") SYSTEM" BY AND BETWEEN THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID AND BQ ENERGY LLC DATED _____.

(B) [BANK NAME]'S HAS FAILED TO MAINTAIN A CORPORATE LONG TERM DEBT RATING OF AT LEAST "A-" FROM STANDARD & POOR'S OR "A3" FROM MOODYS INVESTORS SERVICE AND BENEFICIARY HAS MADE WRITTEN DEMAND ON APPLICANT TO DELIVER A REPLACEMENT LETTER OF CREDIT ISSUED BY A THIRD PARTY BANK SATISFYING THE REQUIREMENTS OF THE BENEFICIARY, AND APPLICANT HAS FAILED TO DELIVER SUCH REPLACEMENT LETTER OF CREDIT TO BENEFICIARY PRIOR TO THE CLOSE OF BUSINESS ON THE TENTH (10TH) DAY FOLLOWING SUCH WRITTEN DEMAND.

(C) THE BENEFICIARY HAS RECEIVED NOTICE FROM THE BANK OF ITS INTENTION TO CANCEL THIS LETTER OF CREDIT BEFORE ITS NORMAL EXPIRATION DATE AND APPLICANT HAS FAILED, PRIOR TO THE CLOSE OF BUSINESS ON _____ [INSERT DATE WHICH IS NOT MORE THAN THIRTY (30) DAYS BEFORE THE PRESENT EXPIRATION DATE], TO DELIVER TO BENEFICIARY ONE OR MORE REPLACEMENT LETTER OF CREDITS SATISFYING THE REQUIREMENTS OF THE AGREEMENT TITLED "ENERGY EFFICIENCY INCENTIVE OFFER LETTER FOR 7,000 KW COMBINED HEAT AND POWER ("CHP") SYSTEM" BY AND BETWEEN THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID AND BQ ENERGY LLC DATED _____.

2. BASED UPON THE FOREGOING, THE BENEFICIARY HEREBY MAKES DEMAND UNDER THE LETTER OF CREDIT FOR PAYMENT OF U.S DOLLARS _____ AND _____/100THS (U.S. \$ _____).

3. FUNDS PAID PURSUANT TO THE PROVISIONS OF THE LETTER OF CREDIT SHALL BE WIRE TRANSFERRED TO THE BENEFICIARY IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS:

UNLESS OTHERWISE PROVIDED HEREIN, CAPITALIZED TERMS WHICH ARE USED AND NOT DEFINED HEREIN SHALL HAVE THE MEANING GIVEN EACH SUCH TERM IN THE LETTER OF CREDIT.

IN WITNESS WHEREOF, THIS CERTIFICATE HAS BEEN DULY EXECUTED AND DELIVERED ON BEHALF OF THE BENEFICIARY BY ITS DULY ELECTED AND ACTING OFFICER AS OF THIS _____ DAY OF _____, _____.

BENEFICIARY: THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID

BY: _____ (SIGNATURE)

NAME: _____ (PRINT NAME)

TITLE: _____

Appendix B
Performance (Surety) Bond

Bond No. _____

WITNESSETH:

BQ Energy LLC having an address at 400 Market Industrial Park, Suite 32, Wappingers Falls, NY 12590 as **Principal**, and _____, having an address at _____, a corporation organized under the laws of _____ and being duly authorized to transact the business of indemnity and suretyship in this State of Rhode Island, as **Surety**, do hereby acknowledge our indebtedness to, and are jointly and severally bound unto the Narragansett Electric Company d/b/a National Grid, as **Obligee**, in the aggregate sum of \$7,000,000.00 (the "*Maximum Obligation*") for the payment of which the Principal and Surety bind themselves, their heirs, executors, administrators, successors, assigns or other legal representatives, jointly and severally.

The condition of this obligation is such, that:

WHEREAS, the Principal has entered into an agreement called "**Energy Efficiency Incentive Offer Letter for 7,000 KW Combined Heat and Power ("CHP") System**" by and between the Narragansett Electric Company d/b/a National Grid and BQ Energy LLC.", by and between Applicant and Beneficiary dated _____ the "*Agreement*"; and

WHEREAS, as a condition precedent to the commencement and/or continuation of the Agreement, the Principal agrees to furnish Obligee with this surety bond, issued by the Surety in the amount above mentioned for the purpose of establishing credit and securing their performance obligations under the Agreement; and

NOW, THEREFORE, if Principal shall timely perform or cause to be performed any and all of its contractual obligations under the Agreement that may at any time be due and owing to the Obligee from Principal, then this obligation shall be null and void, otherwise it shall remain in full force and effect as a continuing obligation and shall not be extinguished. Should the Principal fail to perform or cause to be performed all obligations that may at any time be due and owing to the Obligee by the Principal in connection with the Agreement, then the Surety holds itself bound hereunder for the payment of all such amounts, and such amounts shall become immediately due from the Surety upon demand by the Obligee. Any liability which accrues while this bond is in force and is in effect shall remain and shall not be extinguished, regardless of the cancellation or termination of this bond, as set forth herein. Partial payment(s) shall not be deemed to extinguish this bond.

Surety hereby waives all defenses with respect to (i) notice of default of performance, (ii) notice of amounts owed by Principal to the Obligee, (iii) demand and diligence, (iv) notice of any extension of time granted by the Obligee to Principal, (v) any forbearance by the Obligee in favor of Principal, and (vi) any errors or inaccuracies with respect to the current formal corporate name of Principal as appearing on any documents established by Obligee in connection with the Agreement. Surety further waives any right to require that the Obligee institute suit against Principal for any amount owed or obligation to be performed by Principal to or for the benefit of the Obligee in connection the Agreement, it being the intent of this bond, and Surety hereby agrees, that if Principal fails or refuses to pay any such amount or perform any

obligation due and owing to the Obligee under the Agreement, Surety shall pay such amount to the Obligee upon demand by the Obligee.

Amounts paid by Surety to the Obligee hereunder shall be credited against Surety's Maximum Obligation but shall not otherwise affect Surety's obligations under this bond. Principal and Surety agree that, subject to the Maximum Obligation, in any suit successfully prosecuted on this bond by the Obligee, the Obligee shall be entitled to recover, in addition to any other amount recovered by the Obligee, the reasonable attorneys' fees incurred by the Obligee in prosecuting said suit. Principal and Surety further agree that the Obligee does not, whether by accepting this bond or accepting any payment from Surety under this bond, waive its right to discontinue, in whole or in part and without prior notice, the Agreement in the event Principal fails or refuses to pay any amount and/or perform any obligation owed by Principal to the Obligee in connection with the Agreement, provided, however, the Obligee shall be under no duty to exercise such rights.

This bond is subject to the following additional terms, limitations and conditions:

1. The term of this bond shall commence [_____] and shall be continuous.
2. The Surety shall have the right to terminate its liability hereunder, but only as to amounts owed by Principal as a result of nonperformance as required under the Agreement after the effective date of such termination, at any time by giving notice in writing by registered mail to the Obligee and the Principal and stating therein the effective date of such termination which date shall not be less than thirty (30) days after receipt of said notice by the Obligee. Such notice shall not limit or terminate this bond in respect to any liability for acts, omissions, or indebtedness occurring or arising prior to the effective date of such termination by the Surety. Written notice must be by certified letter, return receipt requested, and mailed to the Obligee at Boston Gas Company d/b/a National Grid, 300 Erie Boulevard West, D-1, Syracuse, NY 13202 (Attn: Commercial Credit and Collections Dept.), and to Principal at BQ ENERGY LLC, 400 Market Industrial Park, Suite 32, Wappingers Falls, NY 12590.
3. It is understood and agreed between the Principal and the Obligee that, upon receipt of Surety's thirty-day written notice of cancellation as provided above, the Obligee may demand from the Principal a replacement surety bond, in the amount corresponding to the existing amount of this Surety Bond at the time of such cancellation notice, by written notice to Principal and Principal shall deliver the replacement Surety Bond to the Obligee at least ten (10) days prior to the effective date of termination or expiration of this bond. In the event that a replacement Surety Bond is not provided in compliance with this paragraph, the Obligee shall have the right, but not the obligation, to pursue all legal rights afforded to Obligee under the Agreement, either in whole or in part and without prior notice.
4. No proceeding in law or in equity may be brought under this bond unless the same shall be commenced and process served prior to the expiration of one (1) year from the effective date of cancellation of this bond.
5. Obligee may make a claim on this bond by mailing a copy hereof, along with a statement of default and the amount owed, to the following address of Surety:

_____.
6. It is understood and agreed that any person(s) having a claim under the conditions of this bond may initiate suit in any court of competent jurisdiction upon this bond.

7. Surety agrees that no change, extension of time, alteration or addition to the Agreement shall in any way affect the obligation of this bond and it does hereby waive notice of any such change, extension of time, alteration or addition. Surety further agrees that any changes in, to, or under any contractual documents relating to the Agreement, and any compliance or non-compliance with formalities connected with such documents or changes, shall not affect Surety's obligation under this bond, and it does hereby waive notice of any such changes, compliance or non-compliance.

8. In this bond, (i) words denoting the singular include the plural and vice versa, and (ii) words such as "hereunder", "hereto", "hereof" and "herein" and other words of similar import shall, unless the context requires otherwise, refer to this bond as a whole and not to any particular article, section, subsection, paragraph or clause hereof.

9. In no event shall the Surety's obligation exceed the Maximum Obligation.

IN WITNESS WHEREOF, the Principal and Surety have executed and delivered this bond this _____ day of _____, 20 ____.

(Seal) _____, as Principal

By: _____
Name:
Title:

(Seal) _____, as Surety

By: _____
Name:
Title:

Minimum Requirements Document



Customer	DC CHP at Naval Station Newport	EI or D2	EI
Location	Building 7CC	Application	7798641
ECM:	Install one 7.965 MW Gas Turbine Generator with Heat Recovery Steam Generator		

This document specifies the agreed upon minimum equipment specifications and operational requirements of the proposed system. These requirements shall address the criteria necessary to be met to achieve the demand and energy savings estimated in the engineering analysis for this project. (Use additional sheets if necessary).

Pre-Construction	<p>SEQUENCE OF OPERATION: Provide a description of equipment operating sequences, setpoints, operating schedules, balancing requirements (flow, velocity, head, etc) or any other required operating parameters</p> <p>Submittals: Provide major equipment data sheets</p>
Yes <input type="checkbox"/> No <input type="checkbox"/>	<p>Milestone 1. Equipment submittal and approval of Sequence of Operation (SOO). Required Completion Date: Before the start of the combined heat and power (CHP) installation at the site and prior to approving submittals for the major equipment.</p> <ol style="list-style-type: none"> 1. The 7.965 MWe (ISO rating) Gas Turbine Generator (GTG) (calculations based on Solar Taurus 70 model or equal) shall operate to serve Thermal loads through a heat recovery steam generator (HRSG) and duct burner when the site's steam distribution system is active. The GTG is expected to have an exhaust diverter valve to allow partial thermal utilization of the HRSG during part load conditions, but sustained use of 100% heat rejection for more than 1 week beyond the site's winter heating steam load is considered not meeting this MRD. The GTG, HRSG, and duct burner compose the main components of the CHP plant, and shall be used as the lead boiler at the Building 7CC boiler plant, which is the central plant for the site's steam distribution system. Note: the CHP system may require a gas compressor, so a 150 kW parasitic load was included in the savings analysis. 2. Provide a process and instrument diagram (PID) showing all GTG plant equipment, electrical connections, fuel gas, and instruments including Btu meters. P&ID to show all the sensors and meter locations as required for measuring thermal and electrical efficiency, net of parasitic loads. 3. Provide a copy of equipment submittals including performance ratings. 4. Provide documentation that the National Grid gas account for the GTG is on a firm delivery rate (non-interruptible), and that gas will be the primary fuel (over 95%, unless gas becomes unavailable from National Grid) used to generate steam. 5. Sequence of Operation: <ol style="list-style-type: none"> a. The CHP plant shall operate continuously from Mid-October through Mid-May while the site's steam heating distribution system is active. The CHP system is not expected to operate Mid-May to Mid-October when the steam distribution system is not active. The estimated annual operating time is 4,500 hours, not counting forced outages of the unit. b. The exhaust from the GTG shall be routed to the Heat Recovery Steam Generator (HRSG). The GTG exhaust will be supplemented as needed with additional heat input from a natural gas fired duct burner installed on the inlet to the HRSG, up to 100% of the site steam load. c. The existing boiler plant may be operated in parallel with the HRSG for back-up / redundancy reasons, but the CHP is expected to be the first run large boiler, and is expected to be used to keep the existing boiler plant in warm stand-by. The existing boilers may be used to meet peak heating loads, should the peak loads exceed the CHP plant capacity. 6. Minimum kW import: The electrical output of the generator should not reach within 500 kW of the demand of the site's grid connected electrical loads, such that the site will always import 500 kW as a minimum, independent of the thermal loads. If need be, the output of the GTG shall be reduced so there will always be at least 500 kW delivered to the site from the grid. 7. BTU meters shall be installed to quantify the delivered thermal output of the HRSG and duct burner. 8. All electric and gas meters shall be utility grade; provide cut sheets to verify. 9. The 7,965 kWe GTG is designed to meet the following performance criteria for the year: <ol style="list-style-type: none"> a. Annual Production of 36,156,000 kWh (net of parasitic loads; see Milestone 2a below) b. Gas fuel increase 300,000 MMBTUs HHV (fuel fired for cogen minus boiler fuel saved) c. Oil usage reduction of 33,500 MMBTUs d. Boiler fuel offset of 165,600 MMBTUs e. Electrical efficiency modeled at 29% HHV (net output to the site, less CHP plant parasitics) f. Thermal efficiency modeled at 30% HHV (net output to the site, less CHP plant parasitics) g. Plant overall efficiency modeled at 59% HHV h. Minimum overall plant efficiency to receive incentive: 55% HHV

Post Inspection	Installation Completion: Provide a list of equipment or materials installed as part of this project. Include mfr, model, HP, kW, efficiency ratings, etc .and confirm completion																								
Yes <input type="checkbox"/> No <input type="checkbox"/>	<p>Milestone 2a. Installation Completion</p> <ol style="list-style-type: none"> 1. Install one 7,965 kWe Gas turbine generator (GTG) at ISO rating; Solar Taurus 70 model or equal. 2. Install one HRSG with a natural gas fired duct burner installed on the inlet, Rentech GTB-XFL-1205 or equal. The GTG exhaust to steam efficiency is expected be 97% or higher. The efficiency of the duct burner is estimated to be 96%. When bolted to the outlet of the GTG, the HRSG & duct burner system shall be capable of delivering 60,000 lbs/hr of 150 psig steam at 32.1 MMBTU/hr of fuel input. 3. GTG unit shall meet the following criteria derived from the product selection sheets. Performance is based on 60F degree inlet air temperature at sea level, 4" inlet & 10" exhaust pressure losses, 150 psig steam, with 228F degree feedwater: <ol style="list-style-type: none"> a. electric output at the generator terminals: 7,692 kW b. thermal output, 32.0 kpph c. overall efficiency: 67% at full load based on 86.9 MMBTUh of fuel input (using HHV) d. GTG gross HHV performance at 60F as follows: <table border="1" data-bbox="555 678 1404 898"> <thead> <tr> <th></th> <th>100%</th> <th>75%</th> <th>50%</th> </tr> </thead> <tbody> <tr> <td>Electrical output</td> <td>7,692 kW</td> <td>5,769 kW</td> <td>3,846 kW</td> </tr> <tr> <td>Fuel input (HHV)</td> <td>86.9 MMBTUh</td> <td>71.4 MMBTUh</td> <td>57.3 MMBTUh</td> </tr> <tr> <td>HRSG steam (GTG)</td> <td>32.0 kpph</td> <td>25.5 kpph</td> <td>20.5 kpph</td> </tr> <tr> <td>Electrical efficiency</td> <td>30.2%</td> <td>27%</td> <td>23%</td> </tr> <tr> <td>Thermal efficiency</td> <td>36.8%</td> <td>36%</td> <td>35%</td> </tr> </tbody> </table> e. Generator gross kW vs Outdoor Air Temperature <div data-bbox="555 925 1398 1384"> </div> f. Parasitic loads: estimated at 213 kW during full-load operation; inclusive of gas compressor, all pumps and fans; accounting for expected added CHP parasitic equipment loading at these conditions and deducting diminished boiler loads, as applicable. 4. Install a Btu meter to measure the thermal output of the CHP unit(s). 5. Provide meters as required to monitor energy output, waste heat utilization and electrical power production. Both electric meters and gas meters shall have accuracy equal to utility grade meters. 6. Energy monitoring accuracy shall meet: <ol style="list-style-type: none"> a. As a minimum the system shall be able to capture 15-minute interval data for electricity produced, utility kW import, waste heat utilization (Steam production), outdoor air temperature, HRSG inlet & outlet temperatures, fuel input and power consumed by all auxiliary equipment. b. Fifteen-minute trends for gas input and engine run hours shall be provided. c. The control system should be capable of trending and archiving this data for a period of five year before overwriting. d. Archived data shall be capable of being exported to a National Grid designated ftp server via CSV compatible electronic files on a daily basis. 7. During post inspection confirm that data collection system is installed, connected to properly calibrated metering and reporting and archiving data properly. 		100%	75%	50%	Electrical output	7,692 kW	5,769 kW	3,846 kW	Fuel input (HHV)	86.9 MMBTUh	71.4 MMBTUh	57.3 MMBTUh	HRSG steam (GTG)	32.0 kpph	25.5 kpph	20.5 kpph	Electrical efficiency	30.2%	27%	23%	Thermal efficiency	36.8%	36%	35%
	100%	75%	50%																						
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Thermal efficiency	36.8%	36%	35%																						

<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p><u>Milestone 2b. Demonstration of Operability</u> <u>(Completion of Milestone 2A and 2b is required for the payment of 80% of the incentive)</u> Confirm that the above noted equipment is installed and operational for completing Milestone 2b. Installed and operational is defined as :</p> <ol style="list-style-type: none"> 1. All components of the new GTG including all meters are installed, calibrated and connected to their respective building systems. Start-up and commissioning of the system is complete in accordance with equipment supplier recommendations and industry practice. 2. All equipment, piping, electrical and control wiring is completed, so that all CHP units can run in an automatic mode. The minimum performance shall be the following: <ol style="list-style-type: none"> a. Annual net Production of 36,156,000 kWh (accounting for parasitics; see Milestone 2a below) b. Boiler fuel offset of 165,600 therms (based on 82% overall boiler efficiency) c. Plant overall efficiency of 59% 3. Interconnection facilities are completed and accepted by Retail Connections Engineering, and insurance certificates are in place. This does not absolve the customer from meeting any other jurisdictional permits or other regulatory requirements. 4. All instrumentation and meters required are installed and are working properly and porting data to remote website. 5. 15-minute interval data shall be made available and exported to remote website for access to National Grid in CSV format. 6. Customer and its vendors have completed their own commissioning with reports on major pieces of equipment provided.
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<p>Post Operational Assessment</p>	<p>DOCUMENTATION: List written documentation required to train, verify, operate, or maintain the equipment being installed or controlled. This may include specification sheets, test reports, construction drawings, etc.: Provide a list of Trending Requirements required to verify proper system operation. Trends should document operational sequences, setpoints and scheduling of equipment as described in TA Study</p>
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<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p><u>Milestone 3. (Completion of Milestone 3 & 4 is required for the payment of the remaining 20% of the incentive.)</u> Validate the following items:</p> <ol style="list-style-type: none"> A. O&M manuals and documentation on site <ol style="list-style-type: none"> 1. O&M manuals for the following equipment: <ol style="list-style-type: none"> a. Combustion gas turbine b. Heat recovery Steam Generator c. Duct burner d. Gas compressor, as applicable e. Metering equipment (gas, electric) 2. Design Drawings (Process and & Instrument Diagrams and Mechanical Piping Drawings, Instrumentation List and equipment Data Sheets) are available on site: <ol style="list-style-type: none"> a. Facility layout drawings b. Process & Instrument Diagrams c. One line diagrams d. Instrument list e. Equipment data sheets 3. Meter calibration data has been provided for all meters identified in this MRD B. Availability of trend data and confirming of its exportability. <ol style="list-style-type: none"> 1. Provide 15-minute interval data for the following points as a minimum. Provide the capacity for and enable trend data archiving for a period of at least one year. <ol style="list-style-type: none"> a. Gross and net (after parasitics) kW and kWh electrical output – including parasitic consumption measurements b. Fuel input to CHP plant (therms or MMBtu) c. Flow/temperature on heat recovery supply/return d. Any point necessary to determine other parasitic loads, based on the final plant design 2. Provide ability to export weekly data electronically to third party via email or FTP at all times. 3. Post operational assessment process will require functional testing of the CHP and the thermal and
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electrical interface to the buildings, a minimum 2 weeks and up to 6 months of concurrent 15 minute interval data for all points noted above. If equipment fails to meet expected sequences of operations and corrections are needed, additional trend data shall be provided to confirm any seasonal changes in operations.

4. Install, maintain, and calibrate measurement, monitoring and data recording equipment for the lifetime of the project in compliance with ISO-New England's Manual for Measurement and Verification of Demand Resources, including:

- a. Meet or exceed the relevant American National Standard Institute or equivalent standard for the equipment.
- b. Meet the relevant Institute of Electrical and Electronics Engineers standards for equipment installed and measuring electric demand on electric circuits with significant harmonics and have a digital sampling rate of at least 2.6 kHz.
- c. Utilize a pulse rate within the resolution capabilities of the recorder, if recording pulses from measurement and monitoring devices.
- d. Have an accuracy of no less than +/-2% using a true Root Mean Square measurement device to measure electrical demand or using any measurement or monitoring equipment for proxy variables to calculate electrical demand.
- e. Install measurement or monitoring devices that direct measure electrical demand from three-phase devices such that measurements are taken on all three-phases to account for any phase imbalance or an equivalent method that can measure electrical demand using two phases.
- f. Include the power factor of the end-uses in the demand calculations if measuring current and nominal voltage to calculate electrical demand.
- g. Synchronize data recorders with the National Institute of Standards and Technology to an accuracy of +/- 2 minutes per month.
- h. Calibrate to meet or exceed Federal Energy Management Program Measurement and Verification Guidelines, applicable American Society of Heating, Refrigeration and Air Conditioning Engineers standards, National Institute of Standards and Technology, or equivalent standard for the equipment and provide meter calibration data.
- i. Ensure all measurement, monitoring and data logging equipment is maintained to meet or exceed industry and manufacturer maintenance standards and maintain documentation on all such calibration activities.
- j. Collect electricity usage data at a frequency of 15 minute intervals or less.

C. Sequence of operation is working as outlined in MRD, TA report and supporting energy saving calculations.

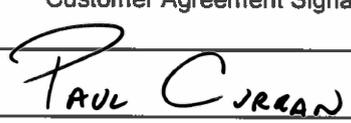
Post Inspection OTHER REQUIRMENTS: Describe any requirements for demolition, removal, etc of existing equipment.

Yes No

Milestone 4

1. Customer will have a minimum 3 year or first major overhaul maintenance contract to help achieve long term proposed operational strategies and energy cost savings. Normal planned /routine maintenance shall be conducted where possible during the summer shutdown period.
2. The minimum requirements described in this MRD must be met for the project to receive the EE incentive; missing or underperforming characteristics may result in a diminished incentive, or no incentive.
3. Provide detailed project cost breakdown by major system components. Provide copies of paid invoices to support the project costs.

The pre-approved incentive is subject to Retail Companies' POST INSPECTION of final specifications, drawings and operation of the proposed equipment. In the event the proposed system is altered from the above description, notify the Company of the change prior to the equipment purchase and installation as the change in design and operation may impact the available incentive.

MOSHIA	<small>Digitally signed by Moshia DN: cn = Moshia Date: 2018.01.29 09:33:44 -0400</small>		
National Grid Technical Support Consultant	Date	Customer Agreement Signature	Date
			2 May 2018
Post Inspection Signature	Date	Customer Sign Off	Date

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4755
In Re: 2018 Energy Efficiency Plan
Notification of an Energy Efficiency Incentive Greater Than \$3,000,000
Responses to the Division's Seventh Set of Data Requests
Issued on August 20, 2018

Division 7-9

Request:

Refer to Division 5-10 which asked the Company to disclose "whether receipt of the incentive equal to \$1,000/KW from National Grid is a legal prerequisite to the contractor(s) proceeding with the CH under its lease agreement with the Navy or whether the contractor(s) can cancel the lease or alter its commitment relating to the CHP project under the lease if an incentive is not received." The Company's response was: "The Company does not have a copy of the BQ Energy Lease Agreement and, therefore, cannot comment on the terms of the lease with the Navy."

- (a) Did the Company communicate with BQ Energy about the Division's request in Division 5-10? If not, why not. If yes, please describe the communication and its outcome.
- (b) Has the Company ever requested a copy of the sections of the Lease Agreement relating to the like-kind exchange CHP provision? If yes, please describe the communications and outcome. If not, why not?
- (c) Did the Company ever ask BQ Energy to provide an answer to the Division's question in Division 5-10? If yes, please describe the communications and the outcome. If not, why not?

Response:

- (a) Yes, the Company informed BQ that as a result of the Company's notification of the CHP incentive to the PUC, the Division had some follow up questions. The communication was a part of the regularly scheduled project meetings.
- (b) Yes, in early October 2017 National Grid requested a copy of the lease agreement from BQ. Upon BQ's request, the Navy provided the Company with a memo (See Attachment DIV 7-9), describing the lease and the payment in kind. As described in the Company's response to Division 7-3, the efficiency of the CHP has increased after the date on which the memo was written.
- (c) No, the Company did not ask BQ to provide a response to 5-10 because the Company had previously requested the lease. See part (b) above.



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND HEADQUARTERS
WASHINGTON NAVY YARD, DC 32212-0030

October 24, 2017

National Grid
280 Melrose Street
Providence, RI 02907
Attn: Gerald Ferris

Dear Mr. Gerald Ferris:

The Navy and BQ Energy plan to execute a 30 year lease agreement for approximately 168.87 acres of land located at Naval Station Newport. As negotiated, BQ Energy will install a 20 MW solar array on the leased premises. In lieu of cash rent payment, BQ Energy will design, install, and maintain a nominal 7.9 MW CHP generation plant with thermal load following and an annual target efficiency of 55% to be located at Naval Station Newport. Electricity produced by the plant will not be exported beyond the Newport Navy Primary metering point. At the end of the lease term, BQ Energy will remove the solar array and the Navy will assume ownership of the CHP generation plant. The project as specified exceeds the fair market value of the land, thus meeting in-kind consideration requirements for the solar array project.

CDR KEN SCHWALBE
Resilient Energy Program Office
Action Officer

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4755
In Re: 2018 Energy Efficiency Plan
Notification of an Energy Efficiency Incentive Greater Than \$3,000,000
Responses to the Division's Seventh Set of Data Requests
Issued on August 20, 2018

Division 7-10

Request:

Please make a request to BQ Energy for the information being sought in Division 510 and disclose BQ Energy's response.

Response:

Please see the Company's response to Data Request Division 7-9.