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February 28, 2020

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

**RE: Review of Proposed Power Purchase Agreements  
Pursuant to R.I. Gen. Laws § 39-26.1  
Docket No. 5011**

Dear Ms. Massaro:

Enclosed for filing with the Rhode Island Public Utilities Commission (Commission) are two amended schedules in support of a 20-year Power Purchase Agreement (PPA) entered into by National Grid<sup>1</sup> with Gravel Pit Solar II, LLC (Gravel Pit) for review and approval under the Long-Term Contracting Standard for Renewable Energy, R.I. Gen. Laws § 39-26.1.1 *et seq.* (Filing). The proposed PPA with Gravel Pit provides for National Grid to acquire 99% of the renewable energy output and renewable energy certificates (RECs) from Gravel Pit's proposed 50 MW solar facility over a term of 20 years (*see* Filing at Bates NG000007). The Company's Filing was docketed by the Commission on February 5, 2020 as Docket No. 5011.

After submitting its Filing, the Company identified certain errors in Schedules NG-4 and NG-5. Schedule NG-4 contains errors in the second and fourth lines under item # 10 providing "Option value of individual resources," in expressing revenue reductions for Rhode Island and New England markets, respectively. These resulted from a calculation error and a cell reference error in the quantitative evaluation workbooks prepared by the Company's consultant. The Company has confirmed with its consultant that the error does not impact the Stage 2 or Stage 3 analysis or ranking of proposals. Also, because Schedule NG-5 takes outputs from Schedule NG-4 to provide a benefit-cost ratio, one of its cost values requires amendment, as well. The revision reduces the reported Total Net Benefits in Schedule NG-4 from approximately \$101 million to \$91,830,664, and revises the B/C Ratio in Schedule NG-5 from 2.73 to 2.35.

The Company respectfully requests that the Commission accept the attached amended copies of Schedules 4 and 5 as part of its Filing in support of the PPA. The Company is not requesting protective treatment of these materials, and they can be included on the public record.

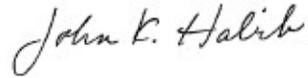
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1 The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

Luly Massaro, Commission Clerk  
Petition for Approval of Proposed Power Purchase Agreement  
Pursuant to R.I. Gen. Laws § 39-26.1  
February 28, 2020  
Page 2 of 2

Please contact me at 617-951-1400 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "John K. Habib".

John K. Habib, Esq.  
R.I. Bar # 7431

cc: Docket 5011 Service List

**Docket No. 5011 – The Narragansett Electric Co. d/b/a National Grid’s Review of PPA w/ Gravel Pit Solar II, LLC**  
**Service List updated 2/27/2020**

<b>Name/Address</b>	<b>E-mail Distribution</b>	<b>Phone</b>
<b>National Grid</b> John K. Habib, Esq. Keegan Werlin LLP 99 High Street, Suite 2900 Boston, MA 02110  Laura Bickel, Esq. National Grid	<a href="mailto:Jhabib@keeganwerlin.com">Jhabib@keeganwerlin.com</a> ;	617-951-1354
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	<a href="mailto:Brooke.skulley@nationalgrid.com">Brooke.skulley@nationalgrid.com</a> ;	
	<a href="mailto:Stephen.mccauley@nationalgrid.com">Stephen.mccauley@nationalgrid.com</a> ;	
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	<a href="mailto:Laura.Bickel@nationalgrid.com">Laura.Bickel@nationalgrid.com</a> ; <a href="mailto:Laurie.Riley@nationalgrid.com">Laurie.Riley@nationalgrid.com</a> ;	
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	<a href="mailto:Thomas.kogut@dpuc.ri.gov">Thomas.kogut@dpuc.ri.gov</a> ;	
	<a href="mailto:Joel.munoz@dpuc.ri.gov">Joel.munoz@dpuc.ri.gov</a> ;	
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**Rhode Island Renewable Energy Long Term Contract RFP  
Docket 4600 Benefit-Cost Framework - Applicable Category Summary**

Power System Level (Cost/Benefit Categories)		(NPV in 2018\$)	Description of quantitative values or reason for exclusion:
(1) Energy Supply & Transmission Operating Value of Energy Provided or Saved (Time- & Location-	Applicable/Quantifiable	\$54,871,248	Market value of Energy from Project.
(2) Renewable Energy Credit Cost/Value	Applicable/Quantifiable	\$24,451,273	Market value of Project RECs retired (used) for RES or sold.
(3) Retail Supplier Risk Premium	Not Applicable (N/A)	\$0	PPA is a long term contract for wholesale power supply at a fixed price.
(4) Forward Commitment: Capacity Value	Applicable/Not Quantifiable	-	Beyond the capabilities of the modeling system to quantify accurately. Neutral impact.
(5) Forward Commitment: Avoided Ancillary Services Value	Applicable/Not Quantifiable	-	Beyond the capabilities of the modeling system to quantify accurately. Negative impact, insignificant.
(6) Utility / Third Party Developer Renewable Energy, Efficiency, or DER costs	Applicable/Quantifiable	(\$48,466,063)	PPA cost of energy and RECs.
(7) Electric Transmission Capacity Costs / Value	Applicable/Quantifiable	\$0	The Proposal contains a fixed PPA price for energy and REC, with all interconnection and transmission upgrades included in PPA price. The project is commitment to interconnect to the ISO-NE "PTF" at the Capacity Capability Interconnection Standard, as defined by ISO-NE.
(8) Electric transmission infrastructure costs for Site Specific Resources	Applicable/Quantifiable	\$0	The Proposal contains a fixed PPA price for energy and REC, with all interconnection and transmission upgrades included in PPA price. The project is required to interconnect to the ISO-NE "PTF" at the Capacity Capability Interconnection Standard, as defined by ISO-NE.
(9) Net risk benefits to utility system operations (generation, transmission, distribution)	N/A	\$0	Generation supply will be interconnected at the ISO-NE "PTF". This resource is not a DER.
(10) Option value of individual resources	Applicable/Quantifiable	\$2,219,724	RI Energy Market Price Change Impact + RI REC Market Price Change Impact + Benefit to Rhode Island Gas Customers due to Gas Use Reduction (Benefits)
Option value of individual resources	Applicable/Quantifiable	(\$3,665,076)	RI Energy Market Price Change Impact + RI REC Market Price Change Impact (Revenue Reduction for existing Long Term Contracts)
Option value of individual resources	Applicable/Quantifiable	\$34,089,848	Other NE States Energy Market Price Change Impact + Other NE States REC Market Price Change Impact + Benefit to Other NE States Gas Customers due to Gas Use Reduction (Benefits)
Option value of individual resources	Applicable/Quantifiable	(\$13,704,787)	Other NE States Energy Market Price Change Impact + Other NE States REC Market Price Change Impact (Revenue Reduction for existing Long Term Contracts)
(11) Investment under Uncertainty: Real Options Cost / Value	Applicable/Quantifiable	Included in categories (1,2,6,10)	Project was selected based on a competitive process of multiple proposals. Evaluation and benefit cost analysis was compared to a basecase that provided a "but for" or "counterfactual" projection of the costs of electric energy, RECs, and carbon emissions associated with Rhode Island electricity consumption under a future in which no proposals are selected.
(12) Energy Demand Reduction Induced Price Effect	N/A	\$0	Generation supply is not an Energy DRIPE, but the proposal's indirect benefit impact on market LMP price change and REC price change is listed above.
(13) Greenhouse gas compliance costs (Embedded Costs)	Applicable/Quantifiable	Included in category (1)	Greenhouse gas compliance costs (GGC) is embedded as a fuel related cost in the model analysis to determine the quantitative market impacts listed above.
(14) Criteria air pollutant and other environmental compliance costs	Applicable/Not quantifiable	-	Not significant value to quantify or differentiate between project. Positive impact, insignificant.
(15) Innovation and Learning by Doing	Applicable/Not quantifiable	-	The benefits of innovation in the solar industry and by the developer have been captured in the bid pricing of the contract, including, but not limited to any potential federal tax credits, Positive impact, insignificant.
(16) Distribution capacity costs	N/A	\$0	Generation supply will be interconnected at the ISO-NE "PTF". Distribution level category is not applicable to this project.
(17) Distribution delivery costs	N/A	\$0	Generation supply will be interconnected at the ISO-NE "PTF". Distribution level category is not applicable to this project.
(18) Distribution system safety loss/gain	N/A	\$0	Generation supply will be interconnected at the ISO-NE "PTF". Distribution level category is not applicable to this project.
(19) Distribution system performance	N/A	\$0	Generation supply will be interconnected at the ISO-NE "PTF". Distribution level category is not applicable to this project.
(20) Utility low income	N/A	\$0	Generation supply will be interconnected at the ISO-NE "PTF". Distribution level category is not applicable to this project.
(21) Distribution system and customer reliability / resilience impacts	N/A	\$0	Generation supply will be interconnected at the ISO-NE "PTF". Distribution level category is not applicable to this project.
(22) Distribution system safety loss/gain	N/A	\$0	Generation supply will be interconnected at the ISO-NE "PTF". Distribution level category is not applicable to this project.

Customer Level (Cost/Benefit Categories)		
(23) Program participant / prosumer benefits / costs	N/A	\$0
(24) Participant non-energy costs/benefits: Oil, Gas, Water, Waste Water	N/A	\$0
(25) Low-Income Participant Benefits	N/A	\$0
(26) Consumer Empowerment & Choice	N/A	\$0
(27) Non-participant (equity) rate and bill impacts	N/A	\$0

Proposed rate recovery through distribution rates applicable to all distribution customers.
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Societal Level (Cost/Benefit Categories)		
(28) Greenhouse gas externality costs	Applicable/Quantifiable	\$40,320,033
(29) Criteria air pollutant and other environmental externality costs	Applicable/Quantifiable	\$1,593,093
(30) Conservation and community benefits	Applicable/Not quantifiable	-
(31) Non-energy costs/benefits: Economic Development	Applicable/Quantifiable	\$121,371
(32) Innovation and knowledge spillover	Applicable/Not quantifiable	-
(33) Societal Low-Income Impacts	N/A	\$0
(34) Public Health	Applicable/Not quantifiable	Included in category (28) and (29)
(35) National Security and US international influence	Applicable/Not quantifiable	Included in category (1) and (28)

Impact of Reduction in GHG Emissions
Impact of Reduction in NOx Emissions
The project must be reviewed and approved by the Connecticut Siting Council, which preempts local permit requirements. Development and Management Plan must then be approved by CSC, and stormwater and dewatering discharge permit must be issued by Connecticut Department of Energy and Environmental Protection. Gravel Pit Solar is strategically sited on a gravel mine, is not visible from homes or roads, has no sensitive natural resources, thereby minimizing and avoiding environmental impacts. Additionally, using the latest inverter technology, tracking panel rack systems, bi-facial panels, and the newest engineering approaches the proposed project will produce substantially more energy from a smaller footprint than similar solar projects. In consideration of land use impact the Gravel Pit Solar project has a direct societal benefit relative to the development and deployment of other projects mounted on greenfield parcels which can disrupt the carbon absorption capacity of forest, open space and farmland. Positive impact, unknown magnitude.
Economic Benefit to Rhode Island. The project made a commitment to invest at least \$300,000 in training RI new energy workforce.
The DESRI-North Light team has developed, constructed, and operated over 300 MW of new solar in ISO-NE. DESRI Renewables' parent company D.E. Shaw Renewable Investments, LLC (DESRI) was formed in 2011, and is an experienced owner operator of utility-scale solar across the U.S. Their total portfolio includes projects of comparable size. Positive impact, small.
Proposed rate recovery through distribution rates applicable to all distribution customers.
Pollutants emitted by the electric power sector cause damage to human health, including increased morbidity and mortality. Over the course of its operating life, the Gravel Pit Solar project will displace thermal generation which will result in reduced emissions of harmful pollutants, which can be translated to societal benefits. The societal benefits for GHG and NOx emissions reduction are listed above in (28) and (29). Positive impact, significant.
The project will contribute to reducing oil consumption, attributed to winter fuel switching, by approximately 330,000 Bbls. The economic and environmental impacts have been captured in the market value and GHG emission reduction listed in (1) and (28). Positive impact, small.

<b>Total Net Benefits:</b>	<b>\$91,830,664</b>
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**Comparison to Programs that have performed the RI Benefit Cost Test**

Program	Total Benefits (\$ Million)	Total Cost (\$ Million)	RI Test Benefit/Cost	Data Source
Gravel Pit Solar	\$158	\$67	2.35	Schedule NG-4 : TCR Report, Rhode Island Benefit Cost Test
Revolution Wind	\$5,552	\$2,049	2.71	Docket No. 4929: Attachment PUC 3-7-A, Rhode Island Benefit Cost Test <sup>(1)</sup>
Energy Efficiency (2020 Program Year)	\$603	\$130	4.64	Docket No. 4979: 2020 Energy Efficiency Program Plan -Table E-5
Energy Efficiency (2019 Program Year)	\$506	\$126	4.00	Docket No. 4888: 2019 Energy Efficiency Program Plan -Table E-5

<sup>(1)</sup> In the Docket 4929 written order, issued on June 7, 2019, the RIPUC ordered that the remuneration calculated on the cost of the payments made under the power purchase agreement is hereby denied which adjusts the RI Test Benefit/Cost to 2.76.

**Comparison to Levelized Cost of Other Programs**

Program	Levelized Nominal Cost \$/MWh
Gravel Pit Solar	\$52.95 /MWh
CERFP - Long Term Contracts (Weighted Average of 8 Projects)	\$90.26 /MWh
Revolution Wind	\$98.43 /MWh
Net Metering <i>(Bill Credit Rates as of 10/1/2019)</i>	\$177.28 /MWh
RE Growth (2019 Program Year)	\$181.83 /MWh
RE Growth (2018 Program Year)	\$183.11 /MWh