Jennifer B. Hutchinson
Senior Counsel

August 26, 2015

VIA HAND DELIVERY & ELECTRONIC MAIL

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

RE: Docket 4574 - Review of Power Purchase Agreement – Copenhagen Wind Farm, LLC Pursuant to Rhode Island General Laws § 39-26.1-1 *et seq*.
Responses to Commission Data Requests – Set 1

Dear Ms. Massaro:

On behalf of National Grid[1] I have enclosed the Company's responses to data requests that were issued by the Rhode Island Public Utilities Commission on August 7, 2015 in the above-referenced docket.

Thank you for your attention to this transmittal. If you have any questions, please contact me at 401-784-7288.

Very truly yours,

Jennifer Brooks Hutchinson

Enclosures

cc: Docket 4574 Service List
Leo Wold, Esq.
Jon Hagopian, Esq.
Steve Scialabba, Division

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

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Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

Paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

Joanne M. Scanlon

August 26, 2015
Date

Docket No. 4574 - National Grid – Review of PPA - Copenhagen Wind Farm, LLC
Service List updated 8/18/15

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COMM 1-1

Request:

Corinne DiDomenico at 5, line 7-14. Identify the nameplate capacity, contract capacity and capacity factor of each of the projects listed on p. 5, lines 8-14, and explain how the Company concluded that 78% of the LTC requirement has been met as of December of 2014. Include in your response definitions of nameplate capacity, contract capacity and capacity factor.

Response:

Please refer to Attachment COMM 1-1 for the requested information associated with projects listed on p. 5, lines 8-14. The Company concluded that 78% of the LTC requirement has been met as of December of 2014 by dividing the sum of the contract capacity of all active projects by the 90 MW requirement.

Nameplate capacity is the maximum output or gross output of a generator.

Capacity factor is determined by the expected average annual output of the generator divided by the maximum annual output of the generator at full capacity (100%).

Contract capacity is the maximum annual output adjusted by the expected capacity factor.

For example:

Nameplate Capacity of Generator = 100 MW
Estimated Average Annual Output = 219,000 MWh per year

$$\frac{\text{(219,000 MWh/year)}}{\text{(100 MW) X (8,760 hrs./year)}} = 25\% \text{ Capacity Factor}$$

Because rating conventions are technology dependent[1], the most straightforward way to determine the contract capacity is to divide the estimated annual output in MWh/year by 8,760 hrs./year.

[1] Solar projects use DC nameplate ratings and wind projects use AC nameplate ratings. The nominal ratings of thermal (biogas or landfill gas) and hydroelectric renewable technologies differ from nameplate ratings because they are based on site and equipment specific factors.

Summary of National Grid's Rhode Island Renewable Long-term Contracts
As of December 31, 2014

Contract	Nameplate Capacity (MW)	Capacity Factor (%)	Contract Capacity (MW)
Deepwater Wind Block Island, LLC	30.000	0.40	12.00
Rhode Island Landfill Gas Genco	32.100	0.85	27.29
Orbit Energy	3.200	0.83	2.64
Black Bear Hydro	3.958	0.90	3.57
Bowers Wind	48.000	0.38	18.34
2011 RIDG - CED, Plain Meeting House Power	2.000	0.14	0.28
2011 RIDG - ACP Land, 28 Jacome Way	0.500	0.14	0.07
2011 RIDG - WED NK Green, North Kingstown Green, 42 Thornton Way	1.500	0.24	0.36
2012-1 RIDG - Forbes Street Solar	3.710	0.14	0.52
2012-1 RIDG - West Davisville Solar, 338 Compass Circle	2.340	0.14	0.33
2012-2 RIDG - Altus 100 Dupont Solar	1.500	0.14	0.21
2012-2 RIDG - Altus Comtram Cable Plant	0.499	0.14	0.07
2012-2 RIDG - CoxCom CCI NE 181 kW	0.181	0.14	0.03
2012-2 RIDG - Altus 0 Martin Solar	0.500	0.14	0.07
2012-2 RIDG - Altus 225 Dupont Solar	0.300	0.14	0.04
2012-2 RIDG - Altus 35 Martin Solar	0.500	0.14	0.07
2012-2 RIDG - CoxCom CCI NE 500 kW	0.498	0.14	0.07
2013-1 RIDG - Brickle Group Solar	1.084	0.14	0.15
2013-1 RIDG - Gannon & Scott Solar	0.406	0.14	0.06
2013-1 RIDG - All American Foods Solar	0.331	0.14	0.05
2013-1 RIDG - TEAM Inc. Solar	0.182	0.14	0.03
2013-1 RIDG - CMS Solar	0.128	0.14	0.02
2013-1 RIDG - Newport Vineyards Solar	0.053	0.14	0.01
2013-1 RIDG - WED Coventry One	1.500	0.24	0.36
2013-2 RIDG - Johnston Solar I Peck Hill Rd	1.700	0.14	0.24
2013-2 RIDG - Randall Steere Farm	0.091	0.14	0.01
2013-3 RIDG - Bella 574 Camp Ave	0.498	0.14	0.07
2013-3 RIDG - Bella 1600 Division Rd	1.298	0.14	0.18
2013-3 RIDG - Nexamp 76 Stilson Rd	0.498	0.14	0.07
2013-3 RIDG - North Kingstown Solar 1720 Davisville Rd	0.500	0.14	0.07
2013-3 RIDG - RSM Solar 166 Valley Street	0.150	0.14	0.02
2013-3 RIDG - SER Solar 23 Appian Way	0.052	0.14	0.01
2014-1 RIDG - 48 Bank Street Solar	0.500	0.14	0.07
2014-1 RIDG - 60 Valley Street Solar	0.110	0.14	0.02
2014-2 RIDG - Brookside Equestrian Center - 90 Tifft Rd	1.246	0.14	0.17
2014-2 RIDG - Glocester-Reichert - 212 Old Snake Hill Rd	0.895	0.14	0.13
2014-2 RIDG - North Kingstown Organic Energy	0.500	0.85	0.425
2014-3 RIDG - Foster Solar	1.250	0.14	0.175
2014-3 RIDG - 200 Frenchtown Solar	1.250	0.14	0.175
2014-3 RIDG - Wilco 260 South County Trail	1.246	0.14	0.174
2014-3 RIDG - Windy Acres Solar Farm	1.242	0.14	0.174
2014-3 RIDG - Smart Technologies	1.043	0.14	0.146
2014-3 RIDG - 116/128 Singleton Street	0.500	0.14	0.070
2014-3 RIDG - 1000 Division Street	0.500	0.14	0.070
2014-3 RIDG - Stor-More RI	0.499	0.14	0.070
2014-3 RIDG - 240 Bald Hill Rd	0.270	0.14	0.038
2014-3 RIDG - 380 Warwick Ave	0.173	0.14	0.024
2014-3 RIDG - WED Coventry Three	1.500	0.23	0.347
2014-3 RIDG - WED Coventry Four	1.500	0.23	0.347
		Total MW	**69.9**
	As % of 90 MW Long-Term Contract Obligation		**77.7%**

COMM 1-2

Request:

Explain the discrepancy in the commercial operation dates listed at Corinne DiDomenico, p. 9, line 8 (December 31, 2017) and Exhibit 2, p. 1 of 7 (January 2017). Please confirm the correct COD.

Response:

Please see the Company's response to Division Data Request 1-8. The correct Commercial Operation Date is December 31, 2017. Please see Confidential Attachment DIV 1-8 for the revised Exhibit 2 with the updated Commercial Operation Date.

COMM 1-3

Request:

Explain the discrepancy in the capacity factor listed at Corinne DiDomenico, p. 8, line 1 (35%) and the Fourth Solicitation Summary Report, Appendix A, p.2 of 4 (29.7%). Please confirm the correct capacity factor of the Copenhagen project.

Response:

The expected capacity factor for delivery under the contract is 29.7%. As explained on page 7 of the testimony, beginning on line 20, "the expected annual delivery to the Company from the facility is 208,015 megawatt hours (MWh). This delivery amount accounts for an expected capacity factor of approximately 35 percent and an expected curtailment of deliveries of 15 percent […]" Thus, the expected capacity factor is calculated as follows:

Nameplate Capacity of Copenhagen Wind = 80 MW
Estimated Average Annual Output = 208,015 MWh per year

$$\frac{\text{(208,015 MWh/year)}}{\text{(80 MW) X (8,760 hrs/year)}} = 29.7\% \text{ Capacity Factor}$$

The capacity factor of 29.7% shown in the Fourth Solicitation Summary Report, Appendix A accounts for expected capacity delivered under the contract. This figure provides the basis for comparison of the capacity under contract with the other projects. Thus, all of the capacity factors listed in Appendix A are based on delivered energy quantities under contract.

Prepared by or under the supervision of: Corinne M. DiDomenico

COMM 1-4

Request:

Confirm that the capacity of the Copenhagen project, which the Company has determined to be eligible to count toward the 90MW requirement, is consistent with R.I.G.L. §39-26.1-2(7).

Response:

While the statutory definition of "minimum long-term contract capacity"[1] does not explicitly contemplate a generation unit located outside of the ISO-NE control area, the calculated contract capacity of 23.7 MW accounts for the renewable energy expected to be delivered into ISO-NE under the contract. The provisions of the PPA account for ISO-NE and NEPOOL GIS rules to ensure that the RECs credited to National Grid's NEPOOL GIS account are only for renewable energy delivered to National Grid in the ISO-NE control area. Thus, the calculated contract capacity is appropriately based on delivered energy under the contract in accordance with ISO-NE rules as required by the statute, rather than the estimated capacity factor of 35% as determined at the interconnection point in the New York control area. This interpretation is also consistent with R.I.G.L. 39-26-5(c) and Section 5 of the Public Utilities Commission's Rules and Regulations Governing the Implementation of a Renewable Energy Standard, which permit generation units located in an adjacent control area to be deemed eligible renewable energy resources for purposes of the Long-Term Contracting Standard to the extent the energy produced by the generation unit is actually delivered into the ISO-NE control area for consumption by New England customers.

[1] R.I.G.L. §39.26.1-2(7) provides, in part, that the "'[m]inimum long-term contract capacity' means ninety (90) megawatts of which three (3) megawatts must be solar or photovoltaic projects located in the state of Rhode Island. In determining whether the minimum long-term contract capacity has been reached, the capacity under contract shall be adjusted by the capacity factor of each renewable generator as determined by the ISO-NE rules, as they may change from time to time."

COMM 1-5

Request:

Corinne DiDomenico at 7, line 3. Explain why the Copenhagen project is described as "the highest ranked project" but was ranked Second and Third among other bidders in the Fourth Solicitation. (See Summary Report on Fourth Solicitation, Tables 2 and 3 and 4.)

Response:

To clarify, the Copenhagen project is the highest ranking project after completion of the evaluation and selection process. As explained in Section 2.5 of the RFP, that process includes confirmation whether a project selected for negotiations intends to proceed with their proposals. As explained in the Summary Report, the highest ranking project withdrew its bid from the RFP, and, therefore, the Copenhagen Wind project was the highest ranking project in the final combined ranking of the remaining eligible projects under the RFP.