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December 10, 2019

VIA HAND DELIVERY & ELECTRONIC MAIL

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

**RE: Docket 4992 - 2019 Long Term Contracting Renewable Energy Recovery Factor
Responses to PUC Data Requests – Set 1**

Dear Ms. Massaro:

Enclosed please find 10 copies of National Grid's¹ responses to the First Set of Data Requests issued by the Public Utilities Commission in the above-referenced matter.

Thank you for your attention to this matter. If you have any questions, please contact me at (401) 709-3337.

Sincerely,



Leticia C. Pimentel

¹ The Narragansett Electric Company d/b/a National Grid

Docket No. 4992 – National Grid – LTC RER
Service List updated 11/15/2019

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PUC 1-1

Request:

Referencing Attachment 1, page 3 of the November 15, 2019 filing, please explain how the Market Energy Proxy was developed for the different energy classes (solar, wind, biomass) and projects.

Response:

Enclosed please see Attachment PUC 1-1 saved in a USB thumb drive, which contains a working Excel version of Attachment 1 in the Company's November 15, 2019 filing.

The Market Energy Proxy calculations for each energy class resides on the Energy Proxy tab in Attachment PUC 1-1. The Market Energy Proxy is based on NYMEX peak and off peak electricity futures prices as of November 7, 2019 for the Pricing Period. It is also based on each energy class's monthly, peak, and off peak expected generation. The hourly expected generation data can be found on five tabs:

- LFG Shape – Averages
- Hydro Shape – Averages
- Solar Shape - Averages
- Wind Shape – Averages
- Offshore Wind Shape – Averages

The hourly expected generation is summed to monthly peak and off peak amounts, from which the Company can derive peak, off peak, and monthly percentages which are applied to the NYMEX electricity future prices on the Energy Proxy tab. The hourly expected generation is based on the last year of historical generation for the various projects.

**Long-Term Contracting for Renewable Energy Recovery (LTCRER)
Factor Calculation
For the Period January 2020 through June 2020**

(1) Above Market Cost for the period January 2020 through June 2020 (AM)	\$16,329,071
(2) Estimated Customer Share of Net Forward Capacity Market Proceeds (NFCMP)	\$16,608
(3) <u>Estimated Administrative Costs (ADM)</u>	<u>\$9,424</u>
(4) Total Estimated Costs	\$16,321,887
(5) Forecasted kWh Deliveries - January 2020 through June 2020 (FkWh)	3,433,885,995
(6) LTCRER Factor for the period of January 2020 through June 2020	\$0.00475
(7) Adjustment for Uncollectibles (UP)	<u>1.30%</u>
(8) Proposed LTCRER Factor for the period of January 2020 through June 2020	\$0.00481
(9) Currently Effective LTCRER Reconciliation Factor	<u>\$0.00062</u>
(10) Total Proposed LTCRER Factor (LTCRER Factor)	\$0.00543
(11) Current LTCRER Factor	<u>\$0.00711</u>
(12) Decrease in LTCRER Factor	(\$0.00168)

- (1) per page 4, Column (c), Line (35)
- (2) per page 5, Column (e), Line (35)
- (3) per page 6, Line (11)
- (4) Line (1) - Line (2) + Line (3)
- (5) per Company forecast
- (6) Line (4) ÷ Line (5), truncated after five decimal places
- (7) uncollectible percentage approved in RIPUC Docket No. 4770
- (8) Line (6) x [1 + Line (7)], truncated to five decimal places
- (9) per RIPUC Docket No. 4930, Schedule REP-18, page 1, line (8)
- (10) Line (8) + Line (9)
- (11) Summary of Delivery Rates, RIPUC No. 2095, Effective October 1, 2019
- (12) Line (10) - Line (11)

Long-Term Contracting for Renewable Energy Recovery (LTCRER)
Estimated Contract Cost
For the Period January 2020 through June 2020

Estimated Six-Month Contract Cost

	<u>Unit</u>	<u>Unit Capacity (MW)</u> (a)	<u>Commercial Operation Date</u> (b)	<u>Unit Factor</u> (c)	<u>Estimated Six-Month Output (MWh)</u> (d)	<u>Contract Price (\$ per MWh)</u> (e)	<u>Estimated Six-Month Contract Cost</u> (f)
(1)	RI LFG Genco Asset No. 40054	32.100	05/28/13	72%	100,963.4	\$145.96	\$14,736,520
(2)	Wind Energy Dev. NK Green LLC Asset No. 42394	1.500	03/01/13	18%	1,157.6	\$133.50	\$154,544
(3)	Con Edison Development Plain Mtg House Asset No. 43512	2.000	07/19/13	13%	1,157.2	\$275.00	\$318,229
(4)	ACP Land LLC 28 Jacome Way Asset No. 43527	0.500	07/18/13	13%	289.3	\$316.00	\$91,418
(5)	Comtram Cable Asset No. 43586	0.499	09/30/13	13%	288.7	\$316.00	\$91,236
(6)	CCI New England 500 kW Asset No. 43607	0.498	10/25/13	13%	288.1	\$316.00	\$91,053
(7)	Conanicut Marine Services (CMS) Solar Asset No. 43685	0.128	10/21/13	13%	74.1	\$288.00	\$21,329
(8)	Black Bear Orono B Hydro Asset No. 38083	3.958	11/22/13	67%	11,592.6	\$104.53	\$1,211,764
(9)	West Davisville Solar Asset No. 43716	2.340	12/06/13	13%	1,353.9	\$236.99	\$320,865
(10)	Forbes Street Solar Asset No. 43762	3.710	12/20/13	13%	2,146.6	\$239.00	\$513,037
(11)	CCI New England 181 kW Asset No. 43921	0.181	02/27/14	13%	104.7	\$316.00	\$33,093
(12)	100 Dupont Solar Asset No. 44003	1.500	03/25/14	13%	867.9	\$209.00	\$181,390
(13)	225 Dupont Solar Asset No. 44004	0.300	03/25/14	13%	173.6	\$316.00	\$54,851
(14)	35 Martin Solar Asset No. 44006	0.500	03/27/14	13%	289.3	\$316.00	\$91,418
(15)	0 Martin Solar Asset No. 44005	0.500	03/27/14	13%	289.3	\$316.00	\$91,418
(16)	Gannon & Scott Solar Asset No. 44010	0.406	04/29/14	13%	234.9	\$284.00	\$66,715
(17)	All American Foods Solar Asset. No. 46721	0.331	10/24/14	13%	191.5	\$284.00	\$54,391
(18)	Brickle Group Solar Project Asset. No. 46911	1.084	12/04/14	13%	627.2	\$184.90	\$115,969
(19)	T.E.A.M. Inc. Solar Asset. No. 46913	0.182	12/11/14	13%	105.3	\$288.00	\$30,328
(20)	Newport Vineyards Solar Asset. No. 46917	0.053	12/15/14	13%	30.7	\$299.50	\$9,184
(21)	SER Solar 23 Appian Way Asset. No. 46926	0.052	12/17/14	13%	30.1	\$277.57	\$8,351
(22)	Nexamp 76 Stilson Rd. Asset. No. 47020	0.498	02/28/15	13%	288.1	\$194.88	\$56,153
(23)	Randall Steere Farm Asset. No. 46998	0.091	03/18/15	13%	52.7	\$299.49	\$15,769
(24)	Johnston Solar Asset No. 47357	1.700	08/03/15	13%	983.6	\$175.00	\$172,133
(25)	North Kingstown Solar 1720 Davisville Rd.- Asset No. 47487	0.500	10/20/15	13%	289.3	\$190.00	\$54,967
(26)	Wilco 260 South County Trail - Asset No. 48664	1.246	08/11/16	13%	720.9	\$219.50	\$158,245
(27)	Foster Solar - Asset No. 48774	1.250	09/08/16	13%	723.2	\$205.99	\$148,982
(28)	Brookside Equestrian Center No. 48899	1.246	10/19/16	13%	720.9	\$149.90	\$108,068
(29)	Deepwater Wind Asset No. 38495	30.000	12/12/16	45%	58,696.4	\$270.47	\$15,875,610
(30)	Orbit Energy Asset No. 50057	3.200	08/24/17	0%	0.0	\$100.81	\$0
(31)	Frenchtown Road Solar - Asset No. 50731	1.250	01/30/18	13%	690.4	\$196.00	\$135,318
(32)	Copenhagen Wind Farm	79.900	12/27/18	32%	111,742.9	\$81.93	\$9,155,261
(33)	Woods Hill Solar Asset No. 49370	1.500	12/26/18	13%	867.9	\$99.49	\$86,347
(34)	Hope Farm Solar Asset No. 49029	5.000	12/31/19*	13%	<u>2,893.0</u>	\$93.66	<u>\$270,957</u>
(35)	Total				300,925		\$44,524,915

- (a) commercially operable units
(b) start date of commercial operation; *Line (34) estimated
(c) estimated based on prior average annual generation
(d) column (a) x column (c) x (8,760 ÷ 2) hours
(e) per PPA
(f) column (d) x column (e)

Long-Term Contracting for Renewable Energy Recovery (LTCRER)
Estimated Market Value
For the Period January 2020 through June 2020

Estimated Market Value

<u>Unit</u>	<u>Estimated MWh Purchased Under Contracts (a)</u>	<u>Market Energy Proxy (b)</u>	<u>Energy Market Value (c)</u>	<u>REC Proxy (d)</u>	<u>REC Market Value (e)</u>	<u>Capacity (f)</u>	<u>Total Market Value (g)</u>
(1) RILFG Genco Asset No. 40054	100,963.4	\$45.13	\$4,556,377	\$42.70	\$4,311,138	\$1,051,622	\$9,919,137
(2) Wind Energy Dev. NK Green LLC Asset No. 42394	1,157.6	\$45.93	\$53,167	\$42.70	\$49,431		\$102,598
(3) Con Edison Development Plain Mtg House Asset No. 43512	1,157.2	\$41.93	\$48,517	\$42.70	\$49,412		\$97,930
(4) ACP Land LLC 28 Jacome Way Asset No. 43527	289.3	\$41.93	\$12,129	\$42.70	\$12,353		\$24,482
(5) Comtram Cable Asset No. 43586	288.7	\$41.93	\$12,105	\$42.70	\$12,328		\$24,433
(6) CCI New England 500 kW Asset No. 43607	288.1	\$41.93	\$12,081	\$42.70	\$12,304		\$24,384
(7) Conanicut Marine Services (CMS) Solar Asset No. 43685	74.1	\$41.93	\$3,105	\$42.70	\$3,162		\$6,267
(8) Black Bear Orono B Hydro Asset No. 38083	11,592.6	\$40.35	\$467,742	\$42.70	\$495,004	\$132,011	\$1,094,757
(9) West Davisville Solar Asset No. 43716	1,353.9	\$41.93	\$56,765	\$42.70	\$57,812		\$114,578
(10) Forbes Street Solar Asset No. 43762	2,146.6	\$41.93	\$90,000	\$42.70	\$91,660		\$181,659
(11) CCI New England 181 kW Asset No. 43921	104.7	\$41.93	\$4,391	\$42.70	\$4,472		\$8,863
(12) 100 Dupont Solar Asset No. 44003	867.9	\$41.93	\$36,388	\$42.70	\$37,059		\$73,447
(13) 225 Dupont Solar Asset No. 44004	173.6	\$41.93	\$7,278	\$42.70	\$7,412		\$14,689
(14) 35 Martin Solar Asset No. 44006	289.3	\$41.93	\$12,129	\$42.70	\$12,353		\$24,482
(15) 0 Martin Solar Asset No. 44005	289.3	\$41.93	\$12,129	\$42.70	\$12,353		\$24,482
(16) Gannon & Scott Solar Asset No. 44010	234.9	\$41.93	\$9,849	\$42.70	\$10,031		\$19,880
(17) All American Foods Solar Asset. No. 46721	191.5	\$41.93	\$8,030	\$42.70	\$8,178		\$16,207
(18) Brickle Group Solar Project Asset. No. 46911	627.2	\$41.93	\$26,296	\$42.70	\$26,781		\$53,078
(19) T.E.A.M. Inc. Solar Asset. No. 46913	105.3	\$41.93	\$4,415	\$42.70	\$4,497		\$8,912
(20) Newport Vineyards Solar Asset. No. 46917	30.7	\$41.93	\$1,286	\$42.70	\$1,309		\$2,595
(21) SER Solar 23 Appian Way Asset. No. 46926	30.1	\$41.93	\$1,261	\$42.70	\$1,285		\$2,546
(22) Nexamp 76 Stilson Rd. Asset. No. 47020	288.1	\$41.93	\$12,081	\$42.70	\$12,304		\$24,384
(23) Randall Steere Farm Asset. No. 46998	52.7	\$41.93	\$2,208	\$42.70	\$2,248		\$4,456
(24) Johnston Solar Asset No. 47357	983.6	\$41.93	\$41,240	\$42.70	\$42,000		\$83,240
(25) North Kingstown Solar 1720 Davisville Rd.- Asset No. 47487	289.3	\$41.93	\$12,129	\$42.70	\$12,353		\$24,482
(26) Wilco 260 South County Trail - Asset No. 48664	720.9	\$41.93	\$30,226	\$42.70	\$30,784		\$61,010
(27) Foster Solar - Asset No. 48774	723.2	\$41.93	\$30,323	\$42.70	\$30,883		\$61,206
(28) Brookside Equestrian Center No. 48899	720.9	\$41.93	\$30,226	\$42.70	\$30,784		\$61,010
(29) Deepwater Wind Asset No. 38495	58,696.4	\$46.31	\$2,718,323	\$42.70	\$2,506,335	\$531,794	\$5,756,452
(30) Orbit Energy Asset No. 50057	0.0	\$45.13	\$0	\$42.70	\$0		\$0
(31) Frenchtown Road Solar - Asset No. 50731	690.4	\$41.93	\$28,946	\$42.70	\$29,480		\$58,426
(32) Copenhagen Wind Farm	111,742.9	\$45.93	\$5,132,077	\$42.70	\$4,771,420		\$9,903,497
(33) Woods Hill Solar Asset No. 49370	867.9	\$41.93	\$36,388	\$42.70	\$37,059		\$73,447
(34) Hope Farm Solar Asset No. 49029	2,893.0	\$41.93	<u>\$121,293</u>	\$42.70	<u>\$123,531</u>		<u>\$244,824</u>
(35) Total			\$13,630,902		\$12,849,516	\$1,715,426	\$28,195,844

- (a) per Page 2, column (d)
- (b) The market energy proxy is based on NYMEX electricity futures prices for the Pricing Period and renewable resource generation shapes (output in on peak and off peak hours)
- (c) column (a) x column (b)
- (d) REC price estimate based on most recent market information
- (e) column (a) x column (d)
- (f) Expected capacity revenue from ISO-NE or counterparty
- (g) column (c) + column (e) + column (f)

Long-Term Contracting for Renewable Energy Recovery (LTCRER)
Estimated Above (Below) Market Cost
For the Period January 2020 through June 2020

Estimated Above (Below) Market Cost

<u>Unit</u>		Estimated Six-Month Contract Cost (a)	Total Market Value (b)	Estimated Above (Below) Market Cost (c)
(1)	RI LFG Genco Asset No. 40054	\$14,736,520	\$9,919,137	\$4,817,383
(2)	Wind Energy Dev. NK Green LLC Asset No. 42394	\$154,544	\$102,598	\$51,946
(3)	Con Edison Development Plain Mtg House Asset No. 43512	\$318,229	\$97,930	\$220,299
(4)	ACP Land LLC 28 Jacome Way Asset No. 43527	\$91,418	\$24,482	\$66,936
(5)	Comtram Cable Asset No. 43586	\$91,236	\$24,433	\$66,802
(6)	CCI New England 500 kW Asset No. 43607	\$91,053	\$24,384	\$66,668
(7)	Conanicut Marine Services (CMS) Solar Asset No. 43685	\$21,329	\$6,267	\$15,062
(8)	Black Bear Orono B Hydro Asset No. 38083	\$1,211,764	\$1,094,757	\$117,007
(9)	West Davisville Solar Asset No. 43716	\$320,865	\$114,578	\$206,288
(10)	Forbes Street Solar Asset No. 43762	\$513,037	\$181,659	\$331,378
(11)	CCI New England 181 kW Asset No. 43921	\$33,093	\$8,863	\$24,231
(12)	100 Dupont Solar Asset No. 44003	\$181,390	\$73,447	\$107,943
(13)	225 Dupont Solar Asset No. 44004	\$54,851	\$14,689	\$40,162
(14)	35 Martin Solar Asset No. 44006	\$91,418	\$24,482	\$66,936
(15)	0 Martin Solar Asset No. 44005	\$91,418	\$24,482	\$66,936
(16)	Gannon & Scott Solar Asset No. 44010	\$66,715	\$19,880	\$46,835
(17)	All American Foods Solar Asset. No. 46721	\$54,391	\$16,207	\$38,183
(18)	Brickle Group Solar Project Asset. No. 46911	\$115,969	\$53,078	\$62,891
(19)	T.E.A.M. Inc. Solar Asset. No. 46913	\$30,328	\$8,912	\$21,416
(20)	Newport Vineyards Solar Asset. No. 46917	\$9,184	\$2,595	\$6,589
(21)	SER Solar 23 Appian Way Asset. No. 46926	\$8,351	\$2,546	\$5,805
(22)	Nexamp 76 Stilson Rd. Asset. No. 47020	\$56,153	\$24,384	\$31,769
(23)	Randall Steere Farm Asset. No. 46998	\$15,769	\$4,456	\$11,313
(24)	Johnston Solar Asset No. 47357	\$172,133	\$83,240	\$88,893
(25)	North Kingstown Solar 1720 Davisville Rd.- Asset No. 47487	\$54,967	\$24,482	\$30,484
(26)	Wilco 260 South County Trail - Asset No. 48664	\$158,245	\$61,010	\$97,235
(27)	Foster Solar - Asset No. 48774	\$148,982	\$61,206	\$87,776
(28)	Brookside Equestrian Center No. 48899	\$108,068	\$61,010	\$47,058
(29)	Deepwater Wind Asset No. 38495	\$15,875,610	\$5,756,452	\$10,119,158
(30)	Orbit Energy Asset No. 50057	\$0	\$0	\$0
(31)	Frenchtown Road Solar - Asset No. 50731	\$135,318	\$58,426	\$76,892
(32)	Copenhagen Wind Farm	\$9,155,261	\$9,903,497	(\$748,237)
(33)	Woods Hill Solar Asset No. 49370	\$86,347	\$73,447	\$12,900
(34)	Hope Farm Solar Asset No. 49029	<u>\$270,957</u>	<u>\$244,824</u>	<u>\$26,133</u>
(35)	Total	\$44,524,915	\$28,195,844	\$16,329,071

- (a) page 2 column (f)
(b) page 3 column (g)
(c) column (a) - column (b)

Long-Term Contracting for Renewable Energy Recovery (LTCRER)
Estimated Capacity Bid into Forward Capacity Market
For the Period January 2020 through June 2020

	<u>Unit</u>	<u>CSO</u> <u>MW's</u> (a)	<u>Estimated</u> <u>MRA Price</u> (b)	<u>Conversion</u> <u>to kW</u> (c)	<u>Total Capacity</u> <u>Bid into FCM</u> (d)	<u>Customer</u> <u>Share</u> (e)	<u>Company</u> <u>Share</u> (f)
(1)	RI LFG Genco Asset No. 40054		\$0.000	1,000	\$0	\$0	\$0
(2)	Wind Energy Dev. NK Green LLC Asset No. 42394		\$0.000	1,000	\$0	\$0	\$0
(3)	Con Edison Development Plain Mtg House Asset No. 43512	0.938	\$2.060	1,000	\$1,932	\$1,739	\$193
(4)	ACP Land LLC 28 Jacome Way Asset No. 43527	0.228	\$2.060	1,000	\$470	\$423	\$47
(5)	Comtram Cable Asset No. 43586	0.232	\$2.060	1,000	\$478	\$430	\$48
(6)	CCI New England 500 kW Asset No. 43607	0.162	\$2.060	1,000	\$334	\$300	\$33
(7)	Conanicut Marine Services (CMS) Solar Asset No. 43685		\$0.000	1,000	\$0	\$0	\$0
(8)	Black Bear Orono B Hydro Asset No. 38083		\$0.000	1,000	\$0	\$0	\$0
(9)	West Davisville Solar Asset No. 43716	0.980	\$2.060	1,000	\$2,019	\$1,817	\$202
(10)	Forbes Street Solar Asset No. 43762	1.551	\$2.060	1,000	\$3,195	\$2,876	\$320
(11)	CCI New England 181 kW Asset No. 43921		\$0.000	1,000	\$0	\$0	\$0
(12)	100 Dupont Solar Asset No. 44003	0.611	\$2.060	1,000	\$1,259	\$1,133	\$126
(13)	225 Dupont Solar Asset No. 44004	0.133	\$2.060	1,000	\$274	\$247	\$27
(14)	35 Martin Solar Asset No. 44006	0.214	\$2.060	1,000	\$441	\$397	\$44
(15)	0 Martin Solar Asset No. 44005	0.210	\$2.060	1,000	\$433	\$389	\$43
(16)	Gannon & Scott Solar Asset No. 44010	0.157	\$2.060	1,000	\$323	\$291	\$32
(17)	All American Foods Solar Asset. No. 46721	0.132	\$2.060	1,000	\$272	\$245	\$27
(18)	Brickle Group Solar Project Asset. No. 46911	0.451	\$2.060	1,000	\$929	\$836	\$93
(19)	T.E.A.M. Inc. Solar Asset. No. 46913		\$0.000	1,000	\$0	\$0	\$0
(20)	Newport Vineyards Solar Asset. No. 46917		\$0.000	1,000	\$0	\$0	\$0
(21)	SER Solar 23 Appian Way Asset. No. 46926		\$0.000	1,000	\$0	\$0	\$0
(22)	Nexamp 76 Stilson Rd. Asset. No. 47020	0.223	\$2.060	1,000	\$459	\$413	\$46
(23)	Randall Steere Farm Asset. No. 46998		\$0.000	1,000	\$0	\$0	\$0
(24)	Johnston Solar Asset No. 47357	0.493	\$2.060	1,000	\$1,016	\$914	\$102
(25)	North Kingstown Solar 1720 Davisville Rd.- Asset No. 47487	0.216	\$2.060	1,000	\$445	\$400	\$44
(26)	Wilco 260 South County Trail - Asset No. 48664	0.508	\$2.060	1,000	\$1,046	\$942	\$105
(27)	Foster Solar - Asset No. 48774	0.493	\$2.060	1,000	\$1,016	\$914	\$102
(28)	Brookside Equestrian Center No. 48899	0.474	\$2.060	1,000	\$976	\$879	\$98
(29)	Deepwater Wind Asset No. 38495		\$0.000	1,000	\$0	\$0	\$0
(30)	Orbit Energy Asset No. 50057		\$0.000	1,000	\$0	\$0	\$0
(31)	Frenchtown Road Solar - Asset No. 50731	0.552	\$2.060	1,000	\$1,137	\$1,023	\$114
(32)	Copenhagen Wind Farm	-	\$0.000	1,000	\$0	\$0	\$0
(33)	Woods Hill Solar Asset No. 49370	-	\$0.000	1,000	\$0	\$0	\$0
(34)	Hope Farm Solar Asset No. 49029	-	\$0.000	1,000	\$0	\$0	\$0
(35)	Total				\$18,453	\$16,608	\$1,845

- (a) MW's bid
(b) Estimated Annual Reconfiguration Auction (ARA) Price
(c) Multiplication by 1000 to result in kW
(d) Estimated Net Forward Capacity Market Proceeds
(e) Column (d) x .90
(f) Column (d) x .10

Long-Term Contracting for Renewable Energy Recovery (LTCRER)
Estimated Capacity Bid into Forward Capacity Market
For the Period July 2019 through December 2019

	<u>Unit</u>	<u>CSO</u> <u>MW's</u> (a)	<u>Estimated</u> <u>ARA Price</u> (b)	<u>Conversion</u> <u>to kW</u> (c)	<u>Total Capacity</u> <u>Bid into FCM</u> (d)	<u>Customer</u> <u>Share</u> (e)	<u>Company</u> <u>Share</u> (f)
(1)	RI LFG Genco Asset No. 40054	-	\$0.000	1,000	\$0	\$0	\$0
(2)	Wind Energy Dev. NK Green LLC Asset No. 42394	-	\$0.000	1,000	\$0	\$0	\$0
(3)	Con Edison Development Plain Mtg House Asset No. 43512	0.855	\$3.551	1,000	\$9,108	\$8,197	\$911
(4)	ACP Land LLC 28 Jacome Way Asset No. 43527	0.163	\$3.551	1,000	\$1,736	\$1,563	\$174
(5)	Comtram Cable Asset No. 43586	0.195	\$3.551	1,000	\$2,077	\$1,870	\$208
(6)	CCI New England 500 kW Asset No. 43607	0.042	\$3.551	1,000	\$149	\$134	\$15
(7)	Conanicut Marine Services (CMS) Solar Asset No. 43685	-	\$0.000	1,000	\$0	\$0	\$0
(8)	Black Bear Orono B Hydro Asset No. 38083	-	\$0.000	1,000	\$0	\$0	\$0
(9)	West Davisville Solar Asset No. 43716	0.768	\$3.551	1,000	\$8,182	\$7,363	\$818
(10)	Forbes Street Solar Asset No. 43762	1.267	\$3.551	1,000	\$13,497	\$12,148	\$1,350
(11)	CCI New England 181 kW Asset No. 43921	-	\$0.000	1,000	\$0	\$0	\$0
(12)	100 Dupont Solar Asset No. 44003	0.497	\$3.551	1,000	\$5,295	\$4,765	\$529
(13)	225 Dupont Solar Asset No. 44004	0.115	\$3.551	1,000	\$1,225	\$1,103	\$123
(14)	35 Martin Solar Asset No. 44006	0.183	\$3.551	1,000	\$1,949	\$1,755	\$195
(15)	0 Martin Solar Asset No. 44005	0.182	\$3.551	1,000	\$1,939	\$1,745	\$194
(16)	Gannon & Scott Solar Asset No. 44010	0.128	\$3.551	1,000	\$1,364	\$1,227	\$136
(17)	All American Foods Solar Asset. No. 46721	0.103	\$3.551	1,000	\$1,097	\$988	\$110
(18)	Brickle Group Solar Project Asset. No. 46911	0.409	\$3.551	1,000	\$4,357	\$3,921	\$436
(19)	T.E.A.M. Inc. Solar Asset. No. 46913	-	\$0.000	1,000	\$0	\$0	\$0
(20)	Newport Vineyards Solar Asset. No. 46917	-	\$0.000	1,000	\$0	\$0	\$0
(21)	SER Solar 23 Appian Way Asset. No. 46926	-	\$0.000	1,000	\$0	\$0	\$0
(22)	Nexamp 76 Stilson Rd. Asset. No. 47020	0.194	\$3.551	1,000	\$2,067	\$1,860	\$207
(23)	Randall Steere Farm Asset. No. 46998	-	\$0.000	1,000	\$0	\$0	\$0
(24)	Johnston Solar Asset No. 47357	0.440	\$3.551	1,000	\$4,687	\$4,219	\$469
(25)	North Kingstown Solar 1720 Davisville Rd.- Asset No. 47487	0.197	\$3.551	1,000	\$2,099	\$1,889	\$210
(26)	Wilco 260 South County Trail - Asset No. 48664	0.444	\$3.551	1,000	\$4,730	\$4,257	\$473
(27)	Foster Solar - Asset No. 48774	0.427	\$3.551	1,000	\$4,549	\$4,094	\$455
(28)	Brookside Equestrian Center No. 48899	0.432	\$3.551	1,000	\$4,602	\$4,142	\$460
(29)	Deepwater Wind Asset No. 38495	-	\$0.000	1,000	\$0	\$0	\$0
(30)	Orbit Energy Asset No. 50057	-	\$0.000	1,000	\$0	\$0	\$0
(31)	Frenchtown Road Solar - Asset No. 50731	0.552	\$3.551	1,000	\$5,880	\$5,292	\$588
(32)	Copenhagen Wind Farm	-	\$0.000	1,000	\$0	\$0	\$0
(33)	Woods Hill Solar Asset No. 49370	-	\$0.000	1,000	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
(34)	Total				\$80,590	\$72,531	\$8,059

-
- (a) MW's bid
(b) Estimated Annual Reconfiguration Auction (ARA) Price
(c) Multiplication by 1000 to result in kW
(d) Estimated Net Forward Capacity Market Proceeds
(e) Column (d) x .90
(f) Column (d) x .10

**Forward Capacity Market
Estimated Proceeds and Administrative Costs
For the Period January 2020 through June 2020**

Section 1: Estimated Customer Share of Net Forward Capacity Market Proceeds:

(1)	Estimated Net Forward Capacity Market Proceeds	\$18,453
(2)	Estimated Customer Share of Net Forward Capacity Market Proceeds	\$16,608

Section 2: Estimated Administrative Costs:

(3)	Estimated new projects being bid into the FCM	0
(4)	Estimated existing projects being bid into the FCM	20
(5)	Estimated Qualification hours per new project	20
(6)	Estimated Annual Monitoring Labor Hours per project	15
(7)	Estimated total hours for January 2020 - June 2020	150
(8)	Estimated Unburdened Average Hourly Rate	\$38.46
(9)	Estimated Burden Rate	63.35%
(10)	Estimated Burdened Average Hourly Rate	\$62.83
(11)	Estimated total administrative costs for the FCM	\$9,424

- (1) Company Estimate
- (2) Line (1) x 90%
- (3) Company Estimate
- (4) Company Estimate
- (5) Company Estimate
- (6) Company Estimate
- (7) $[\text{Line (3)} + \text{Line (4)}] \times \text{Line (6)} \div 2 + [\text{Line (3)} \times \text{Line (5)}]$
- (8) Estimate hourly rate based on salary of \$80,000
- (9) Per Company records (excludes Pension and PBOP)
- (10) $\text{Line (8)} + [\text{Line (8)} \times \text{Line (9)}]$
- (11) $\text{Line (7)} \times \text{Line (10)}$

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4992
2019 Long Term Contracting Renewable Energy Recovery Factor
Responses to the PUC's First Set of Data Requests
Issued November 19, 2019

PUC 1-2

Request:

Please provide all data and calculations that support the REC proxy value on Attachment 1, page 3. Please provide the same for the previous six-month factor filing.

Response:

Please see Attachment PUC 1-1.

The REC Proxy and LTC Cap "Current" tab calculates the REC proxy value for this LTCRER Factor. The REC Proxy and LTC Cap "Prior" tab calculates the REC proxy value that was calculated in the prior LTCRER Factor filing, for the currently effective rates from July 1, 2019 through December 31, 2019.

PUC 1-3

Request:

In Docket No. 4764, the power purchase agreement relevant to Hope Farm Solar described the project as a fixed tilt solar energy generation project located on Hope Road in the City of Cranston, Providence County, Rhode Island (Sch. CMD-3 at 66). The facility will consist of photovoltaic panels, racking, inverters, transformers, controls, switchgear, and other ancillary facilities.

- a. How did Hope Farm Solar achieve commercial operation in Massachusetts before Rhode Island?
- b. Why is the unit factor in the November 15, 2019 filing 13% when it was 19.42% in the Docket No. 4764 filing?

Response:

- a. Both the Massachusetts Power Purchase Agreement (PPA) and Rhode Island PPA require the seller to satisfy multiple conditions for the project to achieve the Commercial Operation Date, as defined in the PPAs. Each of the PPAs require the seller to obtain qualification as a RPS Class I Renewable Generation Unit¹. In the Massachusetts PPA the project must obtain qualification from the Massachusetts Department of Energy Resources (MA-DOER), while in the Rhode Island PPA the project must obtain qualification from the PUC.

On October 30, 2019, the Hope Farm Solar project submitted a Renewable Energy Resource Eligibility application to the PUC and a Statement of Qualification application to the MA-DOER. The MA-DOER approved the Statement of Qualification on November 4, 2019, and Hope Farm Solar notified National Grid that the project achieved commercial operation on November 4, 2019 for the Massachusetts PPA. On November 5, 2019 Hope Farm Solar informed National Grid that it expects the PUC to approve the project in December, and it would notify the Company that it has achieved commercial operation for the Rhode Island PPA once the PUC certification is received.

- b. The Company utilizes 12 months of historical generation to calculate Unit Factors. As Hope Farm Solar does not have 12 months of historical generation, the Company used the Unit Factor of the solar distributed generation units as a proxy for Hope Farm Solar.

¹ The Rhode Island PPA defines a RPS Class I Renewable Generation Unit as a Newly Developed Renewable Energy Resource that produces RECs that qualify for the RPS. RPS is defined as the requirements established pursuant to R.I.G.L. § 39-26-1 et seq. and the regulations promulgated thereunder that require all retail electricity suppliers in Rhode Island to provide a minimum percentage of electricity from RPS Class I Renewable Generation Units, and such successor laws and regulations as may be in effect from time to time.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4992
2019 Long Term Contracting Renewable Energy Recovery Factor
Responses to the PUC's First Set of Data Requests
Issued November 19, 2019

Twenty-six of the distributed generation standard contracts executed pursuant to R.I. Gen. Laws Chapter 39-26.2 are solar and have 12 months of historical generation. The Company calculated the aggregate Unit Factor as 13.21% for these 26 units.

The Narragansett Electric Company
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Issued November 19, 2019

PUC 1-4

Request:

In Docket No. 4764, the Woods Hill Solar project had a projected capacity factor of 20%. Why is it 13% in this docket?

Response:

The Company utilizes 12 months of historical generation to calculate Unit Factors. The Woods Hill Solar project became commercially operational on December 26, 2018, and does not have 12 months of generation. Therefore, the Company used the Unit Factor of the solar distributed generation units as a proxy for Woods Hill Solar. Twenty-six of the distributed generation standard contracts executed pursuant to R.I. Gen. Laws Chapter 39-26.2 are solar and have 12 months of historical generation. The Company calculated the aggregate Unit Factor as 13.21% for these 26 units.

The Woods Hill Solar project's Unit Factor calculated with actual generation for the January to June 2018 period is 14.7%. The aggregate Unit Factor of 13.21% is closer to the actual Unit Factor (for 6 months) than it is to the 20% projected capacity factor in Docket No. 4764.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4992
2019 Long Term Contracting Renewable Energy Recovery Factor
Responses to the PUC's First Set of Data Requests
Issued November 19, 2019

PUC 1-5

Request:

The following information was provided in Docket No. 4764 (DiDomenico Test. at 39). Please provide updates (we have omitted Woods Hill Solar and Hope Farm Solar from this data request):

The expected Commercial Operation Dates for each facility are as follows:

Cassadaga Wind December 31, 2020

Scituate Solar December 31, 2019

Sanford Airport Solar November 1, 2019

Chinook Solar November 1, 2019

Farmington Solar November 1, 2019

Quinebaug Solar November 1, 2019

Response:

Project	Original Planned COD	COD Including Elected PPA Extensions	COD per 2019-Q3 Progress Report
Cassadaga Wind	12/31/2020	6/30/2022	12/31/2020
Scituate Solar	12/31/2019	6/30/2021	6/30/2021
Sanford Airport Solar	11/1/2019	11/1/2020	11/1/2020
Chinook Solar	11/1/2019	11/1/2020	11/1/2021
Farmington Solar	11/1/2019	11/1/2020	11/1/2021
Quinebaug Solar	11/1/2019	11/1/2020	11/1/2021

Cassadaga Wind has elected three six-month extensions on one of the critical milestones and although that extends all the critical milestones, including the Commercial Operation Date (COD), in its most recent Progress Report the project has not changed the original COD. Chinook Solar, Farmington Solar, and Quinebaug Solar likely will elect extensions to match the COD provided in the 2019-Q3 Project Report.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4992
2019 Long Term Contracting Renewable Energy Recovery Factor
Responses to the PUC's First Set of Data Requests
Issued November 19, 2019

PUC 1-6

Request:

Why does Orbit Energy have 0.0 MWh expected purchases? Please provide an update on the status of the project and PPA.

Response:

Other than small amounts of generation in February 2018 while testing its equipment, Orbit Energy has not delivered energy since its Commercial Operation Date (COD). Orbit Energy has provided several updates since its COD indicating that it expected generation to commence by a particular date, but the generation did not occur. Therefore, the Company did not include expected generation for this Pricing Period to prevent over-collecting from its customers, even though Orbit Energy provided a new update indicating it expected generation this December.

On November 12, 2019 Orbit Energy indicated that it expects to deliver energy to National Grid beginning mid-December. It does not expect to generate at its nameplate capacity of 3.2 MW immediately due to the ongoing ramp up of biogas production.

Per the terms of the Power Purchase Agreement, Orbit Energy's obligation to deliver energy to the Company is Unit Contingent and is subject to the operation of the facility. Unit Contingent means that Orbit Energy is obligated to deliver Products (energy, capacity, and Renewable Energy Certificates) only to the extent that it operates and generates Products.

PUC 1-7

Request:

Please provide the data and calculation to support each facilities' expected capacity revenue (excluding facilities with no expected capacity revenue). Please provide the same for the previous six-month factor filing.

Response:

Please see Attachment PUC 1-1.

The REC Proxy and LTC Cap "Current" tab calculates the expected capacity revenue included in the currently proposed LTCRER Factor for RI LFG Genco, Black Bear Orono B Hydro, and Deepwater Wind. The REC Proxy and LTC Cap "Prior" tab calculates the expected capacity revenue for the previously proposed, and currently effective, LTCRER Factor for RI LFG Genco and Black Bear Orono B Hydro. Deepwater Wind did not have expected capacity revenue for the current recovery period, of July 1, 2019 through December 31, 2019.

The Capacity Bid into FCM tab calculates the expected capacity revenue for the 20 units as part of the Company's approved program to bid capacity of customer-owned Distributed Generation (DG) facilities into the Forward Capacity Market (FCM) for the currently proposed LTCRER Factor. The Capacity Bid into FCM "Prior" tab calculates the expected capacity revenue for the previously proposed, and currently effective, LTCRER Factor for these 20 units. The Capacity Bid into FCM tab is Page 5 of Attachment 1 of each LTCRER Factor filing.

The solar DG facilities participating in the FCM are summer generating resources, which are eligible for Capacity Supply Obligations for the months of June through September only. Thus, the capacity revenue estimates for the January 2020-June 2020 LTCRER Factor filing include only one month (June), whereas the capacity revenue estimates for the July 2019-December 2019 LTCRER Factor filing include three months (July, August, and September).

The Monthly Reconfiguration Auction price of \$2.06 used for the January 2020-June 2020 capacity revenue estimates is based on the average MRA clearing price for the summer of 2019 (June 2019 through September 2019).