

Jennifer Brooks Hutchinson Senior Counsel

January 5, 2017

# VIA HAND DELIVERY & ELECTRONIC MAIL

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

#### RE: Docket 4371 - Long-Term Contracting for Renewable Energy Recovery Factor Response to Commission Post-Hearing Data Requests – Set 10

Dear Ms. Massaro:

Enclosed are National Grid's<sup>1</sup> responses to the Rhode Island Public Utilities Commission's (PUC) Tenth Set of Post-Hearing Data Requests in the above-referenced docket.

Thank you for your attention to this filing. Please contact me if you have any questions concerning this matter at 401-784-7288.

Very truly yours,

Jennifer Brooks Hutchinson.

Enclosures

cc: Docket 4371 Service List Steve Scialabba, Division Leo Wold, Esq.

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<sup>&</sup>lt;sup>1</sup> The Narragansett Electric Company d/b/a National Grid.

#### 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.

The 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

<u>January 5, 2017</u> Date

# Docket No. 4371 - National Grid – Tariff Advice Filing to Amend Long-Term Contracting for Renewable Energy Recovery Factor effective

Service List updated 1/5/17

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# <u>PUC 10-1</u>

# Request:

Please provide a projection of the above-market or below-market cost of the pricing for each project with which National Grid has entered an agreement to purchase power, the costs of which will be recovered through the LTCRER Tariff. Please use the most recent 2016 ESAI market price forecast for energy RECs and capacity in the same format as the Company's response to Commission Post Hearing Data Request issued September 28, 2015.

# Response:

Please see Attachment PUC 10-1(a) and Attachment PUC 10-1(b).

Attachment PUC 10-1(a) contains a summary of the above-market cost for the long-term contracts and distributed generation standard contracts by year. Attachment PUC 10-1(b) contains a detailed listing of the above-market cost by unit.

The Narragansett Electric Company d/b/a National Grid RIPUC Docket No. 4371 Attachment PUC 10-1(a) Page 1 of 1

	Long-term	DG Standard	
	Contracts	Contracts	Totals by Year
	Above Market	Above Market	
Year	Cost	Cost	Above Market Cost
2017	\$30,573,476	\$4,462,293	\$35,035,769
2018	\$21,087,898	\$4,504,926	\$25,592,824
2019	\$14,319,114	\$4,300,872	\$18,619,987
2020	\$24,357,379	\$4,618,867	\$28,976,246
2021	\$31,617,736	\$4,816,445	\$36,434,181
2022	\$34,693,703	\$4,852,479	\$39,546,182
2023	\$34,689,049	\$4,746,787	\$39,435,836
2024	\$36,305,072	\$4,715,637	\$41,020,709
2025	\$36,621,941	\$4,630,094	\$41,252,035
2026	\$38,583,539	\$4,624,496	\$43,208,035
2027	\$40,967,051	\$4,624,149	\$45,591,200
2028	\$43,606,334	\$4,173,129	\$47,779,463
2029	\$28,764,305	\$1,926,344	\$30,690,649
2030	\$30,536,213	\$1,341,005	\$31,877,219
2031	\$32,218,430	\$1,012,765	\$33,231,195
2032	\$35,190,269	\$416,382	\$35,606,651
2033	\$37,285,411	\$0	\$37,285,411
2034	\$36,424,376	\$0	\$36,424,376
2035	\$38,028,047	\$0	\$38,028,047
2036	\$35,839,215	\$0	\$35,839,215
Total	\$661,708,560	\$59,766,669	\$721,475,230
NPV (7%, 2017)	\$333,748,304	\$38,254,410	\$372,002,714

#### Notes:

- RI LTC & RI DG Contracts as of December 2016; approximately 101.8% of the 90 MW minimum requirement

- Above market cost is calculated using market price forecasts for Energy, Capacity and RECs provided by ESAI in December 2016

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	Deepwater Wind 30 MW	Rhode Island Landfill Gas GenCo 32MW	Orbit Energy HSAD Biogas 3.2 MW (\$95)	Black Bear Hydro 3.958 MW	Champlain (Bowers) Wind 48 MW	Copenhagen Wind 79.9 MW
Year	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost
2017	\$19,982,172	\$10,386,094	\$44,879	\$496,638	(\$336,307)	\$0
2018	\$17,275,498	\$6,500,969	(\$247,857)	\$210,456	(\$2,383,678)	(\$267,491)
2019	\$16,576,562	\$5,467,696	(\$391,710)	\$91,975	(\$3,374,888)	(\$4,050,520)
2020	\$18,360,159	\$9,307,714	(\$20,063)	\$411,300	(\$1,891,523)	(\$1,810,208)
2021	\$20,389,934	\$11,756,775	\$204,301	\$623,630	(\$1,021,011)	(\$335,892)
2022	\$21,611,427	\$12,728,900	\$270,951	\$714,920	(\$843,058)	\$210,565
2023	\$22,352,975	\$12,819,745	\$241,212	\$689,220	(\$1,334,855)	(\$79,249)
2024	\$23,378,651	\$13,350,713	\$258,113	\$721,787	(\$1,503,385)	\$99,192
2025	\$24,165,938	\$13,407,160	\$223,436	\$720,366	(\$1,871,581)	(\$23,378)
2026	\$25,238,612	\$13,899,617	\$235,133	\$781,509	(\$1,892,445)	\$321,113
2027	\$26,459,051	\$14,601,583	\$267,129	\$845,904	(\$1,902,225)	\$695,608
2028	\$27,779,610	\$15,426,335	\$310,217	\$912,628	(\$1,906,304)	\$1,083,848
2029	\$29,090,863	\$0	\$343,597	\$0	(\$2,025,612)	\$1,355,457
2030	\$30,483,601	\$0	\$383,998	\$0	(\$2,057,629)	\$1,726,243
2031	\$31,900,936	\$0	\$420,448	\$0	(\$2,137,194)	\$2,034,241
2032	\$33,362,588	\$0	\$47,311	\$0	(\$556,740)	\$2,337,110
2033	\$34,870,235	\$0	\$0	\$0	\$0	\$2,415,176
2034	\$36,424,376	\$0	\$0	\$0	\$0	\$0
2035	\$38,028,047	\$0	\$0	\$0	\$0	\$0
2036	\$35,839,215	\$0	\$0	\$0	\$0	\$0
Total	\$533,570,451	\$139,653,301	\$2,591,095	\$7,220,334	(\$27,038,435)	\$5,711,815
NPV (7%, 2017)	\$256,996,692	\$87,711,910	\$1,082,677	\$4,403,357	(\$15,922,186)	(\$524,146)

#### Notes:

- RI LTC & RI DG Contracts as of December 2016; approximately 101.8% of the 90 MW minimum requirement

- Above market cost is calculated using market price forecasts for Energy, Capacity and RECs provided by ESAI in December 2016

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	RI DG - Plain Meeting House Solar 2 MW	RI DG - ACP 28 Jacome Way 500 kW	RI DG - North Kingstown Green Wind 1.5 MW	RI DG - Forbes Street Solar 3.7 MW	RI DG - West Davisville Solar 2.34 MW	RI DG - 100 Dupont 1.5 MW	RI DG - Altus Comtram Cable Plant 499 kW
Year	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost
2017	\$472,970	\$143,384	\$148,380	\$713,561	\$444,294	\$233,314	\$143,097
2018	\$444,396	\$136,240	\$114,704	\$660,556	\$410,863	\$211,883	\$135,968
2019	\$430,314	\$132,720	\$98,107	\$634,434	\$394,387	\$201,322	\$132,454
2020	\$452,259	\$138,206	\$123,971	\$675,142	\$420,063	\$217,781	\$137,930
2021	\$465,894	\$141,615	\$140,041	\$700,436	\$436,016	\$228,007	\$141,331
2022	\$468,381	\$142,236	\$142,972	\$705,048	\$438,925	\$229,872	\$141,952
2023	\$461,087	\$140,413	\$134,376	\$691,518	\$430,392	\$224,402	\$140,132
2024	\$458,937	\$139,876	\$131,842	\$687,531	\$427,876	\$222,789	\$139,596
2025	\$453,034	\$138,400	\$124,884	\$676,580	\$420,969	\$218,362	\$138,123
2026	\$452,647	\$138,303	\$124,429	\$675,863	\$420,517	\$218,072	\$138,026
2027	\$452,624	\$138,297	\$124,401	\$675,819	\$420,489	\$218,054	\$138,020
2028	\$263,872	\$80,634	\$20,680	\$675,316	\$385,158	\$217,851	\$103,465
2029	\$0	\$0	\$0	\$0	\$0	\$54,202	\$0
2030	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2031	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$5,276,415	\$1,610,323	\$1,428,789	\$8,171,804	\$5,049,950	\$2,695,910	\$1,630,094
NPV (7%, 2017)	\$3,533,720	\$1,078,467	\$968,520	\$5,409,295	\$3,350,430	\$1,771,197	\$1,086,519

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	RI DG - Cox Comm 181 kW	RI DG - 0 Martin 500 kW	RI DG - 225 Dupont 300 kW	RI DG - 35 Martin 500 kW	RI DG - Cox Comm 498 kW	RI DG - Brickle Group 1.08 MW
Year	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost
2017	\$51,905	\$143,384	\$86,030	\$143,384	\$142,810	\$136,569
2018	\$49,319	\$136,240	\$81,744	\$136,240	\$135,695	\$121,082
2019	\$48,045	\$132,720	\$79,632	\$132,720	\$132,189	\$113,450
2020	\$50,031	\$138,206	\$82,924	\$138,206	\$137,653	\$125,344
2021	\$51,265	\$141,615	\$84,969	\$141,615	\$141,048	\$132,734
2022	\$51,490	\$142,236	\$85,342	\$142,236	\$141,667	\$134,082
2023	\$50,829	\$140,413	\$84,248	\$140,413	\$139,851	\$130,129
2024	\$50,635	\$139,876	\$83,925	\$139,876	\$139,316	\$128,963
2025	\$50,101	\$138,400	\$83,040	\$138,400	\$137,846	\$125,764
2026	\$50,066	\$138,303	\$82,982	\$138,303	\$137,750	\$125,554
2027	\$50,064	\$138,297	\$82,978	\$138,297	\$137,744	\$125,541
2028	\$50,039	\$138,229	\$82,938	\$138,229	\$114,730	\$125,394
2029	\$8,319	\$34,470	\$20,682	\$34,470	\$0	\$114,253
2030	\$0	\$0	\$0	\$0	\$0	\$0
2031	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$612,105	\$1,702,388	\$1,021,433	\$1,702,388	\$1,638,300	\$1,638,860
NPV (7%, 2017)	\$403,115	\$1,118,345	\$671,007	\$1,702,308	\$1,089,436	\$1,056,667

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	RI DG - Gannon & Scott 406 kW	RI DG - All American Solar 331 kW	RI DG - TEAM 182 kW	RI DG - CMS 128 kW	RI DG - Newport Vineyard 53 kW	RI DG - Johnston Solar I 1.7 MW
Year	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost
2017	\$100,494	\$81,930	\$45,942	\$32,311	\$14,126	\$193,536
2018	\$94,694	\$77,201	\$43,342	\$30,482	\$13,369	\$169,248
2019	\$91,835	\$74,870	\$42,060	\$29,581	\$12,996	\$157,279
2020	\$96,290	\$78,502	\$44,057	\$30,985	\$13,577	\$175,932
2021	\$99,058	\$80,759	\$45,298	\$31,858	\$13,939	\$187,522
2022	\$99,563	\$81,170	\$45,524	\$32,017	\$14,005	\$189,636
2023	\$98,082	\$79,963	\$44,861	\$31,550	\$13,811	\$183,436
2024	\$97,646	\$79,608	\$44,665	\$31,413	\$13,754	\$181,609
2025	\$96,447	\$78,631	\$44,128	\$31,035	\$13,598	\$176,591
2026	\$96,369	\$78,567	\$44,093	\$31,010	\$13,588	\$176,262
2027	\$96,364	\$78,563	\$44,090	\$31,009	\$13,587	\$176,242
2028	\$96,309	\$78,518	\$44,066	\$25,826	\$13,580	\$176,012
2029	\$32,009	\$65,240	\$40,277	\$0	\$12,414	\$174,829
2030	\$0	\$0	\$0	\$0	\$0	\$101,615
2031	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$1.195.158	\$1,013,521	\$572,403	\$369.077	\$176,344	\$2.419.748
NPV (7%, 2017)	\$783,210	\$654,771	\$368,945	\$245,430	\$113,661	\$1,530,798

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	RI DG - Randall Steere Farm 91 kW	RI DG - Nexamp 76 Stilson Rd 498 kW	RI DG - North Kingstown Solar 1720 Davisville Rd 500 kW	RI DG - SER Solar 23 Appian Way 52 kW	RI DG - Foster Solar - 23 Theodore Foster Drive 1.3 MW	RI DG - Brookside Equestrian Center - 90 Tifft Rd 1.2 MW
Year	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost	Above Market Cost
2017	\$24,253	\$68,836	\$66,120	\$12,461	\$189,814	\$103,496
2018	\$22,953	\$61,722	\$58,977	\$11,718	\$171,955	\$85,694
2019	\$22,312	\$58,215	\$55,456	\$11,352	\$163,154	\$76,921
2020	\$23,311	\$63,679	\$60,943	\$11,923	\$176,870	\$90,593
2021	\$23,931	\$67,075	\$64,352	\$12,277	\$185,391	\$99,087
2022	\$24,044	\$67,694	\$64,973	\$12,342	\$186,946	\$100,637
2023	\$23,713	\$65,878	\$63,150	\$12,152	\$182,387	\$96,093
2024	\$23,615	\$65,342	\$62,612	\$12,096	\$181,043	\$94,753
2025	\$23,346	\$63,872	\$61,136	\$11,943	\$177,354	\$91,075
2026	\$23,329	\$63,776	\$61,040	\$11,933	\$177,112	\$90,835
2027	\$23,328	\$63,770	\$61,034	\$11,932	\$177,097	\$90,820
2028	\$23,315	\$63,703	\$60,966	\$11,925	\$176,928	\$90,651
2029	\$23,252	\$63,356	\$60,618	\$11,889	\$176,058	\$89,784
2030	\$5,805	\$10,529	\$50,360	\$0	\$175,594	\$89,321
2031	\$0	\$0	\$0	\$0	\$116,539	\$73,782
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$310,507	\$847,447	\$851,738	\$155,943	\$2,614,242	\$1,363,541
NPV (7%, 2017)	\$198,200	\$542,448	\$535,048	\$100,288	\$1,604,000	\$833,924

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Year	RI DG - North Kingstown Organic Energy 500 kW Above Market Cost	RI DG - 200 Frenchtown Road Solar 1.25 MW Above Market Cost	RI DG - Wilco 260 South County Trail 1.246 MW Above Market Cost	RI DG - Smart Technologies 22 Christiansen Way 1.043 MW Above Market Cost	Totals by Year Above Market Cost
2017	\$140,641	\$87,250	\$209,851	\$88,151	\$35,035,769
2018	\$378,551	\$156,640	\$192,049	\$161,400	\$25,592,824
2019	\$357.176	\$147.839	\$183.276	\$154.056	\$18,619,987
2010	\$390.486	\$161.555	\$196.948	\$165.501	\$28,976,246
2020	\$411.182	\$170.077	\$205,443	\$172.611	\$36,434,181
2022	\$414,957	\$171,631	\$206,992	\$173,908	\$39,546,182
2023	\$403,886	\$167,072	\$202,448	\$170,104	\$39,435,836
2023	\$400.623	\$165,729	\$201,109	\$168,983	\$41,020,709
2025	\$391,662	\$162,039	\$197,431	\$165,905	\$41,252,035
2026	\$391,076	\$161,798	\$197,190	\$165,703	\$43,208,035
2027	\$391,039	\$161,783	\$197,175	\$165.691	\$45.591.200
2028	\$390.628	\$161,613	\$197,006	\$165,549	\$47,779,463
2029	\$388,515	\$160,743	\$196,139	\$164,824	\$30,690,649
2030	\$387,389	\$160,279	\$195.677	\$164,436	\$31,877,219
2030	\$385,481	\$159,494	\$113,688	\$163,781	\$33,231,195
2032	\$255,555	\$79,305	\$0	\$81,522	\$35,606,651
2032	\$0	\$0	\$0 \$0	\$0	\$37,285,411
2034	\$0	\$0 \$0	\$0	\$0 \$0	\$36,424,376
2035	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$38,028,047
2036	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$35,839,215
Total	\$5,878,846	\$2,434,847	\$2,892,423	\$2,492,125	\$721,475,230
NPV (7%, 2017)	\$3,414,701	\$1,430,956	\$1,778,515	\$1,464,450	\$372,002,714

# <u>PUC 10-2</u>

## Request:

For each project listed in the Company's response to PUC-10-1, please provide the total contract cost and the annual financial remuneration National Grid expects to receive for each contract for each year. Please include column totals on the spreadsheets in addition to the row totals already provided.

#### Response:

Please see Attachment PUC 10-2(a) and Attachment PUC 10-2(b). Attachment PUC 10-2(a) contains a summary of the contract cost and annual financial remuneration for the long-term contracts and distributed generation standard contracts by year. Attachment PUC 10-2(b) contains a detailed listing of the contract cost and annual financial remuneration by unit.

	Long-term	Contracts	DG Standar	d Contracts	Totals by	Year
						Total
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Total Contract Cost	Remuneration
2017	\$72,275,022	\$1,987,563	\$7,063,354	\$194,242	\$79,338,376	\$2,181,805
2018	\$77,399,351	\$2,128,482	\$7,839,524	\$215,587	\$85,238,875	\$2,344,069
2019	\$94,596,882	\$2,601,414	\$7,839,524	\$215,587	\$102,436,406	\$2,817,001
2020	\$96,840,825	\$2,663,123	\$7,839,524	\$215,587	\$104,680,349	\$2,878,710
2021	\$99,149,135	\$2,726,601	\$7,839,524	\$215,587	\$106,988,658	\$2,942,188
2022	\$101,523,743	\$2,791,903	\$7,839,524	\$215,587	\$109,363,267	\$3,007,490
2023	\$103,966,641	\$2,859,083	\$7,839,524	\$215,587	\$111,806,165	\$3,074,670
2024	\$106,479,882	\$2,928,197	\$7,839,524	\$215,587	\$114,319,406	\$3,143,784
2025	\$109,065,585	\$2,999,304	\$7,839,524	\$215,587	\$116,905,109	\$3,214,890
2026	\$111,725,934	\$3,072,463	\$7,839,524	\$215,587	\$119,565,458	\$3,288,050
2027	\$114,463,181	\$3,147,737	\$7,839,524	\$215,587	\$122,302,704	\$3,363,324
2028	\$117,279,650	\$3,225,190	\$7,011,412	\$192,814	\$124,291,061	\$3,418,004
2029	\$77,712,356	\$2,137,090	\$3,520,560	\$96,815	\$81,232,917	\$2,233,905
2030	\$79,650,437	\$2,190,387	\$2,528,100	\$69,523	\$82,178,537	\$2,259,910
2031	\$81,649,403	\$2,245,359	\$1,906,790	\$52,437	\$83,556,194	\$2,297,795
2032	\$72,920,441	\$2,005,312	\$776,170	\$21,345	\$73,696,611	\$2,026,657
2033	\$68,566,759	\$1,885,586	\$0	\$0	\$68,566,759	\$1,885,586
2034	\$50,049,587	\$1,376,364	\$0	\$0	\$50,049,587	\$1,376,364
2035	\$51,801,323	\$1,424,536	\$0	\$0	\$51,801,323	\$1,424,536
2036	\$48,787,021	\$1,341,643	\$0	\$0	\$48,787,021	\$1,341,643
Totals	\$1,735,903,159	\$47,737,337	\$101,201,624	\$2,783,045	\$1,837,104,783	\$50,520,382
NPV (7%, 2017)	\$954,759,599	\$26,255,889	\$64,569,166	\$1,775,652	\$1,019,328,766	\$28,031,541

#### Notes:

- RI LTC & RI DG Contracts as of December 2016; approximately 101.8% of the 90 MW minimum requirement

- Above market cost is calculated using market price forecasts for Energy, Capacity and RECs provided by ESAI in December 2016

	Deepwater Wind 30 MW		Rhode Island Lar 32M			t Energy HSAD Biogas 3.2 MW (\$95)	
	Contract Cost less						
Veen	Outperform Adj	Demonstration		Demonster		Demonster	
Year	Credit	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration	
2017	\$30,131,666	\$828,621	\$28,966,690	\$796,584	\$1,100,100	\$30,253	
2018	\$28,863,893	\$793,757	\$29,690,858	\$816,499	\$2,244,204	\$61,716	
2019	\$29,874,128	\$821,539	\$30,433,129	\$836,911	\$2,289,088	\$62,950	
2020	\$30,919,723	\$850,292	\$31,193,957	\$857,834	\$2,334,870	\$64,209	
2021	\$32,001,913	\$880,053	\$31,973,806	\$879,280	\$2,381,567	\$65,493	
2022	\$33,121,981	\$910,854	\$32,773,151	\$901,262	\$2,429,199	\$66,803	
2023	\$34,281,250	\$942,734	\$33,592,480	\$923,793	\$2,477,783	\$68,139	
2024	\$35,481,093	\$975,730	\$34,432,292	\$946,888	\$2,527,338	\$69,502	
2025	\$36,722,932	\$1,009,881	\$35,293,099	\$970,560	\$2,577,885	\$70,892	
2026	\$38,008,234	\$1,045,226	\$36,175,427	\$994,824	\$2,629,443	\$72,310	
2027	\$39,338,522	\$1,081,809	\$37,079,813	\$1,019,695	\$2,682,032	\$73,756	
2028	\$40,715,372	\$1,119,673	\$38,006,808	\$1,045,187	\$2,735,672	\$75,231	
2029	\$42,140,409	\$1,158,861	\$0	\$0	\$2,790,386	\$76,736	
2030	\$43,615,323	\$1,199,421	\$0	\$0	\$2,846,193	\$78,270	
2031	\$45,141,859	\$1,241,401	\$0	\$0	\$2,903,117	\$79,836	
2032	\$46,721,825	\$1,284,850	\$0	\$0	\$1,480,590	\$40,716	
2033	\$48,357,089	\$1,329,820	\$0	\$0	\$0	\$0	
2034	\$50,049,587	\$1,376,364	\$0	\$0	\$0	\$0	
2035	\$51,801,323	\$1,424,536	\$0	\$0	\$0	\$0	
2036	\$48,787,021	\$1,341,643	\$0	\$0	\$0	\$0	
Totals	\$786,075,145	\$21,617,066	\$399,611,510	\$10,989,317	\$38,429,466	\$1,056,810	
NPV (7%, 2017)	\$387,933,096	\$10,668,160	\$259,318,359	\$7,131,255	\$22,012,042	\$605,331	

#### Notes:

- RI LTC & RI DG Contracts as of December 2016; approximately 101.8% of the 90 MW minimum requirement

- Above market cost is calculated using market price forecasts for Energy, Capacity and RECs provided by ESAI in December 2016

	Black Bear Hydro 3.958 MW		Champlain (Bowe	ers) Wind 48 MW	Copenhagen Wind 79.9 MW	
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$2,766,349	\$76,075	\$9,310,217	\$256,031	\$0	\$0
2018	\$2,821,676	\$77,596	\$12,413,622	\$341,375	\$1,365,098	\$37,540
2019	\$2,878,110	\$79,148	\$12,413,622	\$341,375	\$16,708,805	\$459,492
2020	\$2,935,672	\$80,731	\$12,413,622	\$341,375	\$17,042,981	\$468,682
2021	\$2,994,385	\$82,346	\$12,413,622	\$341,375	\$17,383,841	\$478,056
2022	\$3,054,273	\$83,993	\$12,413,622	\$341,375	\$17,731,517	\$487,617
2023	\$3,115,358	\$85,672	\$12,413,622	\$341,375	\$18,086,148	\$497,369
2024	\$3,177,666	\$87,386	\$12,413,622	\$341,375	\$18,447,871	\$507,316
2025	\$3,241,219	\$89,134	\$12,413,622	\$341,375	\$18,816,828	\$517,463
2026	\$3,306,043	\$90,916	\$12,413,622	\$341,375	\$19,193,165	\$527,812
2027	\$3,372,164	\$92,735	\$12,413,622	\$341,375	\$19,577,028	\$538,368
2028	\$3,439,607	\$94,589	\$12,413,622	\$341,375	\$19,968,569	\$549,136
2029	\$0	\$0	\$12,413,622	\$341,375	\$20,367,940	\$560,118
2030	\$0	\$0	\$12,413,622	\$341,375	\$20,775,299	\$571,321
2031	\$0	\$0	\$12,413,622	\$341,375	\$21,190,805	\$582,747
2032	\$0	\$0	\$3,103,406	\$85,344	\$21,614,621	\$594,402
2033	\$0	\$0	\$0	\$0	\$20,209,670	\$555,766
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$37,102,523	\$1,020,319	\$186,204,330	\$5,120,619	\$288,480,185	\$7,933,205
NPV (7%, 2017)	\$24,171,555	\$664,718	\$111,213,054	\$3,058,359	\$150,111,494	\$4,128,066

	RI DG - Plain Meet		RI DG - ACP 28 Ja	come Way 500 kW	RI DG - North Kingstown Green Wind 1.5 MW	
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2018	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2019	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2020	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2021	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2022	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2023	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2024	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2025	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2026	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2027	\$674,520	\$18,549	\$193,771	\$5,329	\$385,922	\$10,613
2028	\$393,470	\$10,820	\$113,033	\$3,108	\$64,320	\$1,769
2029	\$0	\$0	\$0	\$0	\$0	\$0
2030	\$0	\$0	\$0	\$0	\$0	\$0
2031	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$7,813,190	\$214,863	\$2,244,516	\$61,724	\$4,309,460	\$118,510
NPV (7%, 2017)	\$5,232,711	\$143,900	\$1,503,215	\$41,338	\$2,922,461	\$80,368

	RI DG - Forbes Street Solar 3.7 MW		RI DG - West Davisville Solar 2.34 MW		RI DG - 100 Dupont 1.5 MW	
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2018	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2019	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2020	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2021	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2022	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2023	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2024	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2025	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2026	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2027	\$1,087,437	\$29,905	\$680,108	\$18,703	\$384,476	\$10,573
2028	\$1,087,437	\$29,905	\$623,433	\$17,144	\$384,476	\$10,573
2029	\$0	\$0	\$0	\$0	\$96,119	\$2,643
2030	\$0	\$0	\$0	\$0	\$0	\$0
2031	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$13,049,239	\$358,854	\$8,104,623	\$222,877	\$4,709,836	\$129,520
NPV (7%, 2017)	\$8,637,168	\$237,522	\$5,376,722	\$147,860	\$3,093,661	\$85,076

	RI DG - Altus Comtram Cable Plant 499 kW		RI DG - Cox Comm 181 kW		RI DG - 0 Martin 500 kW	
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2018	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2019	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2020	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2021	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2022	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2023	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2024	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2025	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2026	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2027	\$193,384	\$5,318	\$70,145	\$1,929	\$193,771	\$5,329
2028	\$145,038	\$3,989	\$70,145	\$1,929	\$193,771	\$5,329
2029	\$0	\$0	\$11,691	\$321	\$48,443	\$1,332
2030	\$0	\$0	\$0	\$0	\$0	\$0
2031	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$2,272,258	\$62,487	\$853,433	\$23,469	\$2,373,697	\$65,277
NPV (7%, 2017)	\$1,514,520	\$41,649	\$561,992	\$15,455	\$1,559,166	\$42,877

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	RI DG - 225 Dupont 300 kW		RI DG - 35 Martin 500 kW		RI DG - Cox Comm 498 kW	
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2018	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2019	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2020	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2021	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2022	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2023	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2024	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2025	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2026	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2027	\$116,263	\$3,197	\$193,771	\$5,329	\$192,996	\$5,307
2028	\$116,263	\$3,197	\$193,771	\$5,329	\$160,830	\$4,423
2029	\$29,066	\$799	\$48,443	\$1,332	\$0	\$0
2030	\$0	\$0	\$0	\$0	\$0	\$0
2031	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$1,424,218	\$39,166	\$2,373,697	\$65,277	\$2,283,787	\$62,804
NPV (7%, 2017)	\$935,500	\$25,726	\$1,559,166	\$42,877	\$1,518,626	\$41,762

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	RI DG - Brickle	Group 1 08 MW	RI DG - Gannon & Scott 406 kW		RI DG - All American Solar 331 kW	
Vee						
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2018	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2019	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2020	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2021	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2022	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2023	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2024	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2025	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2026	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2027	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2028	\$245,809	\$6,760	\$141,409	\$3,889	\$115,287	\$3,170
2029	\$225,325	\$6,196	\$47,136	\$1,296	\$96,072	\$2,642
2030	\$0	\$0	\$0	\$0	\$0	\$0
2031	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$3,175,037	\$87,314	\$1,744,042	\$47,961	\$1,479,510	\$40,687
NPV (7%, 2017)	\$2,045,888	\$56,262	\$1,142,726	\$31,425	\$955,551	\$26,278

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RI DG - TEAM 182 kW		AM 182 kW	RI DG - CMS 128 kW		RI DG - Newport Vineyard 53 kW	
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2018	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2019	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2020	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2021	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2022	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2023	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2024	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2025	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2026	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2027	\$64,283	\$1,768	\$45,210	\$1,243	\$19,467	\$535
2028	\$64,283	\$1,768	\$37,675	\$1,036	\$19,467	\$535
2029	\$58,926	\$1,620	\$0	\$0	\$17,845	\$491
2030	\$0	\$0	\$0	\$0	\$0	\$0
2031	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$830,322	\$22,834	\$534,985	\$14,712	\$251,452	\$6,915
NPV (7%, 2017)	\$535,032	\$14,713	\$355,743	\$9,783	\$162,027	\$4,456

	RI DG - Johnston Solar I 1.7 MW		RI DG - Randall Steere Farm 91 kW		RI DG - Nexamp 76 Stilson Rd 498 kW	
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2018	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2019	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2020	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2021	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2022	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2023	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2024	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2025	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2026	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2027	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2028	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2029	\$364,854	\$10,033	\$33,424	\$919	\$119,022	\$3,273
2030	\$212,832	\$5,853	\$8,356	\$230	\$19,837	\$546
2031	\$0	\$0	\$0	\$0	\$0	\$0
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$4,955,934	\$136,288	\$442,865	\$12,179	\$1,567,128	\$43,096
NPV (7%, 2017)	\$3,131,862	\$86,126	\$282,585	\$7,771	\$1,002,441	\$27,567

RI DG - North Kingstown Solar 1720 Davisville Rd 500 kW		RI DG - SER Solar 23 Appian Way 52 kW		RI DG - Foster Solar - 23 Theodore Foster Drive 1.3 MW		
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2018	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2019	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2020	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2021	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2022	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2023	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2024	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2025	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2026	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2027	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2028	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2029	\$116,508	\$3,204	\$17,701	\$487	\$315,783	\$8,684
2030	\$97,090	\$2,670	\$0	\$0	\$315,783	\$8,684
2031	\$0	\$0	\$0	\$0	\$210,522	\$5,789
2032	\$0	\$0	\$0	\$0	\$0	\$0
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$1,611,694	\$44,322	\$230,118	\$6,328	\$4,631,479	\$127,366
NPV (7%, 2017)	\$1,011,386	\$27,813	\$147,942	\$4,068	\$2,837,970	\$78,044

	RI DG - Brookside Equestrian Center - 90 Tifft Rd 1.2 MW		RI DG - North Kingstown Organic Energy 500 kW		RI DG - 200 Frenchtown Road Solar 1.25 MW	
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	Contract Cost	Remuneration
2017	\$229,061	\$6,299	\$242,616	\$6,672	\$150,234	\$4,131
2018	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2019	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2020	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2021	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2022	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2023	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2024	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2025	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2026	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2027	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2028	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2029	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2030	\$229,061	\$6,299	\$727,847	\$20,016	\$300,468	\$8,263
2031	\$190,884	\$5,249	\$727,847	\$20,016	\$300,468	\$8,263
2032	\$0	\$0	\$485,231	\$13,344	\$150,234	\$4,131
2033	\$0	\$0	\$0	\$0	\$0	\$0
2034	\$0	\$0	\$0	\$0	\$0	\$0
2035	\$0	\$0	\$0	\$0	\$0	\$0
2036	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$3,397,743	\$93,438	\$10,917,698	\$300,237	\$4,507,020	\$123,943
NPV (7%, 2017)	\$2,072,434	\$56,992	\$6,340,041	\$174,351	\$2,647,121	\$72,796

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		South County Trail	RI DG - Smart Technologies 22 Christiansen Way 1.043 MW		
Year	Contract Cost	Remuneration	Contract Cost	Remuneration	
2017	\$335,417	\$9,224	\$140,705	\$3,869	
2018	\$335,417	\$9,224	\$281,410	\$7,739	
2019	\$335,417	\$9,224	\$281,410	\$7,739	
2020	\$335,417	\$9,224	\$281,410	\$7,739	
2021	\$335,417	\$9,224	\$281,410	\$7,739	
2022	\$335,417	\$9,224	\$281,410	\$7,739	
2023	\$335,417	\$9,224	\$281,410	\$7,739	
2024	\$335,417	\$9,224	\$281,410	\$7,739	
2025	\$335,417	\$9,224	\$281,410	\$7,739	
2026	\$335,417	\$9,224	\$281,410	\$7,739	
2027	\$335,417	\$9,224	\$281,410	\$7,739	
2028	\$335,417	\$9,224	\$281,410	\$7,739	
2029	\$335,417	\$9,224	\$281,410	\$7,739	
2030	\$335,417	\$9,224	\$281,410	\$7,739	
2031	\$195,660	\$5,381	\$281,410	\$7,739	
2032	\$0	\$0	\$140,705	\$3,869	
2033	\$0	\$0	\$0	\$0	
2034	\$0	\$0	\$0	\$0	
2035	\$0	\$0	\$0	\$0	
2036	\$0	\$0	\$0	\$0	
Totals	\$4,891,494	\$134,516	\$4,221,146	\$116,082	
NPV (7%, 2017)	\$3,004,292	\$82,618	\$2,479,217	\$68,178	

# <u>PUC 10-3</u>

## Request:

For each contract entered into under the Long Term Contracting for Renewable Energy statute (not including distributed generation) for which commercial operation has not begun, please provide an update as to the status, including copies of any extensions that may have been executed and which have not already been filed with the PUC.

# Response:

# Champlain Wind

On December 30, 2015, Champlain Wind provided notice to the Company that it elected to extend by one year the critical milestone dates under the Power Purchase Agreement with National Grid (the PPA). That election extended the Critical Milestone for the receipt of the permit from the Maine Department of Environmental Protection (the Maine DEP) that is required to construct and operate the Champlain Wind project to December 31, 2016. The Maine DEP denied Champlain Wind's application for that permit, and Champlain Wind appealed that denial to the Maine Board of Environmental Protection. The Board of Environmental Protection affirmed the Maine DEP's order denying that permit application, and Champlain Wind appealed that decision to the Maine Supreme Judicial Court. On December 3, 2015, the Maine Supreme Judicial Court affirmed the Board of Environmental Protection's decision.

Under Section 3.1(b) of the PPA, Champlain Wind must provide National Grid with notice of the achievement of a Critical Milestone within seven days after that achievement, and Champlain Wind has not provided any notice with respect to the Maine DEP permit. Section 3.1(c) of the PPA allows Champlain Wind to extend the Critical Milestone deadlines by up to two additional six-month periods and Champlain Wind did not elect to further extend the Critical Milestone deadlines or provide the additional Development Period Security prior to the December 31, 2016 deadline for obtaining the Maine DEP permit.

The Company is currently assessing its options with respect to the PPA.

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## Copenhagen Wind

On October 13, 2016, EDF Renewable Energy provided a progress report for activities performed during the third quarter of 2016. As indicated in that progress report, permit and real property and site control access is ongoing. The PPA letter of credit was extended from \$4.2 million to \$7 million on July 1, 2016 and the project's expected Commercial Operation Date is November 30, 2018.

#### **Orbit Energy**

In a recent communication to National Grid, Orbit Energy provided the following status update: "The project has not yet achieved partial generation. That is scheduled to occur by the end of February. We are in the process now preparing to load the inoculate to start methane production. It will take about 1.5 months of inoculum feeding until methane production is sufficient to operate a generation unit. Production will then ramp throughout the remainder of the spring and we will achieve COD according to the PPA by June 30th."