

Assumptions

Started: 1/14/2019
 Requested by: Craig/Josh
 Avoided Costs: December 2018 Update
 Load and LMP History: December 2018 Rule 4.100 Avoided Costs

Cell Color Code
Calculation
Input

Powerwall Cost	\$16,300
Customer Payment	\$55
Battery Availability	90% adjustment for expected outages or battery not being sufficiently charge
Reserve Margin	35% Current reserve margin assumption
Losses	8.9%
FCM Physical Effectiveness	100.0%
RNS Physical Effectiveness	99.0%
FCM Forecast Accuracy (% of Physical Effectiveness)	80.0%
RNS Forecast Accuracy (% of Physical Effectiveness) (Minimum Performance or Expected)	70.0%

Degradation -
 KPJ - These are the results of a study done as part of the first program.
 Tesla ran simulations against the historical data, reducing the energy capacity of the battery
 This is used to determine 'Capacity Volume' and 'RNS Volume' on the Monthly tab.

Year	RNS Deg	FCM Deg
1	99%	100%
2	99%	100%
3	98%	100%
4	98%	100%
5	98%	100%
6	98%	100%
7	97%	100%
8	97%	100%
9	96%	100%
10	96%	100%
11	95%	100%
12	95%	100%
13	95%	100%
14	94%	100%
15	93%	100%

Failure Rate
 Zero failure rate through year 10 due to Tesla Warranty
 Assumed failure rate starting year 11.

Year	Failure	Cum Fail
1	0%	0%
2	0%	0%
3	0%	0%
4	0%	0%
5	0%	0%
6	0%	0%
7	0%	0%
8	0%	0%
9	0%	0%
10	0%	0%
11	10%	10%
12	15%	25%
13	20%	45%
14	25%	70%
15	30%	100%

Tesla Powerwall Analysis

Started:
 Requested by:
 Avoided Costs:
 Load and LMP History:

Powerwall Cost	
Customer Payment	
Battery Availability	
Reserve Margin	
Losses	
FCM Physical Effectiveness	
RNS Physical Effectiveness	
FCM Forecast Accuracy (% of Physical Effectiveness)	
RNS Forecast Accuracy (% of Physical Effectiveness) (Minimum Performance or Expected)	

Degradation -
 KPJ - These are the results of a study done as part of the first program.
 Tesla ran simulations against the historical data, reducing the energy capacity of the battery
 This is used to determine 'Capacity Volume' and 'RNS Volume' on the Monthly tab.

Failure Rate
 Zero failure rate through year 10 due to Tesla Warranty
 Assumed failure rate starting year 11.

Cost Benefit

Powerwall install cost	
Total Rev Requirement	(\$19,057)

Software Fees (\$175)

Customer Contribution \$4,802

FCM \$4,922

RNS \$8,376

Energy \$1,883

Net Value \$751

Customer Payment \$55.00

Green Mountain Power
Analysis of Revenues Associated with Tesla Powerwall Pilot #2

Project Year	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	3	
Month	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1
Year	2020	2020	2020	2020	2020	2020	2020	2020	2020	2020	2020	2020	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2022	
Nominal Site Capacity - kW (0)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Capacity Volume (1)	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	
RNS Volume (1)	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.91	8.82	
Reserve Margin	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	
Marginal Losses	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	
Adjusted Capacity Volume (2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.585	10.585	10.585	10.585	10.585	10.585	10.585	
Adjusted RNS Volume (2)	0	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	6.724	
RNS Price - \$/kW-month	9.64	9.64	9.64	9.64	9.64	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.69	10.69	10.69	10.69	10.69	10.69	10.69	
Capacity Price - \$/kW-month	0.00	0.00	0.00	0.00	0.00	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	4.63	4.63	4.63	4.63	4.63	4.63	4.63	
Revenues																									
Energy	11.85	16.23	13.09	7.79	10.87	6.44	7.36	9.15	10.92	5.64	6.31	9.07	11.66	15.77	13.00	7.73	10.76	6.32	7.32	9.03	10.65	5.59	6.42	9.04	10.79
Capacity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.01	49.01	49.01	49.01	49.01	49.01	49.01	
RNS	0.00	64.83	64.83	64.83	64.83	69.14	69.14	69.14	69.14	69.14	69.14	69.14	69.14	69.14	69.14	69.14	69.14	71.90	71.90	71.90	71.90	71.90	71.90	71.90	
Total Revenues	11.85	81.06	77.92	72.62	75.70	75.58	76.50	78.29	80.06	74.78	75.45	78.21	80.80	84.91	82.14	76.87	79.90	127.23	128.23	129.94	131.56	126.50	127.33	129.95	131.70

Year	NPV	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Revenues																	
Energy	1,883	115	113	108	104	105	147	152	157	162	167	0	0	0	0	0	0
Capacity	4,922	0	343	527	488	498	580	643	655	668	682	695	689	634	533	390	202
RNS	8,376	743	849	874	904	935	965	987	1,018	1,041	1,074	1,048	946	777	531	211	0
Total	15,180	858	1,305	1,508	1,496	1,537	1,692	1,782	1,830	1,871	1,923	1,744	1,635	1,411	1,064	601	202

** Per Quint, these values are per single PW, so the NPV is multiplied by 2

- (0) Adjusted for failure rate
- (1) Adjusted for degradation and availability
- (2) Adjusted for losses, reserve margin (for FCM), physical effectiveness, and forecast error.

3 2 2022	3 3 2022	3 4 2022	3 5 2022	3 6 2022	3 7 2022	3 8 2022	3 9 2022	3 10 2022	3 11 2022	3 12 2022	4 1 2023	4 2 2023	4 3 2023	4 4 2023	4 5 2023	4 6 2023	4 7 2023	4 8 2023	4 9 2023	4 10 2023	4 11 2023	4 12 2023	5 1 2024	5 2 2024	5 3 2024	5 4 2024	5 5 2024
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82
35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%
10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585
6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656
10.69	10.69	10.69	10.69	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.48	11.48	11.48	11.48	11.48	11.48	11.48	11.48	11.48	11.48	11.48	11.48
4.63	4.63	4.63	4.63	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88
14.53	12.96	7.62	10.61	6.26	6.95	8.54	10.43	5.56	6.15	7.73	10.09	13.54	12.88	7.29	10.26	6.05	6.68	8.22	10.05	5.43	6.12	7.31	9.50	12.74	12.93	7.47	10.86
49.01	49.01	49.01	49.01	40.22	40.22	40.22	40.22	40.22	40.22	40.22	40.22	40.22	40.22	40.22	40.22	41.03	41.03	41.03	41.03	41.03	41.03	41.03	41.03	41.03	41.03	41.03	41.03
71.18	71.18	71.18	71.18	73.84	73.84	73.84	73.84	73.84	73.84	73.84	73.84	73.84	73.84	73.84	73.84	76.43	76.43	76.43	76.43	76.43	76.43	76.43	76.43	76.43	76.43	76.43	76.43
134.72	133.15	127.81	130.80	120.32	121.01	122.60	124.49	119.62	120.21	121.79	124.15	127.60	126.94	121.35	124.32	123.51	124.14	125.68	127.51	122.89	123.58	124.77	126.96	130.20	130.39	124.93	128.32

5 6 2024	5 7 2024	5 8 2024	5 9 2024	5 10 2024	5 11 2024	5 12 2024	6 1 2025	6 2 2025	6 3 2025	6 4 2025	6 5 2025	6 6 2025	6 7 2025	6 8 2025	6 9 2025	6 10 2025	6 11 2025	6 12 2025	7 1 2026	7 2 2026	7 3 2026	7 4 2026	7 5 2026	7 6 2026	7 7 2026	7 8 2026	7 9 2026
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0
8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73
35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%
10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585
6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.656	6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.588
11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86	12.24	12.24	12.24	12.24	12.24	12.24	12.24	12.24	12.24	12.24	12.24	12.24	12.24	12.64	12.64	12.64
3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.10	5.10	5.10	5.10
6.42	7.01	8.62	10.50	5.67	6.16	6.97	17.73	18.46	15.71	8.19	14.18	9.13	9.54	11.43	13.06	8.41	9.57	11.98	17.84	18.58	15.92	8.50	15.16	9.75	10.07	12.05	13.73
41.85	41.85	41.85	41.85	41.85	41.85	41.85	41.85	41.85	41.85	41.85	41.85	52.93	52.93	52.93	52.93	52.93	52.93	52.93	52.93	52.93	52.93	52.93	52.93	53.98	53.98	53.98	53.98
78.91	78.91	78.91	78.91	78.91	78.91	78.91	78.91	78.91	78.91	78.91	78.91	81.48	81.48	81.48	81.48	81.48	81.48	81.48	81.48	80.65	80.65	80.65	80.65	83.27	83.27	83.27	83.27
127.18	127.77	129.38	131.26	126.43	126.92	127.73	138.49	139.22	136.47	128.95	134.94	143.54	143.95	145.84	147.47	142.82	143.98	146.39	152.25	152.16	149.50	142.08	148.74	147.00	147.32	149.30	150.98

7 10 2026	7 11 2026	7 12 2026	8 1 2027	8 2 2027	8 3 2027	8 4 2027	8 5 2027	8 6 2027	8 7 2027	8 8 2027	8 9 2027	8 10 2027	8 11 2027	8 12 2027	9 1 2028	9 2 2028	9 3 2028	9 4 2028	9 5 2028	9 6 2028	9 7 2028	9 8 2028	9 9 2028	9 10 2028	9 11 2028	9 12 2028	10 1 2029
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0
8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.73	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64
35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%
10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585
6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.588	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52
12.64	12.64	12.64	12.64	12.64	12.64	12.64	12.64	13.05	13.05	13.05	13.05	13.05	13.05	13.05	13.05	13.05	13.05	13.05	13.05	13.47	13.47	13.47	13.47	13.47	13.47	13.47	13.47
5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31
8.82	9.89	12.08	17.90	18.65	16.08	8.75	16.02	10.32	10.59	12.67	14.38	9.23	10.21	12.21	17.99	18.75	16.27	8.95	16.71	10.79	11.05	13.29	15.09	9.74	10.62	12.41	18.16
53.98	53.98	53.98	53.98	53.98	53.98	53.98	53.98	55.06	55.06	55.06	55.06	55.06	55.06	55.06	55.06	55.06	55.06	55.06	55.06	56.16	56.16	56.16	56.16	56.16	56.16	56.16	56.16
83.27	83.27	83.27	83.27	83.27	83.27	83.27	83.27	85.97	85.97	85.97	85.97	85.97	85.97	85.97	85.97	85.08	85.08	85.08	85.08	87.85	87.85	87.85	87.85	87.85	87.85	87.85	87.85
146.07	147.14	149.33	155.15	155.90	153.33	146.00	153.27	151.35	151.62	153.70	155.41	150.26	151.24	153.24	159.02	158.89	156.41	149.09	156.85	154.80	155.06	157.30	159.10	153.75	154.63	156.42	162.17

10 2 2029	10 3 2029	10 4 2029	10 5 2029	10 6 2029	10 7 2029	10 8 2029	10 9 2029	10 10 2029	10 11 2029	10 12 2029	11 1 2030	11 2 2030	11 3 2030	11 4 2030	11 5 2030	11 6 2030	11 7 2030	11 8 2030	11 9 2030	11 10 2030	11 11 2030	11 12 2030	12 1 2031	12 2 2031	12 3 2031	12 4 2031	12 5 2031	
10	10	10	10	10	10	10	10	10	10	10	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	8.25	8.25	8.25	8.25	8.25
0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	8.55	0	0	0	0	0	0	0	0	0	
8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.123	8.123	8.123	8.123	8.123	8.123	8.123	8.123	8.123	8.123	8.123	8.123	7.054	7.054	7.054	7.054	7.054	
35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	
8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	
10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	
6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	5.323	5.323	5.323	5.323
13.47	13.47	13.47	13.47	13.91	13.91	13.91	13.91	13.91	13.91	13.91	13.91	13.91	13.91	13.91	13.91	14.36	14.36	14.36	14.36	14.36	14.36	14.36	14.36	14.36	14.36	14.36	14.36	
5.31	5.31	5.31	5.31	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52	
18.94	16.59	9.24	17.65	11.40	11.59	13.94	15.75	10.18	10.97	12.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
56.16	56.16	56.16	56.16	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	58.43	58.43	58.43	58.43	58.43	58.43	58.43	58.43	58.43	58.43	58.43	58.43	
87.85	87.85	87.85	87.85	90.71	90.71	90.71	90.71	90.71	90.71	90.71	90.71	85.28	85.28	85.28	85.28	88.05	88.05	88.05	88.05	88.05	88.05	88.05	88.05	76.46	76.46	76.46	76.46	
162.95	160.60	153.25	161.66	159.40	159.59	161.94	163.75	158.18	158.97	160.56	148.00	142.57	142.57	142.57	142.57	146.48	146.48	146.48	146.48	146.48	146.48	146.48	146.48	134.89	134.89	134.89	134.89	

12 6 2031	12 7 2031	12 8 2031	12 9 2031	12 10 2031	12 11 2031	12 12 2031	13 1 2032	13 2 2032	13 3 2032	13 4 2032	13 5 2032	13 6 2032	13 7 2032	13 8 2032	13 9 2032	13 10 2032	13 11 2032	13 12 2032	14 1 2033	14 2 2033	14 3 2033	14 4 2033	14 5 2033	14 6 2033	14 7 2033	14 8 2033	14 9 2033
8.25	8.25	8.25	8.25	8.25	8.25	8.25	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
0	0	7.425	0	0	0	0	0	0	0	0	0	0	0	5.85	0	0	0	0	0	0	0	0	0	0	0	3.825	0
7.054	7.054	7.054	7.054	7.054	7.054	7.054	5.558	5.558	5.558	5.558	5.558	5.558	5.558	5.558	5.558	5.558	5.558	5.558	3.596	3.596	3.596	3.596	3.596	3.596	3.596	3.596	3.596
35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%
10.056	10.056	10.056	10.056	10.056	10.056	10.056	10.056	10.056	10.056	10.056	10.056	8.733	8.733	8.733	8.733	8.733	8.733	8.733	8.733	8.733	8.733	8.733	8.733	6.88	6.88	6.88	6.88
5.323	5.323	5.323	5.323	5.323	5.323	5.323	5.323	4.194	4.194	4.194	4.194	4.194	4.194	4.194	4.194	4.194	4.194	4.194	4.194	2.714	2.714	2.714	2.714	2.714	2.714	2.714	2.714
14.83	14.83	14.83	14.83	14.83	14.83	14.83	14.83	14.83	14.83	14.83	14.83	15.31	15.31	15.31	15.31	15.31	15.31	15.31	15.31	15.31	15.31	15.31	15.31	15.81	15.81	15.81	15.81
5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.74	5.74	5.74	5.74	5.74	5.74	5.74	5.74	5.74	5.74	5.74	5.74	5.86	5.86	5.86	5.86
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56.63	56.63	56.63	56.63	56.63	56.63	56.63	56.63	56.63	56.63	56.63	56.63	50.15	50.15	50.15	50.15	50.15	50.15	50.15	50.15	50.15	50.15	50.15	50.15	40.30	40.30	40.30	40.30
78.94	78.94	78.94	78.94	78.94	78.94	78.94	78.94	62.20	62.20	62.20	62.20	64.22	64.22	64.22	64.22	64.22	64.22	64.22	64.22	41.56	41.56	41.56	41.56	42.91	42.91	42.91	42.91
135.57	135.57	135.57	135.57	135.57	135.57	135.57	135.57	118.83	118.83	118.83	118.83	114.37	114.37	114.37	114.37	114.37	114.37	114.37	114.37	91.71	91.71	91.71	91.71	83.21	83.21	83.21	83.21

Peak

Month	Year	Beginning	Ending	Volume
8	2021	6/1/22	5/31/23	9
8	2020	6/1/21	5/31/22	9
8	2022	6/1/23	5/31/24	9
8	2023	6/1/24	5/31/25	9
8	2024	6/1/25	5/31/26	9
8	2025	6/1/26	5/31/27	9
8	2026	6/1/27	5/31/28	9
8	2027	6/1/28	5/31/29	9
8	2028	6/1/29	5/31/30	9
8	2029	6/1/30	5/31/31	9
8	2030	6/1/31	5/31/32	8.55
8	2031	6/1/32	5/31/33	7.425
8	2032	6/1/33	5/31/34	5.85
8	2033	6/1/34	5/31/35	3.825
8	2034	6/1/35	5/31/36	1.35

Revenue Requirement

Macroeconomic Inputs

Federal Inc Tax Rate =	21.00%
State Inc Tax Rate =	8.50%
Composite Tax Rate =	27.715%

Financial Inputs

	Share	Cost	Weighted Pre-Tax	Weighted ROR	Weighted After-Tax
Common Equity	49.46%	9.16%	6.27%	4.53%	4.53%
Preferred	0.00%	0.00%	0.00%	0.00%	0.00%
Debt	50.54%	4.69%	2.37%	2.37%	1.71%
			8.64%	6.90%	6.24%

	1	2	3	4	5	6	7	8	9	10			
Preliminary Capital Investment			\$ 16,300										
Sales Tax	6.00%		\$ -										
Capitalized A&G	7.94%		\$ 1,294.22										
Installed Capital Investment			\$ 17,594.22										
Book Depreciation (10 years)			\$1,759	\$1,759	\$1,759	\$1,759	\$1,759	\$1,759	\$1,759	\$1,759			
Net Plant (b.o.y.)			\$17,594	\$15,835	\$14,075	\$12,316	\$10,557	\$8,797	\$7,038	\$5,278	\$3,519		
Net Plant (e.o.y.)			\$15,835	\$14,075	\$12,316	\$10,557	\$8,797	\$7,038	\$5,278	\$3,519	(\$0)		
MACRS Depreciation Rates (7 yrs)			14.3%	24.5%	17.5%	12.5%	8.9%	8.9%	4.5%	0.0%	0.0%		
Tax Depreciation			\$2,516	\$4,311	\$3,079	\$2,199	\$1,566	\$1,566	\$792	\$0	\$0		
Deferred Income Taxes (e.o.y.)			(\$210)	(\$707)	(\$366)	(\$122)	\$54	\$54	\$268	\$488	\$488		
Accumulated Deferred Income Taxes (b.o.y.)			\$0	(\$210)	(\$917)	(\$1,282)	(\$1,404)	(\$1,351)	(\$1,297)	(\$1,243)	(\$975)		
Accumulated Deferred Income Taxes (e.o.y.)			(\$210)	(\$917)	(\$1,282)	(\$1,404)	(\$1,351)	(\$1,297)	(\$1,243)	(\$975)	(\$488)		
Working Capital			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Net Rate Base			\$16,610	\$14,392	\$12,096	\$10,093	\$8,299	\$6,594	\$4,888	\$3,289	\$1,908		
Return Requirement			\$1,146	\$993	\$835	\$697	\$573	\$455	\$337	\$227	\$132		
Income Taxes			\$364	\$327	\$287	\$252	\$221	\$190	\$161	\$133	\$110		
Total Revenue Requirement (Direct Cost Recovery)			\$ (17,594.22)	\$3,270	\$3,080	\$2,881	\$2,708	\$2,553	\$2,405	\$2,257	\$2,119	\$2,001	\$1,891
Levelized Billing Requirement (aka Present Value Rev. Req.)		\$18,867											
Adjustment for Gross Revenue & Weather. Taxes		\$19,057											
Pre-tax ROR			9.10%	9.17%	9.27%	9.40%	9.56%	9.79%	10.19%	10.94%	12.64%	20.77%	
Adjusted NPV													
Post-Tax Cost		\$ -	\$3,270	\$3,080	\$2,881	\$2,708	\$2,553	\$2,405	\$2,257	\$2,119	\$2,001	\$1,891	
Levelized Billing Requirement (aka Present Value Rev. Req.)		\$18,867	\$ 1,651,596.67										
Adjustment for Gross Revenue & Weather. Taxes		\$19,057	\$ 3,303.19	\$ 3,110.69	\$ 2,910.27	\$ 2,735.03	\$ 2,578.95	\$ 2,429.01	\$ 2,280.09	\$ 2,140.80	\$ 2,020.85	\$ 1,910.60	
Levelization Factor		1.169	\$ (3,303.19)	\$ (3,110.69)	\$ (2,910.27)	\$ (2,735.03)	\$ (2,578.95)	\$ (2,429.01)	\$ (2,280.09)	\$ (2,140.80)	\$ (2,020.85)	\$ (1,910.60)	

TAX CALCULATION:

return on rate base	\$1,146	\$993	\$835	\$697	\$573	\$455	\$337	\$227	\$132	\$44
less interest	(394)	(341)	(287)	(239)	(197)	(156)	(116)	(78)	(45)	(15)
+/- PERM - Book depreciation of ITC basis reduction	198	198	198	198	198	198	198	198	198	198
ITC amortization (NOTE: assumes the ITC is monetized in the year earned)	0	0	0	0	0	0	0	0	0	0
Subtotal	951	850	746	655	574	497	419	347	284	227
Federal Statutory Rate X	21.000%	21.000%	21.000%	21.000%	21.000%	21.000%	21.000%	21.000%	21.000%	21.000%
1 minus Fed Statutory rate /	0.790000	0.790000	0.790000	0.790000	0.790000	0.790000	0.790000	0.790000	0.790000	0.790000
ITC amortization	253	227	199	175	153	132	111	92	76	61
Federal Tax Expense / (Benefit)	253	227	199	175	153	132	111	92	76	61
return on rate base	\$1,146	\$993	\$835	\$697	\$573	\$455	\$337	\$227	\$132	\$44
less interest	(394)	(341)	(287)	(239)	(197)	(156)	(116)	(78)	(45)	(15)
Federal income tax	253	227	199	175	153	132	111	92	76	61
Perms	198	198	198	198	198	198	198	198	198	198
State manual adjs	0	0	0	0	0	0	0	0	0	0
subtotal	1,204	1,077	945	830	727	629	530	439	360	288
1 minus STATE Statutory rate /	0.915000	0.915000	0.915000	0.915000	0.915000	0.915000	0.915000	0.915000	0.915000	0.915000
less return on rate base	(1,146)	(993)	(835)	(697)	(573)	(455)	(337)	(227)	(132)	(44)
less Federal income tax	(253)	(227)	(199)	(175)	(153)	(132)	(111)	(92)	(76)	(61)
less interest	394	341	287	239	197	156	116	78	45	15
perms	(198)	(198)	(198)	(198)	(198)	(198)	(198)	(198)	(198)	(198)
State Tax Expense / (Benefit)	111	100	88	77	68	58	50	41	34	27
TOTAL TAX EXPENSE / (BENEFIT)	364	327	287	252	221	190	161	133	110	88

67366	CHECK:										
19740	Return on rate base	\$1,146	\$993	\$835	\$697	\$573	\$455	\$337	\$227	\$132	\$44
	Add back - Federal Tax	253	227	199	175	153	132	111	92	76	61
	State Tax	111	100	88	77	68	58	50	41	34	27
	Deduct interest expense	(394)	(341)	(287)	(239)	(197)	(156)	(116)	(78)	(45)	(15)
	PERMS - Book depreciation of ITC Basis reduction	198	198	198	198	198	198	198	198	198	198
	Pretax income	1,315	1,177	1,033	907	795	687	580	480	394	315
	Federal & State Statutory rate X	27.715%	27.715%	27.715%	27.715%	27.715%	27.715%	27.715%	27.715%	27.715%	27.715%
	Tax before ITC amortization	364	326	286	252	220	190	161	133	109	87
	ITC amortization	0	0	0	0	0	0	0	0	0	0
	NET TAX	364	326	286	252	220	190	161	133	109	87

Capacity Prices

FCM				RNS			
Auction	Begin	End	Price	Year	Forecast	Month	Rate
FCA11	6/1/2020	5/31/2021	5.300	2017	1	6/1/17	9.33
FCA12	6/1/2021	5/31/2022	4.630	2017	1	7/1/17	9.33
FCA13	6/1/2022	5/31/2023	3.800	2017	1	8/1/17	9.33
FCA14	6/1/2023	5/31/2024	3.876	2017	1	9/1/17	9.33
FCA15	6/1/2024	5/31/2025	3.954	2017	1	10/1/17	9.33
FCA16	6/1/2025	5/31/2026	5.000	2017	1	11/1/17	9.33
FCA17	6/1/2026	5/31/2027	5.100	2017	1	12/1/17	9.33
FCA18	6/1/2027	5/31/2028	5.202	2018	1	1/1/18	9.33
FCA19	6/1/2028	5/31/2029	5.306	2018	1	2/1/18	9.33
FCA20	6/1/2029	5/31/2030	5.412	2018	1	3/1/18	9.33
FCA21	6/1/2030	5/31/2031	5.520	2018	1	4/1/18	9.33
FCA22	6/1/2031	5/31/2032	5.631	2018	1	5/1/18	9.33
FCA23	6/1/2032	5/31/2033	5.743	2018	2	6/1/18	9.33
FCA24	6/1/2033	5/31/2034	5.858	2018	2	7/1/18	9.33
FCA25	6/1/2034	5/31/2035	5.975	2018	2	8/1/18	9.33
FCA26	6/1/2035	5/31/2036	6.095	2018	2	9/1/18	9.33
FCA27	6/1/2036	5/31/2037	6.217	2018	2	10/1/18	9.33
FCA28	6/1/2037	5/31/2038	6.341	2018	2	11/1/18	9.33
FCA29	6/1/2038	5/31/2039	6.468	2018	2	12/1/18	9.33
FCA30	6/1/2039	5/31/2040	6.597	2019	2	1/1/19	9.33
FCA31	6/1/2040	5/31/2041	6.729	2019	2	2/1/19	9.33
FCA32	6/1/2041	5/31/2042	6.864	2019	2	3/1/19	9.33
FCA33	6/1/2042	5/31/2043	7.001	2019	2	4/1/19	9.33
FCA34	6/1/2043	5/31/2044	7.141	2019	2	5/1/19	9.33
FCA35	6/1/2044	5/31/2045	7.284	2019	3	6/1/19	9.641
FCA36	6/1/2045	5/31/2046	7.430	2019	3	7/1/19	9.641
FCA37	6/1/2046	5/31/2047	7.578	2019	3	8/1/19	9.641
FCA38	6/1/2047	5/31/2048	7.730	2019	3	9/1/19	9.641
FCA39	6/1/2048	5/31/2049	7.884	2019	3	10/1/19	9.641
FCA40	6/1/2049	5/31/2050	8.042	2019	3	11/1/19	9.641
FCA41	6/1/2050	5/31/2051	8.203	2019	3	12/1/19	9.641
FCA42	6/1/2051	5/31/2052	8.367	2020	3	1/1/20	9.641
				2020	3	2/1/20	9.641
				2020	3	3/1/20	9.641
				2020	3	4/1/20	9.641
				2020	3	5/1/20	9.641
				2020	4	6/1/20	10.28213
				2020	4	7/1/20	10.28213
				2020	4	8/1/20	10.28213
				2020	4	9/1/20	10.28213
				2020	4	10/1/20	10.28213
				2020	4	11/1/20	10.28213
				2020	4	12/1/20	10.28213
				2021	4	1/1/21	10.28213
				2021	4	2/1/21	10.28213
				2021	4	3/1/21	10.28213
				2021	4	4/1/21	10.28213
				2021	4	5/1/21	10.28213
				2021	5	6/1/21	10.69341
				2021	5	7/1/21	10.69341
				2021	5	8/1/21	10.69341
				2021	5	9/1/21	10.69341
				2021	5	10/1/21	10.69341
				2021	5	11/1/21	10.69341
				2021	5	12/1/21	10.69341
				2022	5	1/1/22	10.69341
				2022	5	2/1/22	10.69341
				2022	5	3/1/22	10.69341
				2022	5	4/1/22	10.69341
				2022	5	5/1/22	10.69341
				2022	6	6/1/22	11.09441
				2022	6	7/1/22	11.09441
				2022	6	8/1/22	11.09441
				2022	6	9/1/22	11.09441
				2022	6	10/1/22	11.09441
				2022	6	11/1/22	11.09441
				2022	6	12/1/22	11.09441
				2023	6	1/1/23	11.09441
				2023	6	2/1/23	11.09441
				2023	6	3/1/23	11.09441
				2023	6	4/1/23	11.09441
				2023	6	5/1/23	11.09441
				2023	7	6/1/23	11.48272
				2023	7	7/1/23	11.48272
				2023	7	8/1/23	11.48272
				2023	7	9/1/23	11.48272
				2023	7	10/1/23	11.48272
				2023	7	11/1/23	11.48272
				2023	7	12/1/23	11.48272
				2024	7	1/1/24	11.48272
				2024	7	2/1/24	11.48272
				2024	7	3/1/24	11.48272
				2024	7	4/1/24	11.48272
				2024	7	5/1/24	11.48272
				2024	8	6/1/24	11.85591
				2024	8	7/1/24	11.85591
				2024	8	8/1/24	11.85591
				2024	8	9/1/24	11.85591
				2024	8	10/1/24	11.85591
				2024	8	11/1/24	11.85591
				2024	8	12/1/24	11.85591
				2025	8	1/1/25	11.85591
				2025	8	2/1/25	11.85591

Capacity Prices

FCM

RNS

2025	8	3/1/25	11.85591
2025	8	4/1/25	11.85591
2025	8	5/1/25	11.85591
2025	9	6/1/25	12.24122
2025	9	7/1/25	12.24122
2025	9	8/1/25	12.24122
2025	9	9/1/25	12.24122
2025	9	10/1/25	12.24122
2025	9	11/1/25	12.24122
2025	9	12/1/25	12.24122
2026	9	1/1/26	12.24122
2026	9	2/1/26	12.24122
2026	9	3/1/26	12.24122
2026	9	4/1/26	12.24122
2026	9	5/1/26	12.24122
2026	10	6/1/26	12.63906
2026	10	7/1/26	12.63906
2026	10	8/1/26	12.63906
2026	10	9/1/26	12.63906
2026	10	10/1/26	12.63906
2026	10	11/1/26	12.63906
2026	10	12/1/26	12.63906
2027	10	1/1/27	12.63906
2027	10	2/1/27	12.63906
2027	10	3/1/27	12.63906
2027	10	4/1/27	12.63906
2027	10	5/1/27	12.63906
2027	11	6/1/27	13.04983
2027	11	7/1/27	13.04983
2027	11	8/1/27	13.04983
2027	11	9/1/27	13.04983
2027	11	10/1/27	13.04983
2027	11	11/1/27	13.04983
2027	11	12/1/27	13.04983
2028	11	1/1/28	13.04983
2028	11	2/1/28	13.04983
2028	11	3/1/28	13.04983
2028	11	4/1/28	13.04983
2028	11	5/1/28	13.04983
2028	12	6/1/28	13.47395
2028	12	7/1/28	13.47395
2028	12	8/1/28	13.47395
2028	12	9/1/28	13.47395
2028	12	10/1/28	13.47395
2028	12	11/1/28	13.47395
2028	12	12/1/28	13.47395
2029	12	1/1/29	13.47395
2029	12	2/1/29	13.47395
2029	12	3/1/29	13.47395
2029	12	4/1/29	13.47395
2029	12	5/1/29	13.47395
2029	13	6/1/29	13.91186
2029	13	7/1/29	13.91186
2029	13	8/1/29	13.91186
2029	13	9/1/29	13.91186
2029	13	10/1/29	13.91186
2029	13	11/1/29	13.91186
2029	13	12/1/29	13.91186
2030	13	1/1/30	13.91186
2030	13	2/1/30	13.91186
2030	13	3/1/30	13.91186
2030	13	4/1/30	13.91186
2030	13	5/1/30	13.91186
2030	14	6/1/30	14.36399
2030	14	7/1/30	14.36399
2030	14	8/1/30	14.36399
2030	14	9/1/30	14.36399
2030	14	10/1/30	14.36399
2030	14	11/1/30	14.36399
2030	14	12/1/30	14.36399
2031	14	1/1/31	14.36399
2031	14	2/1/31	14.36399
2031	14	3/1/31	14.36399
2031	14	4/1/31	14.36399
2031	14	5/1/31	14.36399
2031	15	6/1/31	14.83082
2031	15	7/1/31	14.83082
2031	15	8/1/31	14.83082
2031	15	9/1/31	14.83082
2031	15	10/1/31	14.83082
2031	15	11/1/31	14.83082
2031	15	12/1/31	14.83082
2032	15	1/1/32	14.83082
2032	15	2/1/32	14.83082
2032	15	3/1/32	14.83082
2032	15	4/1/32	14.83082
2032	15	5/1/32	14.83082
2032	16	6/1/32	15.31282
2032	16	7/1/32	15.31282
2032	16	8/1/32	15.31282
2032	16	9/1/32	15.31282
2032	16	10/1/32	15.31282
2032	16	11/1/32	15.31282
2032	16	12/1/32	15.31282

Capacity Prices

FCM

RNS

2033	16	1/1/33	15.31282
2033	16	2/1/33	15.31282
2033	16	3/1/33	15.31282
2033	16	4/1/33	15.31282
2033	16	5/1/33	15.31282
2033	17	6/1/33	15.81049
2033	17	7/1/33	15.81049
2033	17	8/1/33	15.81049
2033	17	9/1/33	15.81049
2033	17	10/1/33	15.81049
2033	17	11/1/33	15.81049
2033	17	12/1/33	15.81049
2034	17	1/1/34	15.81049
2034	17	2/1/34	15.81049
2034	17	3/1/34	15.81049
2034	17	4/1/34	15.81049
2034	17	5/1/34	15.81049
2034	18	6/1/34	16.32433
2034	18	7/1/34	16.32433
2034	18	8/1/34	16.32433
2034	18	9/1/34	16.32433
2034	18	10/1/34	16.32433
2034	18	11/1/34	16.32433
2034	18	12/1/34	16.32433
2035	18	1/1/35	16.32433
2035	18	2/1/35	16.32433
2035	18	3/1/35	16.32433
2035	18	4/1/35	16.32433
2035	18	5/1/35	16.32433
2035	19	6/1/35	16.85487
2035	19	7/1/35	16.85487
2035	19	8/1/35	16.85487
2035	19	9/1/35	16.85487
2035	19	10/1/35	16.85487
2035	19	11/1/35	16.85487
2035	19	12/1/35	16.85487
2036	19	1/1/36	16.85487
2036	19	2/1/36	16.85487
2036	19	3/1/36	16.85487
2036	19	4/1/36	16.85487
2036	19	5/1/36	16.85487
2036	20	6/1/36	17.40266
2036	20	7/1/36	17.40266
2036	20	8/1/36	17.40266
2036	20	9/1/36	17.40266
2036	20	10/1/36	17.40266
2036	20	11/1/36	17.40266
2036	20	12/1/36	17.40266
2037	20	1/1/37	17.40266
2037	20	2/1/37	17.40266
2037	20	3/1/37	17.40266
2037	20	4/1/37	17.40266
2037	20	5/1/37	17.40266
2037	21	6/1/37	17.96824
2037	21	7/1/37	17.96824
2037	21	8/1/37	17.96824
2037	21	9/1/37	17.96824
2037	21	10/1/37	17.96824
2037	21	11/1/37	17.96824
2037	21	12/1/37	17.96824
2038	21	1/1/38	17.96824
2038	21	2/1/38	17.96824
2038	21	3/1/38	17.96824
2038	21	4/1/38	17.96824
2038	21	5/1/38	17.96824
2038	22	6/1/38	18.55221
2038	22	7/1/38	18.55221
2038	22	8/1/38	18.55221
2038	22	9/1/38	18.55221
2038	22	10/1/38	18.55221
2038	22	11/1/38	18.55221
2038	22	12/1/38	18.55221
2039	22	1/1/39	18.55221
2039	22	2/1/39	18.55221
2039	22	3/1/39	18.55221
2039	22	4/1/39	18.55221
2039	22	5/1/39	18.55221
2039	23	6/1/39	19.15516
2039	23	7/1/39	19.15516
2039	23	8/1/39	19.15516
2039	23	9/1/39	19.15516
2039	23	10/1/39	19.15516
2039	23	11/1/39	19.15516
2039	23	12/1/39	19.15516
2040	23	1/1/40	19.15516
2040	23	2/1/40	19.15516
2040	23	3/1/40	19.15516
2040	23	4/1/40	19.15516
2040	23	5/1/40	19.15516
2040	24	6/1/40	19.7777
2040	24	7/1/40	19.7777
2040	24	8/1/40	19.7777
2040	24	9/1/40	19.7777
2040	24	10/1/40	19.7777

Capacity Prices

FCM

RNS

2040	24	11/1/40	19.7777
2040	24	12/1/40	19.7777
2041	24	1/1/41	19.7777
2041	24	2/1/41	19.7777
2041	24	3/1/41	19.7777
2041	24	4/1/41	19.7777
2041	24	5/1/41	19.7777
2041	25	6/1/41	20.42047
2041	25	7/1/41	20.42047
2041	25	8/1/41	20.42047
2041	25	9/1/41	20.42047
2041	25	10/1/41	20.42047
2041	25	11/1/41	20.42047
2041	25	12/1/41	20.42047
2042	25	1/1/42	20.42047
2042	25	2/1/42	20.42047
2042	25	3/1/42	20.42047
2042	25	4/1/42	20.42047
2042	25	5/1/42	20.42047
2042	26	6/1/42	21.08414
2042	26	7/1/42	21.08414
2042	26	8/1/42	21.08414
2042	26	9/1/42	21.08414
2042	26	10/1/42	21.08414
2042	26	11/1/42	21.08414
2042	26	12/1/42	21.08414
2043	26	1/1/43	21.08414
2043	26	2/1/43	21.08414
2043	26	3/1/43	21.08414
2043	26	4/1/43	21.08414
2043	26	5/1/43	21.08414
2043	27	6/1/43	21.76937
2043	27	7/1/43	21.76937
2043	27	8/1/43	21.76937
2043	27	9/1/43	21.76937
2043	27	10/1/43	21.76937
2043	27	11/1/43	21.76937
2043	27	12/1/43	21.76937
2044	27	1/1/44	21.76937
2044	27	2/1/44	21.76937
2044	27	3/1/44	21.76937
2044	27	4/1/44	21.76937
2044	27	5/1/44	21.76937
2044	28	6/1/44	22.47688
2044	28	7/1/44	22.47688
2044	28	8/1/44	22.47688
2044	28	9/1/44	22.47688
2044	28	10/1/44	22.47688
2044	28	11/1/44	22.47688
2044	28	12/1/44	22.47688
2045	28	1/1/45	22.47688
2045	28	2/1/45	22.47688
2045	28	3/1/45	22.47688
2045	28	4/1/45	22.47688
2045	28	5/1/45	22.47688
2045	29	6/1/45	23.20738
2045	29	7/1/45	23.20738
2045	29	8/1/45	23.20738
2045	29	9/1/45	23.20738
2045	29	10/1/45	23.20738
2045	29	11/1/45	23.20738
2045	29	12/1/45	23.20738
2046	29	1/1/46	23.20738
2046	29	2/1/46	23.20738
2046	29	3/1/46	23.20738
2046	29	4/1/46	23.20738
2046	29	5/1/46	23.20738
2046	30	6/1/46	23.96162
2046	30	7/1/46	23.96162
2046	30	8/1/46	23.96162
2046	30	9/1/46	23.96162
2046	30	10/1/46	23.96162
2046	30	11/1/46	23.96162
2046	30	12/1/46	23.96162
2047	30	1/1/47	23.96162
2047	30	2/1/47	23.96162
2047	30	3/1/47	23.96162
2047	30	4/1/47	23.96162
2047	30	5/1/47	23.96162
2047	31	6/1/47	24.74037
2047	31	7/1/47	24.74037
2047	31	8/1/47	24.74037
2047	31	9/1/47	24.74037
2047	31	10/1/47	24.74037
2047	31	11/1/47	24.74037
2047	31	12/1/47	24.74037
2048	31	1/1/48	24.74037
2048	31	2/1/48	24.74037
2048	31	3/1/48	24.74037
2048	31	4/1/48	24.74037
2048	31	5/1/48	24.74037
2048	32	6/1/48	25.54443
2048	32	7/1/48	25.54443
2048	32	8/1/48	25.54443

Capacity Prices

FCM

RNS

2048	32	9/1/48	25.54443
2048	32	10/1/48	25.54443
2048	32	11/1/48	25.54443
2048	32	12/1/48	25.54443
2049	32	1/1/49	20.49345
2049	32	2/1/49	20.49345
2049	32	3/1/49	20.49345
2049	32	4/1/49	20.49345
2049	32	5/1/49	20.49345
2049	33	6/1/49	20.88012
2049	33	7/1/49	20.88012
2049	33	8/1/49	20.88012
2049	33	9/1/49	20.88012
2049	33	10/1/49	20.88012
2049	33	11/1/49	20.88012
2049	33	12/1/49	20.88012
2050	33	1/1/50	20.89983
2050	33	2/1/50	20.89983
2050	33	3/1/50	20.89983
2050	33	4/1/50	20.89983
2050	33	5/1/50	20.89983
2050	34	6/1/50	21.29483
2050	34	7/1/50	21.29483
2050	34	8/1/50	21.29483
2050	34	9/1/50	21.29483
2050	34	10/1/50	21.29483
2050	34	11/1/50	21.29483
2050	34	12/1/50	21.29483
2051	34	1/1/51	21.31493
2051	34	2/1/51	21.31493
2051	34	3/1/51	21.31493
2051	34	4/1/51	21.31493
2051	34	5/1/51	21.31493
2051	35	6/1/51	21.71743
2051	35	7/1/51	21.71743
2051	35	8/1/51	21.71743
2051	35	9/1/51	21.71743
2051	35	10/1/51	21.71743
2051	35	11/1/51	21.71743
2051	35	12/1/51	21.71743
2052	35	1/1/52	21.73793
2052	35	2/1/52	21.73793
2052	35	3/1/52	21.73793
2052	35	4/1/52	21.73793
2052	35	5/1/52	21.73793
2052	36	6/1/52	22.14876
2052	36	7/1/52	22.14876
2052	36	8/1/52	22.14876
2052	36	9/1/52	22.14876
2052	36	10/1/52	22.14876
2052	36	11/1/52	22.14876
2052	36	12/1/52	22.14876
2053	36	1/1/53	22.16968
2053	36	2/1/53	22.16968
2053	36	3/1/53	22.16968
2053	36	4/1/53	22.16968
2053	36	5/1/53	22.16968
2053	37	6/1/53	22.58884
2053	37	7/1/53	22.58884
2053	37	8/1/53	22.58884
2053	37	9/1/53	22.58884
2053	37	10/1/53	22.58884
2053	37	11/1/53	22.58884
2053	37	12/1/53	22.58884
2054	37	1/1/54	22.61018
2054	37	2/1/54	22.61018
2054	37	3/1/54	22.61018
2054	37	4/1/54	22.61018
2054	37	5/1/54	22.61018
2054	38	6/1/54	23.03768
2054	38	7/1/54	23.03768
2054	38	8/1/54	23.03768
2054	38	9/1/54	23.03768
2054	38	10/1/54	23.03768
2054	38	11/1/54	23.03768
2054	38	12/1/54	23.03768
2055	38	1/1/55	23.05943
2055	38	2/1/55	23.05943
2055	38	3/1/55	23.05943
2055	38	4/1/55	23.05943
2055	38	5/1/55	23.05943
2055	39	6/1/55	23.49527
2055	39	7/1/55	23.49527
2055	39	8/1/55	23.49527
2055	39	9/1/55	23.49527
2055	39	10/1/55	23.49527
2055	39	11/1/55	23.49527
2055	39	12/1/55	23.49527
2056	39	1/1/56	23.51746
2056	39	2/1/56	23.51746
2056	39	3/1/56	23.51746
2056	39	4/1/56	23.51746
2056	39	5/1/56	23.51746
2056	40	6/1/56	23.96246

Capacity Prices

FCM

RNS

2056	40	7/1/56	23.96246
2056	40	8/1/56	23.96246
2056	40	9/1/56	23.96246
2056	40	10/1/56	23.96246

Powerhub Cost

\$50,000 per year
2000 units
\$24 per system (2 PWs) per year
10 year duration

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	24	24	24	24	24	24	24	24	24	24	0	0	0	0	0
NPV	\$174.62														

Customer Payments

\$ 55.00 per month
10 years

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Monthly	660	660	660	660	660	660	660	660	660	660	0	0	0	0	0

\$4,801.97

Attachment 3

	<u>Year</u>	<u>1</u>	<u>2</u>	<u>3</u>	
Monthly Customers		400	400	400	
Upfront Customers		100	100	100	
Costs					<u>Lifetime NPV</u>
Equipment & Installation Costs*		(\$1,651,597)	(\$3,206,944)	(\$4,662,078)	(\$26,938,731)
Software Fees		(\$12,000)	(\$24,000)	(\$36,000)	(\$246,834)
Total Costs		(\$1,663,597)	(\$3,230,944)	(\$4,698,078)	(\$27,185,564)
Revenues					
Power Supply Value		\$429,010	\$1,081,690	\$1,835,800	\$20,127,964
Avoided A&G		\$517,688	\$517,688	\$517,688	\$1,377,561
Customer Battery Payment (Upfront)		\$550,000	\$550,000	\$550,000	\$1,463,543
Customer Battery Payment (Monthly)		\$264,000	\$528,000	\$792,000	\$5,430,343
Total Revenue		\$1,760,698	\$2,677,378	\$3,695,488	\$28,399,410
Net Benefit		\$97,101	(\$553,566)	(\$1,002,590)	\$1,213,846

*Includes 8% A&G allocation for all batteries.