

## **TRAVERSE CITY LIGHT & POWER**

### **RENEWABLE ENERGY PLAN**

**U-16635**

**July 1, 2011**

- Based on this Renewable Energy Plan (REP) Traverse City Light & Power (City) will have the required Renewable Energy Credits (RECs) for the REP time period of 2012-2029 thereby complying with PA 295.
- The primary sources of RECs are participation in the Michigan Public Power Agency (MPPA) Granger and North American Natural Resources (NANR) Projects, the City's existing wind generation, and the City's wind farm power purchase agreement. The Granger and NANR Projects will utilize landfill gas for electric power generation from a variety of locations in Michigan and possibly in neighboring states. The current schedule calls for additional Granger and NANR projects to begin commercial operation between 2011 and 2014.
- The City will have excess RECs to sell from 2012 through 2029. Selling of RECs represents a source of income to the City which will reduce overall power supply costs. The cost per REC will be determined to a large extent by market forces once the Michigan REC market is designed and implemented. This REP assumes the sale of some of the excess RECs keeping the balance in reserve.
- The City had a pre-existing policy in place to develop and include renewable energy project costs with their power supply cost recovery, therefore, there are no incremental costs of compliance. If RECs were to be purchased at some point in the future then there would be an incremental cost of RECs for the additional RECs purchased and would be included in a surcharge accordingly.
- The City will comply with Section 45 of PA 295 which refers to methods of notification to customers charges, if any, for costs associated with its REP.

TRAVERSE CITY

ATTACHMENT C - RENEWABLE ENERGY PLAN SURCHARGE SUMMARY FOR MUNICIPAL UTILITIES

ITEM	Units	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Sales Forecast - 3 yr running average</b>	MWH	328,416	323,605	318,903	318,994	323,518	328,462	331,789					
10% Compliance Factor					0.10	0.10	0.10	0.10					
RPS Requirement	MWH	-	-	-	31,899	32,352	32,846	33,179	33,179	33,179	33,179	33,179	33,179
RPS Required REC's	RECS	-	-	-	31,899	32,352	32,846	33,179	33,179	33,179	33,179	33,179	33,179
(-) REC's from Existing Renew. Energy Supply (Baseline)	RECS	-	-	-	31,899	32,352	32,846	33,179	33,179	33,179	33,179	33,179	33,179
<b>RECS - Incremental Difference</b>	RECS	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>
<b>FACTOR</b>		-	-	-	0.20	0.33	0.50	1.00	1.00	1.00	1.00	1.00	1.00
<b>Required New RECS</b>	RECS	-	-	-	6,224	10,419	16,034	32,401	32,401	32,401	32,401	32,401	32,401
<b>RPS Renewable Energy Credit Compliance</b>													
Total RPS Required REC's	RECS	-	-	-	6,380	10,676	16,423	33,179	33,179	33,179	33,179	33,179	33,179
Required New RECS	RECS	-	(778)	(778)	6,224	10,419	16,034	32,401	32,401	32,401	32,401	32,401	32,401
RECS Obtained from New Resources	RECS	-	10,821	31,895	35,342	40,757	42,739	43,848	43,565	43,386	43,309	43,283	43,283
RECS Over / (Short) without carryover	RECS	-	11,599	32,673	29,118	30,337	26,705	11,447	11,164	10,985	10,908	10,882	10,882
REC Purchases / (Sales)	RECS	-	-	-	(3,800)	(13,788)	(33,500)	(21,436)	(16,964)	(14,785)	(14,708)	(14,682)	(14,682)
Cumulative RECS Compliance Balance	RECS	-	11,599	44,272	69,590	86,139	79,344	69,356	63,556	59,756	55,956	52,156	48,356
Incremental Compliance with New RECS	%	NA	NA	NA	568%	391%	267%	135%	134%	134%	134%	134%	134%
Compliance % with Cumulative REC Balance	%	NA	NA	NA	1218%	927%	595%	314%	296%	284%	273%	261%	249%
<b>Revenue Requirements for New Renewables</b>													
Build	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
PPA	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
REC Purchases (Sales)	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>New RECS Obtained</b>													
Generation Based													
Build	MWH	-	-	-	-	-	-	-	-	-	-	-	-
PPA	MWH	-	10,728	31,623	34,507	38,999	40,332	41,614	41,871	41,871	41,871	41,871	41,871
Subtotal	MWH	-	10,728	31,623	34,507	38,999	40,332	41,614	41,871	41,871	41,871	41,871	41,871
Purchase (Sold) From New RECS	RECS	-	-	-	(3,800)	(13,788)	(33,500)	(21,436)	(16,964)	(14,785)	(14,708)	(14,682)	(14,682)
Incentive (SB 213 Sec 39 (2))	RECS	-	92	272	835	1,757	2,407	2,234	1,694	1,515	1,438	1,412	1,412
<b>Total</b>	RECS	-	10,821	31,895	31,542	26,969	9,239	22,413	26,601	28,601	28,601	28,601	28,601
<b>Forecasted Transfer Price per MWH - SUGGESTED</b>	\$/MWH	-	-	-	-	-	-	-	-	-	-	-	-
<b>Amount recovered through PSCR</b>													
Transfer price x volume of energy	\$	-	-	-	-	-	-	-	-	-	-	-	-
<b>Incremental Cost of Compliance</b>	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Non-Volumetric Surcharge</b>													
<b>Meter (or customer) Forecast (Number)</b>													
Residential	No.	8,733	8,670	8,760	8,804	8,848	8,892	8,937	8,981	9,026	9,071	9,117	9,162
Secondary (Commercial)	No.	3,001	2,983	3,020	3,050	3,059	3,069	3,078	3,087	3,096	3,106	3,115	3,124
Primary (Industrial)	No.	43	40	40	40	40	40	40	40	40	40	40	40
<b>Total</b>	No.	11,777	11,693	11,820	11,894	11,947	12,001	12,055	12,108	12,162	12,217	12,272	12,326
<b>Maximum Surcharge (all rate classes at caps)</b>													
Residential	\$/MO	\$ 3.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial	\$/MO	\$ 16.58	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Industrial	\$/MO	\$ 187.50	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Streetsights	\$/MO	\$ 16.58	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Unmetered	\$/MO	\$ 0.60	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$/MO	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Planned Surcharge</b>													
Residential	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Industrial	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Streetsights	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Unmetered	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

(a) Annual Energy Forecast used to calculate 3-yr Average 331,497 324,438 314,881 317,390 324,710 328,455 332,220 334,692 336,366

<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179
33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179
<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>	<u>778</u>
32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401
<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>
32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401

33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179
32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401
43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283
10,882	10,882	10,882	10,882	10,882	10,882	10,882	10,882	10,882
(14,682)	(14,682)	(14,682)	(14,682)	(14,682)	(14,682)	(14,682)	(14,682)	(14,682)
44,556	40,756	36,956	33,156	29,356	25,556	21,756	17,956	14,156
134%	134%	134%	134%	134%	134%	134%	134%	134%
238%	226%	214%	202%	191%	179%	167%	155%	144%

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<u>41,871</u>	<u>41,871</u>	<u>41,871</u>	<u>41,871</u>	<u>41,871</u>	<u>41,871</u>	<u>41,871</u>	<u>41,871</u>	<u>41,871</u>
41,871	41,871	41,871	41,871	41,871	41,871	41,871	41,871	41,871
(14,682)	(14,682)	(14,682)	(14,682)	(14,682)	(14,682)	(14,682)	(14,682)	(14,682)
<u>1,412</u>	<u>1,412</u>	<u>1,412</u>	<u>1,412</u>	<u>1,412</u>	<u>1,412</u>	<u>1,412</u>	<u>1,412</u>	<u>1,412</u>
28,601	28,601	28,601	28,601	28,601	28,601	28,601	28,601	28,601

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9,208	9,254	9,300	9,347	9,394	9,441	9,488	9,535	9,583
3,134	3,143	3,153	3,162	3,171	3,181	3,191	3,200	3,210
<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>
12,382	12,437	12,493	12,549	12,605	12,662	12,719	12,775	12,833

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**TRAVERSE CITY  
GRANGER - ALL SITES**

			2009	2010	2011	2012	2013	2014	2015	2016	2017
CAPACITY FACTOR			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
NETGENERATION	MWH *		-	740	1,923	3,269	6,666	9,230	9,743	9,743	9,743
CAPACITY	MW *		-	0.244	0.244	0.585	1.106	1.236	1.236	1.236	1.236
<b>RENEWABLE ENERGY CREDITS</b>											
BASE GENERATION	RECS		-	740	1,923	3,269	6,666	9,230	9,743	9,743	9,743
ON-PEAK & MICH INCENT RECS	RECS *		-	92	272	535	1,107	1,607	1,438	1,028	925
TOTAL	RECS		-	833	2,195	3,804	7,774	10,837	11,181	10,771	10,668
<b>GRANGER UNIT COST</b>											
O & M	\$/ kWh *	\$	-	\$ 0.07880	\$ 0.08077	\$ 0.08279	\$ 0.08486	\$ 0.08698	\$ 0.08916	\$ 0.09139	\$ 0.09367
ADMIN	\$/ kWh *	\$	-	\$ 0.00082	\$ 0.00549	\$ 0.00333	\$ 0.00163	\$ 0.00118	\$ 0.00112	\$ 0.00112	\$ 0.00112
WDS CHARGES	\$/ kWh *	\$	-	\$ 0.00002	\$ 0.00001	\$ 0.00001	\$ 0.00001	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000
INCREMENTAL UNIT COST	\$/ REC	\$	-	\$ 0.07965	\$ 0.08627	\$ 0.08612	\$ 0.08650	\$ 0.08816	\$ 0.09028	\$ 0.09250	\$ 0.09479
<b>TOTAL INCREMENTAL COST</b>	\$	\$	-	\$ 58,945	\$ 165,889	\$ 281,540	\$ 576,612	\$ 813,767	\$ 879,547	\$ 901,257	\$ 923,513
<b>WITH PILT</b>	\$	\$	1.04	\$ 61,303	\$ 172,525	\$ 292,802	\$ 599,677	\$ 846,317	\$ 914,729	\$ 937,308	\$ 960,453
<b>INTERCONNECTION COSTS: AMMORTIZED SHARE</b>											
<b>GRANGER SITES</b>											
SITE 1	\$	8.13%	\$ -	\$ -	\$ 2,439	\$ 2,439	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 2	\$	8.13%	\$ -	\$ 3,374	\$ -	\$ 20,325	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 3	\$	8.13%	\$ -	\$ 5,081	\$ -	\$ 4,878	\$ 4,878	\$ -	\$ -	\$ -	\$ -
SITE 4	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ 2,033	\$ -	\$ -	\$ -	\$ -
SITE 5	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ 10,163	\$ -	\$ -	\$ -	\$ -
SITE 6	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 7	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 8	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 9	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL</b>	\$	8.13%	\$ -	\$ 8,455	\$ 2,439	\$ 27,642	\$ 17,073	\$ -	\$ -	\$ -	\$ -
<b>WITH PILT</b>	\$	1.04	\$ -	\$ 8,793	\$ 2,537	\$ 28,748	\$ 17,756	\$ -	\$ -	\$ -	\$ -
	\$ / MWH		\$	11.88	\$ 1.32	\$ 8.79	\$ 2.66	\$ -	\$ -	\$ -	\$ -
	\$ / KW-YR		\$	36,053	\$ 10,400	\$ 49,111	\$ 16,059	\$ -	\$ -	\$ -	\$ -
<b>GRANGER ENERGY COST</b>	\$		\$ -	\$ 61,303	\$ 172,525	\$ 292,802	\$ 599,677	\$ 846,317	\$ 914,729	\$ 937,308	\$ 960,453
<b>GRANGER INTERCONN COST</b>	\$		\$ -	\$ 8,793	\$ 2,537	\$ 28,748	\$ 17,756	\$ -	\$ -	\$ -	\$ -
<b>GRANGER TOTAL COST</b>	\$		\$ -	\$ 70,096	\$ 175,061	\$ 321,550	\$ 617,433	\$ 846,317	\$ 914,729	\$ 937,308	\$ 960,453
<b>GRANGER TOTAL COST</b>	\$ / MWH		\$	94.71	\$ 91.04	\$ 98.36	\$ 92.62	\$ 91.69	\$ 93.89	\$ 96.20	\$ 98.58

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743
	1.236	1.236	1.236	1.236	1.236	1.236	1.236	1.236	1.236	1.236	1.236	1.236
	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743	9,743
	925	925	925	925	925	925	925	925	925	925	925	925
	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668
\$	0.09601	\$ 0.09841	\$ 0.10087	\$ 0.10340	\$ 0.10598	\$ 0.10863	\$ 0.11135	\$ 0.11413	\$ 0.11698	\$ 0.11991	\$ 0.12290	\$ 0.12598
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\$	0.00112	\$ 0.00112	\$ 0.00112	\$ 0.00112	\$ 0.00112	\$ 0.00112	\$ 0.00112	\$ 0.00112	\$ 0.00112	\$ 0.00112	\$ 0.00112	\$ 0.00112
\$	0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000
\$	0.09713	\$ 0.09953	\$ 0.10199	\$ 0.10451	\$ 0.10710	\$ 0.10975	\$ 0.11246	\$ 0.11525	\$ 0.11810	\$ 0.12102	\$ 0.12402	\$ 0.12709
\$	946,326	\$ 969,710	\$ 993,679	\$ 1,018,248	\$ 1,043,431	\$ 1,069,244	\$ 1,095,702	\$ 1,122,822	\$ 1,150,620	\$ 1,179,113	\$ 1,208,319	\$ 1,238,255
\$	984,179	\$ 1,008,498	\$ 1,033,426	\$ 1,058,978	\$ 1,085,168	\$ 1,112,014	\$ 1,139,530	\$ 1,167,735	\$ 1,196,645	\$ 1,226,278	\$ 1,256,652	\$ 1,287,785
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\$	984,179	\$ 1,008,498	\$ 1,033,426	\$ 1,058,978	\$ 1,085,168	\$ 1,112,014	\$ 1,139,530	\$ 1,167,735	\$ 1,196,645	\$ 1,226,278	\$ 1,256,652	\$ 1,287,785
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\$	984,179	\$ 1,008,498	\$ 1,033,426	\$ 1,058,978	\$ 1,085,168	\$ 1,112,014	\$ 1,139,530	\$ 1,167,735	\$ 1,196,645	\$ 1,226,278	\$ 1,256,652	\$ 1,287,785
\$	101.02	\$ 103.51	\$ 106.07	\$ 108.69	\$ 111.38	\$ 114.14	\$ 116.96	\$ 119.86	\$ 122.82	\$ 125.86	\$ 128.98	\$ 132.18

TRAVERSE CITY

North American Renewable Energy - ALL SITES

			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CAPACITY FACTOR			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
NETGENERATION	MWH	*	-	-	-	1,538	3,333	4,102	4,871	5,128	5,128	5,128	5,128
CAPACITY	MW	*	-	-	-	0.390	0.455	0.585	0.650	0.650	0.650	0.650	0.650
RENEWABLE ENERGY CREDITS													
BASE GENERATION	RECS		-	0	0	1,538	3,333	4,102	4,871	5,128	5,128	5,128	5,128
ON-PEAK & MICH INCENT	RECS	*	-	-	-	300	650	800	796	666	590	513	487
TOTAL	RECS		-	0	0	1,838	3,983	4,902	5,667	5,794	5,717	5,640	5,615
NANR UNIT COST	\$/ kWh	*	\$ -	\$ 0.07800	\$ 0.07995	\$ 0.08195	\$ 0.08400	\$ 0.08574	\$ 0.08775	\$ 0.08994	\$ 0.09230	\$ 0.09474	\$ 0.09727
O & M	\$/ kWh	*	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ADMIN	\$/ kWh	*	\$ -	\$ 0.00082	\$ 0.00085	\$ 0.00087	\$ 0.00090	\$ 0.00093	\$ 0.00096	\$ 0.00098	\$ 0.00101	\$ 0.00104	\$ 0.00108
WDS CHARGES	\$/ kWh	*	\$ -	\$ -	\$ -	\$ 0.00002	\$ 0.00001	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000
INCREMENTAL UNIT COST	\$/ REC		\$ -	\$ 0.07882	\$ 0.08080	\$ 0.08284	\$ 0.08490	\$ 0.08667	\$ 0.08871	\$ 0.09093	\$ 0.09332	\$ 0.09579	\$ 0.09834
TOTAL INCREMENTAL COST	\$		\$ -	\$ -	\$ -	\$ 127,436	\$ 282,992	\$ 355,540	\$ 432,128	\$ 466,277	\$ 478,518	\$ 491,176	\$ 504,293
WITH PILT	\$	1.04	\$ -	\$ -	\$ -	\$ 132,533	\$ 294,312	\$ 369,762	\$ 449,413	\$ 484,928	\$ 497,659	\$ 510,823	\$ 524,464
INTERCONNECTION COSTS: AMMORTIZED SHARE													
NANR SITES													
SITE 1	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 2	\$	8.13%	\$ -	\$ -	\$ -	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520
SITE 3	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 4	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 5	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 6	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 7	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 8	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SITE 9	\$	8.13%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL	\$	8.13%	\$ -	\$ -	\$ -	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520
WITH PILT	\$	1.04	\$ -	\$ -	\$ -	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581
	\$ / MWH		\$ -	\$ -	\$ -	\$ 1.03	\$ 0.47	\$ 0.39	\$ 0.32	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31
	\$ / KW-YR		\$ -	\$ -	\$ -	\$ 4,052	\$ 3,473	\$ 2,701	\$ 2,431	\$ 2,431	\$ 2,431	\$ 2,431	\$ 2,431
NANR ENERGY COST	\$		\$ -	\$ -	\$ -	\$ 132,533	\$ 294,312	\$ 369,762	\$ 449,413	\$ 484,928	\$ 497,659	\$ 510,823	\$ 524,464
NANR INTERCONN COST	\$		\$ -	\$ -	\$ -	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581
NANR TOTAL COST	\$		\$ -	\$ -	\$ -	\$ 134,114	\$ 295,893	\$ 371,343	\$ 450,994	\$ 486,510	\$ 499,240	\$ 512,405	\$ 526,045
NANR TOTAL COST	\$ / MWH		\$ -	\$ -	\$ -	\$ 87.18	\$ 88.77	\$ 90.52	\$ 92.58	\$ 94.88	\$ 97.36	\$ 99.93	\$ 102.59

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5127.805
	0.650	0.650	0.650	0.650	0.650	0.650	0.650	0.650	0.650	0.650	0.650407
	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5127.805
	487	487	487	487	487	487	487	487	487	487	487.0244
	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	
\$	0.09988	\$ 0.10259	\$ 0.10542	\$ 0.10837	\$ 0.11143	\$ 0.11458	\$ 0.11780	\$ 0.12111	\$ 0.12451	\$ 0.12801	
\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$	0.00111	\$ 0.00114	\$ 0.00117	\$ 0.00121	\$ 0.00125	\$ 0.00128	\$ 0.00132	\$ 0.00136	\$ 0.00140	\$ 0.00144	
\$	0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	
\$	0.10099	\$ 0.10373	\$ 0.10659	\$ 0.10958	\$ 0.11268	\$ 0.11587	\$ 0.11913	\$ 0.12247	\$ 0.12591	\$ 0.12945	
\$	517,856	\$ 531,928	\$ 546,591	\$ 561,913	\$ 577,794	\$ 594,134	\$ 610,860	\$ 628,014	\$ 645,650	\$ 663,812	
\$	538,570	\$ 553,205	\$ 568,454	\$ 584,390	\$ 600,906	\$ 617,900	\$ 635,294	\$ 653,135	\$ 671,476	\$ 690,365	
\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$	1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	
\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$	1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	\$ 1,520	
\$	1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	\$ 1,581	
\$	0.31	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31	
\$	2,431	\$ 2,431	\$ 2,431	\$ 2,431	\$ 2,431	\$ 2,431	\$ 2,431	\$ 2,431	\$ 2,431	\$ 2,431	
	538,570	553,205	568,454	584,390	600,906	617,900	635,294	653,135	671,476	690,365	
\$	<u>1,581</u>	\$ <u>1,581</u>	\$ <u>1,581</u>	\$ <u>1,581</u>	\$ <u>1,581</u>	\$ <u>1,581</u>	\$ <u>1,581</u>	\$ <u>1,581</u>	\$ <u>1,581</u>	\$ <u>1,581</u>	
\$	540,151	\$ 554,786	\$ 570,035	\$ 585,971	\$ 602,487	\$ 619,481	\$ 636,875	\$ 654,716	\$ 673,057	\$ 691,946	
\$	105.34	\$ 108.19	\$ 111.17	\$ 114.27	\$ 117.49	\$ 120.81	\$ 124.20	\$ 127.68	\$ 131.26	\$ 134.94	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	TRAVERSE CITY																									
2	REQUIRED RECS	RECS	Total	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
3			***																							
4	LOAD - 3 YEAR AVERAGE			328,413	326,380	318,903	318,994	323,518	328,462	331,789																
5	FACTOR			-	-	-	0.10	0.10	0.10	0.10																
6	<b>RECS - REQUIRED</b>		594,781				31,899	32,352	32,846	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	33,179	
7																										
8	RECS - PRE-REP RECS (BASELINE)			778	778	778	778	778	778	778	778	778	778	778	778	778	778	778	778	778	778	778	778	778	778	778
9	RECS - INCREMENTAL DIFFERENCE						31,121	31,574	32,068	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	
10																										
11	FACTOR						0.20	0.33	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
12	<b>RECS - NEW REQUIRED</b>		518,691				6,224	10,419	16,034	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	
13																										
14																										
15	<b>SOURCES</b>			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
16																										
17	<b>EXISTING RENEWABLE SOURCES</b>																									
18	ADDITIONS	RECS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	XXX	RECS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	XXX	RECS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	TOTAL	RECS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22																										
23																										
24																										
25																										
26																										
27	<b>NEW RENEWABLES:</b>																									
28	GRANGER (MPPA)	RECS	-	833	2,195	3,804	7,774	10,837	11,181	10,771	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668
29	NANR (MPPA)	RECS	-	-	-	1,838	3,983	4,902	5,667	5,794	5,717	5,640	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615
30	STONEY CORNERS - wind	RECS		9,988	29,700	29,700	29,000	29,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000
31		RECS																								
32		RECS																								
33		RECS																								
34		RECS																								
35																										
36	TOTAL NEW RENEWABLES	RECS	-	10,821	31,895	35,342	40,757	42,739	43,848	43,565	43,386	43,309	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283
37	TOTAL OTHER RENEWABLES (without Granger and NANR)		-	9,988	29,700	29,700	29,000	29,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000
38	LESS PURCHASES/(SALES) by City		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	<b>TOTAL SOURCES</b>		811,775	-	10,821	31,895	35,342	40,757	42,739	43,848	43,565	43,386	43,309	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283	43,283
40																										
41																										
42																										
43																										
44																										
45	<b>USES</b>		<b>TOTAL</b>																							
46	EXISTING SITE - 2009	RECS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	EXISTING SITE - 2010	RECS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	EXISTING SITE - 2011	RECS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49																										
50	GRANGER SITES - 2010	RECS	833			833																				
51	GRANGER SITES - 2011	RECS	2,195			2,195																				
52	GRANGER SITES - 2012	RECS	3,804			3,196	607																			
53	GRANGER SITES - 2013	RECS	7,774				7,774																			
54	GRANGER SITES - 2014	RECS	10,837					10,837																		
55	GRANGER SITES - 2015	RECS	11,181						11,181																	
56	GRANGER SITES - 2016	RECS	10,771							10,771																
57	GRANGER SITES - 2017	RECS	10,668								10,668															
58	GRANGER SITES - 2018	RECS	10,668									10,668														
59	GRANGER SITES - 2019	RECS	10,668										10,668													
60	GRANGER SITES - 2020	RECS	10,668											10,668												
61	GRANGER SITES - 2021	RECS	10,668												10,668											
62	GRANGER SITES - 2022	RECS	10,668													10,668										
63	GRANGER SITES - 2023	RECS	10,668														10,668									
64	GRANGER SITES - 2024	RECS	10,668															10,668								
65	GRANGER SITES - 2025	RECS	10,668																10,668							
66	GRANGER SITES - 2026	RECS	10,668			</																				



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
98	OTHER RENEWABLES - 2010	RECS	-				-	-	-																	
99	OTHER RENEWABLES - 2011	RECS	-				-	-	-																	
100	OTHER RENEWABLES - 2012	RECS	12,064				-	-	-	12,064																
101	OTHER RENEWABLES - 2013	RECS	15,836				-	-	-		15,836															
102	OTHER RENEWABLES - 2014	RECS	16,015				-	-	-			16,015														
103	OTHER RENEWABLES - 2015	RECS	16,092				-	-	-				16,092													
104	OTHER RENEWABLES - 2016	RECS	16,118				-	-	-					16,118												
105	OTHER RENEWABLES - 2017	RECS	16,118				-	-	-						16,118											
106	OTHER RENEWABLES - 2018	RECS	16,118				-	-	-							16,118										
107	OTHER RENEWABLES - 2019	RECS	16,118				-	-	-								16,118									
108	OTHER RENEWABLES - 2020	RECS	16,118				-	-	-									16,118								
109	OTHER RENEWABLES - 2021	RECS	16,118				-	-	-										16,118							
110	OTHER RENEWABLES - 2022	RECS	16,118				-	-	-											16,118						
111	OTHER RENEWABLES - 2023	RECS	16,118				-	-	-												16,118					
112	OTHER RENEWABLES - 2024	RECS	16,118				-	-	-													16,118				
113	OTHER RENEWABLES - 2025	RECS	16,118				-	-	-														16,118			
114	OTHER RENEWABLES - 2026	RECS	16,118				-	-	-															16,118		
115	OTHER RENEWABLES - 2027	RECS	-																							
116	OTHER RENEWABLES - 2028	RECS	-																							
117	OTHER RENEWABLES - 2029	RECS	-																							
118	TOTAL USES	RECS	237,305	-	-	-	-	-	-	12,064	15,836	16,015	16,092	16,118	16,118	16,118	16,118	16,118	16,118	16,118	16,118	16,118	16,118	16,118	16,118	
119																										
120																										
121																										
122																										
123	RECS - NEW REQUIRED						6,224	10,419	16,034	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	
124	RECS - NEW SOURCES						6,224	10,419	16,034	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	32,401	
125	DIFFERENCE						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
126																										
127	EXPIRING		TOTAL	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
128	EXISTING	RECS	-																							
129	GRANGER SITES - 2010	RECS	-																							
130	GRANGER SITES - 2011	RECS	-																							
131	GRANGER SITES - 2012	RECS	-																							
132	GRANGER SITES - 2013	RECS	-																							
133	GRANGER SITES - 2014	RECS	-																							
134	GRANGER SITES - 2015	RECS	-																							
135	GRANGER SITES - 2016	RECS	-																							
136	GRANGER SITES - 2017	RECS	-																							
137	GRANGER SITES - 2018	RECS	-																							
138	GRANGER SITES - 2019	RECS	-																							
139	GRANGER SITES - 2020	RECS	-																							
140	GRANGER SITES - 2021	RECS	-																							
141	GRANGER SITES - 2022	RECS	-																							
142	GRANGER SITES - 2023	RECS	-																							
143	GRANGER SITES - 2024	RECS	-																							
144	GRANGER SITES - 2025	RECS	-																							
145	GRANGER SITES - 2026	RECS	-																							
146	GRANGER SITES - 2027	RECS	-																							
147	GRANGER SITES - 2028	RECS	-																							
148	GRANGER SITES - 2029	RECS	-																							
149	TOTAL EXPIRING	RECS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
150																										
151	NANR - 2010	RECS	-																							
152	NANR - 2011	RECS	-																							
153	NANR - 2012	RECS	-																							
154	NANR - 2013	RECS	-																							
155	NANR - 2014	RECS	-																							
156	NANR - 2015	RECS	-																							
157	NANR - 2016	RECS	-																							
158	NANR - 2017	RECS	-																							
159	NANR - 2018	RECS	-																							
160	NANR - 2019	RECS	-																							
161	NANR - 2020	RECS	-																							
162	NANR - 2021	RECS	-																							
163	NANR - 2022	RECS	-																							
164	NANR - 2023	RECS	-																							
165	NANR - 2024	RECS	-																							
166	NANR - 2025	RECS	-																							
167	NANR - 2026	RECS	-																							
168	NANR - 2027	RECS	-																							
169	NANR - 2028	RECS	-																							
170	NANR - 2029	RECS	-																							
171	TOTAL EXPIRING	RECS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
172																										
173	OTHER RENEWABLES - 2010	RECS	9,988					9,988																		
174	OTHER RENEWABLES - 2011	RECS	29,700						29,700																	
175	OTHER RENEWABLES - 2012	RECS	17,636							17,636																
176	OTHER RENEWABLES - 2013	RECS	13,164								13,164															
177	OTHER RENEWABLES - 2014	RECS	10,985									10,985														
178	OTHER RENEWABLES - 2015	RECS	10,908										10,908													
179	OTHER RENEWABLES - 2016	RECS	10,882											10,882												
180	OTHER RENEWABLES - 2017	RECS	10,882												10,882											
181	OTHER RENEWABLES - 2018	RECS	10,882													10,882										
182	OTHER RENEWABLES - 2019	RECS	10,882														10,882									
183	OTHER RENEWABLES - 2020	RECS	10,882															10,882								
184	OTHER RENEWABLES - 2021	RECS	10,882																10,882							
185	OTHER RENEWABLES - 2022	RECS	10,882																	10,882						
186	OTHER RENEWABLES - 2023	RECS	10,882		</																					

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
195	<b>REC TRACKING</b>																									
196																										
197	<b>EXISTING</b>																									
198	Carryover Start				-	778	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	
199	New RECs				778	778	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
200	Use				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
201	Purchase/(Sell)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
202	Carryover End				778	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	1,556	
203																										
204	<b>GRANGER</b>																									
205	Carryover Start				-	833	3,028	607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
206	New RECs				833	2,195	3,804	7,774	10,837	11,181	10,771	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	
207	Use				-	-	(6,224)	(8,381)	(10,837)	(11,181)	(10,771)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	(10,668)	
208	Purchase/(Sell)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
209	Carryover End				833	3,028	607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
210																										
211	<b>NANR</b>																									
212	Carryover Start				-	-	-	(1,962)	(3,817)	(7,912)	(15,200)	(19,000)	(22,800)	(26,600)	(30,400)	(34,200)	(38,000)	(41,800)	(45,600)	(49,400)	(53,200)	(57,000)	(60,800)	(64,600)		
213	New RECs				-	-	-	1,838	3,983	4,902	5,667	5,794	5,717	5,640	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	
214	Use				-	-	-	(2,038)	(5,197)	(9,156)	(15,836)	(16,015)	(16,092)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	
215	Purchase/(Sell)				-	-	-	(9,988)	(29,700)	(17,636)	(13,164)	(10,985)	(10,908)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	
216	Carryover End				-	-	-	1,838	(17)	(4,112)	(11,400)	(15,200)	(19,000)	(22,800)	(26,600)	(30,400)	(34,200)	(38,000)	(41,800)	(45,600)	(49,400)	(53,200)	(57,000)	(60,800)	(64,600)	
217																										
218	<b>OTHER RENEWABLES</b>																									
219	Carryover Start				-	-	9,988	39,688	69,388	88,400	85,700	83,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	
220	New RECs				-	-	9,988	29,700	29,700	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	
221	Use				-	-	-	-	-	(12,064)	(15,836)	(16,015)	(16,092)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	(16,118)	
222	Purchase/(Sell)				-	-	-	(9,988)	(29,700)	(17,636)	(13,164)	(10,985)	(10,908)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	(10,882)	
223	Carryover End				-	-	-	9,988	39,688	69,388	88,400	85,700	83,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	
224																										
225	Total Carryover				11,599	44,272	73,390	89,939	83,144	73,156	67,356	63,556	59,756	55,956	52,156	48,356	44,556	40,756	36,956	33,156	29,356	25,556	21,756	17,956		
226	Sales from Carryover (a)				(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)	
227	Percent of Requirements carried over					51%		686%	653%	528%	240%	209%	191%	180%	168%	156%	144%	133%	121%	109%	98%	86%	74%	62%	51%	
228																										
229	<b>PURCHASE / (SELL) OF RECS</b>				<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	
230																										
231	REC PRICE - MICHIGAN	\$ / MWH			\$ 7.00	\$ 7.21	\$ 7.43	\$ 7.65	\$ 7.88	\$ 8.11	\$ 8.36	\$ 8.61	\$ 8.87	\$ 9.13	\$ 9.41	\$ 9.69	\$ 9.98	\$ 10.28	\$ 10.59	\$ 10.91	\$ 11.23	\$ 11.57	\$ 11.92	\$ 12.27	\$ 12.64	
232	REC PRICE - ESCALATOR				1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	
233																										
234	BUY	RECS																								
235	EXISTING	RECS																								
236	TOTAL PURCHASE/(SELL) - 2010	RECS	(13,788)			(3,800)	(9,988)																			
237	TOTAL PURCHASE/(SELL) - 2011	RECS	(33,500)				(3,800)	(29,700)																		
238	TOTAL PURCHASE/(SELL) - 2012	RECS	(21,436)					(3,800)	(17,636)																	
239	TOTAL PURCHASE/(SELL) - 2013	RECS	(16,964)						(3,800)	(13,164)																
240	TOTAL PURCHASE/(SELL) - 2014	RECS	(14,785)							(3,800)	(10,985)															
241	TOTAL PURCHASE/(SELL) - 2015	RECS	(14,708)								(3,800)	(10,908)														
242	TOTAL PURCHASE/(SELL) - 2016	RECS	(14,682)									(3,800)	(10,882)													
243	TOTAL PURCHASE/(SELL) - 2017	RECS	(14,682)										(3,800)	(10,882)												
244	TOTAL PURCHASE/(SELL) - 2018	RECS	(14,682)											(3,800)	(10,882)											
245	TOTAL PURCHASE/(SELL) - 2019	RECS	(14,682)												0	(3,800)	(10,882)									
246	TOTAL PURCHASE/(SELL) - 2020	RECS	(14,682)													0	(3,800)	(10,882)								
247	TOTAL PURCHASE/(SELL) - 2021	RECS	(14,682)														0	(3,800)	(10,882)							
248	TOTAL PURCHASE/(SELL) - 2022	RECS	(14,682)															0	(3,800)	(10,882)						
249	TOTAL PURCHASE/(SELL) - 2023	RECS	(14,682)																0	(3,800)	(10,882)					
250	TOTAL PURCHASE/(SELL) - 2024	RECS	(14,682)																	0	(3,800)	(10,882)				
251	TOTAL PURCHASE/(SELL) - 2025	RECS	(14,682)																		0	(3,800)	(10,882)			
252	TOTAL PURCHASE/(SELL) - 2026	RECS	(14,682)																			0	(3,800)	(10,882)	(10,882)	
253	TOTAL PURCHASE/(SELL) - 2027	RECS	(3,800)																				0	(3,800)	(3,800)	
254	TOTAL PURCHASE/(SELL) - 20																									