

AVOIDED COST SUMMARY

NorthWestern Energy - South Dakota

Avoided Energy Costs for Various Levels of Purchase from Qualifying Facilities

Dollars Per MWH

LEVEL OF PURCHASE	Year	2008			2008		
		SUMMER (JUN-SEPT)			WINTER (JAN-MAY,OCT-DEC)		
MW	On-Peak	Off-Peak	Season	On-Peak	Off-Peak	Season	
0	\$54.70	\$21.16	\$40.56				
5	53.05	20.96	39.53				
10	51.13	20.43	38.13				
15	49.22	19.95	36.77				
20	47.44	19.62	35.57				
25	45.84	19.33	34.48				
30	44.27	19.06	33.43				

LEVEL OF PURCHASE	Year	2009			2009		
		SUMMER (JUN-SEPT)			WINTER (JAN-MAY,OCT-DEC)		
MW	On-Peak	Off-Peak	Season	On-Peak	Off-Peak	Season	
0	\$38.58	\$19.22	\$30.39				
5	37.84	19.17	29.95				
10	37.03	19.07	29.44				
15	36.24	18.97	28.93				
20	35.44	18.85	28.41				
25	34.70	18.72	27.92				
30	33.99	18.60	27.45				

LEVEL OF PURCHASE	Year	2010 ACTUAL			2010 ACTUAL		
		SUMMER (JUN-SEPT)			WINTER (JAN-MAY,OCT-DEC)		
MW	On-Peak	Off-Peak	Season	On-Peak	Off-Peak	Season	
0	\$31.84	\$19.47	\$26.69	\$32.21	\$19.58	\$26.80	
5	31.49	19.42	26.46	31.65	19.53	26.44	
10	30.99	19.35	26.13	30.93	19.46	25.99	
15	30.46	19.26	25.76	30.18	19.39	25.53	
20	29.92	19.20	25.41	29.41	19.33	25.06	
25	29.36	19.16	25.06	28.65	19.28	24.61	
30	\$28.81	\$19.12	\$24.73	27.92	19.22	24.17	

LEVEL OF PURCHASE	Year	2011 ACTUAL			2011 YTD		
		SUMMER (JUN-SEPT)			WINTER (JAN-MAY)		
MW	On-Peak	Off-Peak	Season	On-Peak	Off-Peak	Season	
0	\$33.88	\$17.72	\$27.43	\$26.60	\$20.90	\$24.12	
5	33.69	17.83	27.37	\$26.39	\$20.85	\$23.97	
10	33.51	17.92	27.29	\$26.16	\$20.82	\$23.81	
15	33.32	18.00	27.21	\$25.92	\$20.81	\$23.66	
20	33.14	18.10	27.13	\$25.69	\$20.81	\$23.52	
25	32.95	18.21	27.05	\$25.45	\$20.83	\$23.39	
30	32.75	18.36	26.99	\$25.22	\$20.85	\$23.27	

LEVEL OF PURCHASE	Year	2012 ESTIMATED			2012 ESTIMATED		
		SUMMER (JUN-SEPT)			WINTER (JAN-MAY,OCT-DEC)		
MW	On-Peak	Off-Peak	Season	On-Peak	Off-Peak	Season	
0	\$27.60	\$21.57	\$24.58	\$27.08	\$21.69	\$24.39	

5	\$27.46	\$21.61	\$24.53	\$26.87	\$21.76	\$24.31
10	\$27.28	\$21.67	\$24.47	\$26.62	\$21.84	\$24.23
15	\$27.10	\$21.72	\$24.41	\$26.38	\$21.92	\$24.15
20	\$26.93	\$21.78	\$24.35	\$26.15	\$21.99	\$24.07
25	\$26.77	\$21.83	\$24.30	\$25.94	\$22.06	\$24.00
30	\$26.60	\$21.88	\$24.24	\$25.74	\$22.12	\$23.93

LEVEL OF PURCHASE	Year	2013 ESTIMATED			2013 ESTIMATED		
		SUMMER (JUN-SEPT)			WINTER (JAN-MAY,OCT-DEC)		
MW	On-Peak	Off-Peak	Season	On-Peak	Off-Peak	Season	
0	\$30.12	\$23.36	\$26.74	\$28.97	\$23.19	\$26.08	
5	\$29.93	\$23.39	\$26.66	\$28.72	\$23.25	\$25.98	
10	\$29.71	\$23.42	\$26.57	\$28.43	\$23.31	\$25.87	
15	\$29.48	\$23.46	\$26.47	\$28.15	\$23.38	\$25.76	
20	\$29.26	\$23.49	\$26.38	\$27.89	\$23.43	\$25.66	
25	\$29.05	\$23.52	\$26.29	\$27.64	\$23.49	\$25.57	
30	\$28.84	\$23.55	\$26.20	\$27.42	\$23.54	\$25.48	

LEVEL OF PURCHASE	Year	2014 ESTIMATED			2014 ESTIMATED		
		SUMMER (JUN-SEPT)			WINTER (JAN-MAY,OCT-DEC)		
MW	On-Peak	Off-Peak	Season	On-Peak	Off-Peak	Season	
0	\$31.27	\$24.06	\$27.66	\$30.16	\$23.64	\$26.90	
5	\$31.05	\$24.06	\$27.56	\$29.86	\$23.67	\$26.76	
10	\$30.78	\$24.07	\$27.43	\$29.49	\$23.71	\$26.60	
15	\$30.51	\$24.08	\$27.29	\$29.14	\$23.75	\$26.44	
20	\$30.25	\$24.09	\$27.17	\$28.81	\$23.78	\$26.30	
25	\$29.99	\$24.09	\$27.04	\$28.50	\$23.81	\$26.16	
30	\$29.75	\$24.10	\$26.92	\$28.22	\$23.84	\$26.03	

LEVEL OF PURCHASE	Year	2015 ESTIMATED SUMMER (JUN-SEPT)			2015 ESTIMATED WINTER (JAN-MAY,OCT-DEC)		
		On-Peak	Off-Peak	Season	On-Peak	Off-Peak	Season
MW							
0		\$33.55	\$25.46	\$29.51	\$32.05	\$24.83	\$28.44
5		\$33.27	\$25.43	\$29.35	\$31.65	\$24.80	\$28.22
10		\$32.91	\$25.38	\$29.15	\$31.17	\$24.77	\$27.97
15		\$32.55	\$25.34	\$28.95	\$30.71	\$24.74	\$27.72
20		\$32.21	\$25.30	\$28.75	\$30.28	\$24.71	\$27.50
25		\$31.87	\$25.26	\$28.56	\$29.88	\$24.69	\$27.28
30		\$31.55	\$25.21	\$28.38	\$29.51	\$24.66	\$27.09

LEVEL OF PURCHASE	Year	2016 ESTIMATED SUMMER (JUN-SEPT)			2016 ESTIMATED WINTER (JAN-MAY,OCT-DEC)		
		On-Peak	Off-Peak	Season	On-Peak	Off-Peak	Season
MW							
0		\$34.05	\$25.75	\$29.90	\$32.50	\$25.07	\$28.78
5		\$33.75	\$25.71	\$29.73	\$32.07	\$25.02	\$28.55
10		\$33.37	\$25.65	\$29.51	\$31.55	\$24.97	\$28.26
15		\$32.99	\$25.59	\$29.29	\$31.07	\$24.93	\$28.00
20		\$32.63	\$25.54	\$29.08	\$30.61	\$24.88	\$27.75
25		\$32.27	\$25.48	\$28.88	\$30.18	\$24.84	\$27.51
30		\$31.93	\$25.43	\$28.68	\$29.79	\$24.80	\$27.30

BLEND RATES - PURCHASES VERSUS GENERATION

ACTUAL	FOR SUMMER 2008, % OF "LEVEL" FROM PURCHASES VS GENERATION						
	0	5	10	15	20	25	30
% FROM PURCHASES	29.68%	28.27%	26.32%	24.44%	22.79%	21.30%	19.91%
% FROM GENERATION	70.32%	71.73%	73.68%	75.56%	77.21%	78.70%	80.09%

ACTUAL	FOR SUMMER 2009, % OF "LEVEL" FROM PURCHASES VS GENERATION						
	0	5	10	15	20	25	30
% FROM PURCHASES	38.18%	36.94%	35.52%	34.11%	32.62%	31.12%	29.67%
% FROM GENERATION	61.82%	63.06%	64.48%	65.89%	67.38%	68.88%	70.33%

ACTUAL	FOR SUMMER 2010, % OF "LEVEL" FROM PURCHASES VS GENERATION						
	0	5	10	15	20	25	30
% FROM PURCHASES	39.17%	37.46%	35.30%	33.08%	30.99%	29.05%	27.28%
% FROM GENERATION	60.83%	62.54%	64.70%	66.92%	69.01%	70.95%	72.72%

ACTUAL	FOR SUMMER 2011, % OF "LEVEL" FROM PURCHASES VS GENERATION						
	0	5	10	15	20	25	30
% FROM PURCHASES	81.08%	79.58%	77.85%	76.11%	74.33%	72.45%	70.40%
% FROM GENERATION	18.92%	20.42%	22.15%	23.89%	25.67%	27.55%	29.60%

	FOR SUMMER 2012 THRU 2016 -- ESTIMATED BLEND RATES (4 YR HISTORICAL AVG)						
	0	5	10	15	20	25	30
% FROM PURCHASES	47.03%	45.56%	43.75%	41.94%	40.18%	38.48%	36.82%
% FROM GENERATION	52.97%	54.44%	56.25%	58.06%	59.82%	61.52%	63.18%

ACTUAL	FOR WINTER 2010, % OF "LEVEL" FROM PURCHASES VS GENERATION						
	0	5	10	15	20	25	30
% FROM PURCHASES	42.80%	40.34%	37.41%	34.66%	32.13%	29.84%	27.70%
% FROM GENERATION	57.20%	59.66%	62.59%	65.34%	67.87%	70.16%	72.30%

ACTUAL	FOR WINTER 2011, % OF "LEVEL" FROM PURCHASES VS GENERATION (JAN THRU MAY)						
	0	5	10	15	20	25	30
% FROM PURCHASES	46.91%	44.71%	42.06%	39.51%	37.04%	34.69%	32.57%
% FROM GENERATION	53.09%	55.29%	57.94%	60.49%	62.96%	65.31%	67.43%

	FOR WINTER 2012 THRU 2016 -- ESTIMATED BLEND RATES (2 YR HISTORICAL AVG)						
	0	5	10	15	20	25	30
% FROM PURCHASES	44.85%	42.53%	39.73%	37.08%	34.59%	32.27%	30.13%
% FROM GENERATION	55.15%	57.47%	60.27%	62.92%	65.41%	67.73%	69.87%

NOTABLE INFLUENTIAL LOAD OR SUPPLY FACTORS

80.4 AVERAGE DAILY MAXIMUM TEMPERATURE  
94.99% BIG STONE AVAILABILITY - SUMMER PERIOD

77.2 AVERAGE DAILY MAXIMUM TEMPERATURE  
85.89% BIG STONE AVAILABILITY - SUMMER PERIOD  
MAINTENANCE OUTAGES - MAY AND SEPT.

79.8 AVERAGE DAILY MAXIMUM TEMPERATURE  
95.31% BIG STONE AVAILABILITY - SUMMER PERIOD

HYDRO "DUMP" ENERGY AUG/SEPT  
80.6 AVERAGE DAILY MAXIMUM TEMPERATURE  
74.97% BIG STONE AVAILABILITY - SUMMER PERIOD  
FORCED OUTAGE PART AUGUST  
MAJOR MAINTENANCE OUTAGE; SEPTEMBER  
(CONTINUED THRU OCT AND INTO NOV)  
85.1% YEAR END FORECAST

91.88% BIG STONE AVAILABILITY - WINTER PERIOD  
MAINTENANCE OUTAGE DURING MAY

96.38% BIG STONE AVAILABILITY - WINTER PERIOD THRU MAY  
81.96% ESTIMATED ENTIRE WINTER PERIOD WITH OCT-DEC EST





EXH\_RJG-02

LEC Forecast WITH CARBON			LEC Forecast WITH CARBON	
RESULT	RESULT		<u>RESULT</u>	<u>RESULT</u>
FINAL	FINAL		<u>FINAL</u>	<u>FINAL</u>
HLH PRICE	LLH PRICE	<u>Year</u>	<u>HLH PRICE</u>	<u>LLH PRICE</u>
32.32322	20.02987	2012	9.56%	10.03%
35.41191	22.03954	2013	7.32%	5.27%
38.00563	23.2017	2014	11.43%	11.56%
42.3494	25.88343	2015	2.59%	2.48%
43.44808	26.52415	2016	2.60%	2.60%
44.57705	27.21343	2017	2.60%	2.60%
45.73715	27.92172	2018	2.61%	2.61%
46.92922	28.64953	2019	7.93%	7.92%
50.65122	30.91935	2020	2.49%	2.49%
51.90993	31.68784	2021	2.49%	2.49%
53.20334	32.47752	2022	2.50%	2.50%
54.53242	33.28897	2023	2.50%	2.50%
55.89813	34.12279	2024	6.98%	6.97%
59.79854	36.50155	2025	2.41%	2.41%
61.2406	37.38198	2026	2.42%	2.42%
62.7224	38.28668	2027	2.43%	2.43%
64.24507	39.21632	2028	2.44%	2.44%
65.8097	40.17159	2029	2.44%	2.44%
67.41748	41.1532	2030	2.45%	2.45%
69.06958	42.16187			

<u>MONTH-YR</u>
Oct-11
Nov-11
Dec-11
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Nov-16
Dec-16

PERIOD	ON-PK	OFF PEAK	SEASON
SUMMER 2012	\$32.78	\$19.95	\$26.36
WINTER 2012	\$32.10	\$20.07	\$26.08
SUMMER 2013	\$36.72	\$22.35	\$29.54
WINTER 2013	\$34.76	\$21.88	\$28.32
SUMMER 2014	\$39.17	\$23.84	\$31.50
WINTER 2014	\$37.42	\$22.88	\$30.15
SUMMER 2015	\$43.95	\$26.75	\$35.35
WINTER 2015	\$41.55	\$25.45	\$33.50
SUMMER 2016	\$45.09	\$27.44	\$36.27
WINTER 2016	\$42.63	\$26.07	\$34.35



LEC Forecast

WITH CARBON

RESULT RESULT

FINAL FINAL

HLH PRICE LLH PRICE MONTH AVG

\$32.12	\$18.28	\$25.20
\$31.18	\$20.88	\$26.03
\$34.94	\$25.51	\$30.22
\$34.21	\$22.01	\$28.11
\$31.24	\$19.37	\$25.30
\$31.15	\$17.78	\$24.46
\$25.94	\$12.26	\$19.10
\$22.43	\$16.55	\$19.49
\$35.37	\$21.32	\$28.35
\$41.50	\$22.31	\$31.90
\$31.82	\$19.61	\$25.71
\$35.24	\$20.88	\$28.06
\$33.42	\$19.88	\$26.65
\$30.63	\$22.88	\$26.75
\$36.14	\$28.31	\$32.22
\$36.06	\$24.36	\$30.21
\$32.34	\$22.12	\$27.23
\$35.02	\$19.98	\$27.50
\$29.08	\$13.75	\$21.41
\$25.13	\$18.54	\$21.84
\$39.78	\$23.98	\$31.88
\$46.16	\$24.81	\$35.48
\$35.81	\$22.07	\$28.94
\$39.06	\$23.15	\$31.11
\$37.03	\$21.07	\$29.05
\$33.34	\$22.33	\$27.84
\$39.48	\$28.82	\$34.15

\$39.32	\$25.30	\$32.31
\$35.30	\$21.89	\$28.59
\$37.73	\$21.53	\$29.63
\$31.00	\$14.65	\$22.83
\$26.80	\$19.77	\$23.28
\$42.28	\$25.49	\$33.88
\$49.48	\$26.60	\$38.04
\$38.12	\$23.49	\$30.80
\$41.83	\$24.79	\$33.31
\$39.40	\$22.43	\$30.91
\$35.34	\$23.67	\$29.50
\$44.27	\$32.45	\$38.36
\$44.12	\$28.47	\$36.30
\$39.66	\$24.74	\$32.20
\$42.31	\$24.15	\$33.23
\$34.81	\$16.45	\$25.63
\$30.09	\$22.20	\$26.15
\$47.46	\$28.61	\$38.04
\$55.53	\$29.85	\$42.69
\$42.73	\$26.33	\$34.53
\$45.76	\$27.12	\$36.44
\$42.99	\$24.47	\$33.73
\$38.47	\$25.77	\$32.12
\$45.42	\$33.15	\$39.28
\$45.27	\$29.13	\$37.20
\$40.69	\$25.23	\$32.96
\$43.41	\$24.77	\$34.09
\$35.71	\$16.88	\$26.29
\$30.87	\$22.78	\$26.82
\$48.69	\$29.35	\$39.02
\$56.97	\$30.62	\$43.80
\$43.84	\$27.02	\$35.43
\$46.94	\$27.82	\$37.38
\$44.10	\$25.10	\$34.60
\$39.47	\$26.44	\$32.96

