

NorthWestern Energy
Docket GE12-001
South Dakota Demand Side Management Plan
South Dakota Public Utility Commission (SDPUC)

Data Request May 13, 2014

PUC Nelson - Q1

Quantify the values for the boxes containing question marks in the chart that Commissioner Nelson developed and filed on May 13, 2014 as part the docket. The three boxes for which information is requested are listed below:

Box One: "Value of Energy and Capacity Savings reflected in tariff rate reduction or reduction in tariff rate increase",

Box Two: "Audit Value to Customer", and;

Box Three: "Total Customer Return".
Commissioner Nelson- Item #1 Quantify chart boxes with values.

RESPONSE: (May 23, 2014)

1. Box One -- Value of Energy and Capacity Savings reflected in tariff rate reduction or reduction in tariff rate increase:

A study, specific to NorthWestern's (NWE's) South Dakota service territory, would need to be completed in order to quantify the benefits of DSM to customers. Because the energy savings associated with DSM acquired (measures installed) in any particular year persist for years into the future, such a study would appropriately consider a long-term resource plan without DSM vs. a long-term resource plan with DSM .

It is broadly accepted in the utility industry, and NorthWestern is convinced from its experience in Montana, that cost-effective DSM lowers total long-term resource costs and, as a result, reduces average bills. NorthWestern addressed this very question in its response to Data Request PSC-026 in Docket D2004.6.90. That response more fully describes the effects on long-term resource costs of DSM acquisition at costs below the average portfolio cost (avoided cost). NorthWestern's response in its entirety is provided below.

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PSC-026

Regarding: DSM impacts

Witness: Thomas

(a) Please provide an estimate of portfolio costs with and without the planned DSM acquisition over the planning horizon. Please explain how the estimate is calculated and provide supporting work papers.

(b) Please provide an estimate of residential default supply rates with and without the planned DSM acquisition in the portfolio over the planning horizon, and with and without the lost revenue adjustment.

(c) Please provide an estimate of average residential bills without the planned DSM acquisition in the portfolio over the planning horizon.

(d) Please provide an estimate of average residential bills for: 1) participants and 2) non-participants with the planned DSM acquisition in the portfolio over the planning horizon, with and without the lost revenue adjustment.

(e) Please provide an estimate of the average monthly cost for residential participants in the planned DSM programs, including their monthly bill plus their average monthly amortized contribution to the DSM costs.

RESPONSE:

(a) To determine the effects on portfolio costs of the planned DSM acquisition, GenTrader was run with and without DSM energy savings and associated program costs. These runs do not consider lost revenues related to DSM. Although market prices have increased, the cost and price inputs used in this work are the same as were used in the Portfolio Analysis conducted for NWE's 2004 Electric Resource RFP. For the GenTrader runs without DSM, commodity purchases were substituted for DSM savings. The results are presented on PSC-026 Attachment 1, Table 1. Column E of this table computes the difference in Portfolio costs as follows:

Portfolio P&L costs with DSM
- Portfolio costs without DSM
DSM Contribution Mark-to-Market

A positive DSM Mark-to-Market value indicates a beneficial contribution of DSM to overall Portfolio costs (i.e., DSM reduces overall costs).

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(b) *Example residential default supply rates over the planning horizon with and without the planned DSM acquisition in the portfolio, and with and without lost revenues, are developed and presented in PSC-026 Attachment 1, Table 2, columns Q, R, and S. This analysis assumes that DSM costs are expensed in the year they are incurred, transmission and distribution rates are not trued-up for lost revenues, and that all non-default supply charges remain the same throughout the study period.*

(c) *An estimate of typical residential bills without the planned DSM acquisition in the portfolio is presented in PSC-026 Attachment 1, Table 5, columns L and M, based on results from this modeling described in the response to part (a) above.*

(d) *Attachment 1, Table 6, columns O, P, R, and S presents the calculation of typical monthly bills for both participants and non-participants, using residential supply rates with DSM, and with DSM and Lost Revenues, that were developed in Table 2. At the end of the planning horizon, default supply loads are 9.85% lower with DSM than without DSM (refer to Table 2, column C and D line 26). Therefore, a simplifying assumption is made that participants reduce their typical monthly consumption by 9.85% on average. This is reflected in column Q where participants' monthly consumption is 676 kWh versus non-participants' monthly consumption of 750 kWh in column N. NWE's DSM goals are based on broad participation throughout its default supply customer base, and NWE anticipates that by the end of the planning horizon there will be a relatively small number of non-participants.*

(e) *For participants, customer costs include their bills, plus their investment in the DSM measures. Average monthly bills for Participants (with DSM and with DSM & LR) are provided in Table 6, columns R and S. The average customer cost is estimated to be \$0.00577/kWh saved (refer to response to PSC-025 b). The average residential energy savings is 750 kWh/month – 676 kWh/month = 74 kWh/month (refer to Table 6, columns N and Q. Therefore, the customer contribution is computed as (74 kWh x \$0.00577) = \$0.43/month.*

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Table 1: GenTrader Model Results for DSM Using 2004/2005 RFP Resource & Portfolio Analysis and Estimated Annual Program Costs

Calendar Year	Portfolio 19 P&L with DSM (\$)	Portfolio 20 P&L without DSM (\$)	DSM Contribution (Mark-to-Market P&L) (\$)	DSM Energy Savings (MWH)	DSM Energy Savings (aMW)	DSM Program Cost Input (\$)	DSM Program Cost Input (\$/MWH)	Default Supply Load incl Losses (MWH)
2005	-230,988,704	-228,737,456	-2,251,248	7,707	0.9	2,633,321	341.68	6,108,221
2006	-244,425,152	-241,581,920	-2,843,232	32,622	3.7	4,769,635	146.21	6,196,042
2007	-259,604,768	-255,448,896	-4,155,872	70,177	8.0	7,391,403	105.33	6,265,827
2008	-309,667,232	-308,361,760	-1,305,472	113,414	12.9	7,391,403	65.17	6,337,157
2009	-310,511,872	-311,540,000	1,028,128	156,742	17.9	7,391,403	47.16	6,408,876
2010	-248,309,344	-248,978,336	668,992	200,749	22.9	7,391,403	36.82	6,481,210
2011	-212,308,960	-212,843,152	534,192	245,058	28.0	7,391,403	30.16	6,555,092
2012	-253,703,696	-257,922,800	4,219,104	289,640	33.1	7,391,403	25.52	6,676,031
2013	-254,941,344	-260,957,360	6,016,016	332,716	38.0	7,391,403	22.22	6,703,345
2014	-315,644,576	-326,747,008	11,102,432	376,848	43.0	8,504,257	22.57	6,777,193
2015	-329,683,488	-342,859,296	13,175,808	420,438	48.0	9,617,111	22.87	6,850,859
2016	-276,481,120	-286,887,776	10,406,656	465,958	53.2	9,617,111	20.64	6,926,599
2017	-237,273,280	-245,357,152	8,083,872	508,023	58.0	9,617,111	18.93	7,001,428
2018	-241,554,576	-251,442,160	9,887,584	551,939	63.0	9,617,111	17.42	7,076,571
2019	-311,315,776	-329,014,912	17,699,136	595,660	68.0	11,137,579	18.70	7,151,429
2020	-326,643,584	-346,517,344	19,873,760	641,595	73.2	12,658,046	19.73	7,227,236
2021	-439,758,336	-476,474,848	36,716,512	683,372	78.0	12,658,046	18.52	7,303,401
2022	-280,566,624	-297,615,520	17,048,896	726,849	83.0	12,658,046	17.41	7,380,357
Total	-5,083,382,432	-5,229,287,696	145,905,264					

Notes:

Energy savings from DSM is treated in the GenTrader model as hourly purchases for Default Supply

The mark-to-market values are hourly calculations for the period 2005-2022

All Dollar values are nominal

Commodity Trends Forward Electric Price Strip (2005-2022)

All Years are Calendar Years

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Table 2: Derivation of Default Supply Base Electric Rates
Data Response to PSC-026 b

Year	Calendar Year	Without DSM			With DSM			Cumulative All Classes DSM KWH	Without DSM			With DSM			All Classes Default Supply Rates (\$/KWH)			Residential Default Supply Rates (\$/KWH)		
		All Classes			All Classes				All Classes Portion of Portfolio			All Classes Portion of Portfolio			Without DSM			With DSM		
		Load (incl. losses) KWH	Load (incl. losses) KWH	Total Incremental DSM MWH	% All Classes DSM	Incremental All Classes DSM KWH	Cost		Cost	Cost	Without DSM W/DSM	With DSM DSM & LR	Without DSM	With DSM	With DSM & LR	Without DSM	With DSM	With DSM & LR		
1	2005	6,108,221,000	6,100,514,000	7,707	100%	7,707,000	7,707,000	\$ 228,737,456	\$ 230,988,704	\$ 231,583,845	\$ 0.037447	\$ 0.037864	\$ 0.037961	\$ 0.040634	\$ 0.041086	\$ 0.041192				
2	2006	6,196,042,000	6,163,420,000	24,915	100%	24,915,000	32,622,000	241,581,920	244,425,152	245,789,654	0.038990	0.039657	0.039879	0.042308	0.043032	0.043272				
3	2007	6,265,827,000	6,195,650,000	37,555	100%	37,555,000	70,177,000	255,448,896	259,604,768	261,918,225	0.040769	0.041901	0.042275	0.044238	0.045467	0.045872				
4	2008	6,337,157,000	6,223,743,000	43,237	100%	43,237,000	113,414,000	308,361,760	309,667,232	312,983,914	0.048659	0.049756	0.050289	0.052800	0.053990	0.054568				
5	2009	6,408,876,000	6,252,134,000	43,328	100%	43,328,000	156,742,000	311,540,000	310,511,872	314,819,376	0.048611	0.049665	0.050354	0.052747	0.053891	0.054639				
6	2010	6,481,210,000	6,280,461,000	44,007	100%	44,007,000	200,749,000	248,978,336	248,309,344	253,596,365	0.038415	0.039537	0.040379	0.041685	0.042901	0.043815				
7	2011	6,555,092,000	6,310,034,000	44,309	100%	44,309,000	245,058,000	212,843,152	212,308,960	218,565,943	0.032470	0.033646	0.034638	0.035233	0.036510	0.037586				
8	2012	6,676,031,000	6,386,391,000	44,582	100%	44,582,000	289,640,000	257,922,800	253,703,696	260,922,684	0.038634	0.039726	0.040856	0.041922	0.043106	0.044333				
9	2013	6,703,345,000	6,370,629,000	43,076	100%	43,076,000	332,716,000	260,957,360	254,941,344	263,115,530	0.038929	0.040018	0.041301	0.042242	0.043424	0.044816				
10	2014	6,777,193,000	6,400,345,000	44,132	100%	44,132,000	376,848,000	326,747,008	315,644,576	324,768,088	0.048213	0.049517	0.050742	0.052316	0.053514	0.055060				
11	2015	6,850,859,000	6,430,421,000	43,590	100%	43,590,000	420,438,000	342,859,296	329,683,488	339,751,392	0.050046	0.051269	0.052835	0.054305	0.055632	0.057331				
12	2016	6,926,599,000	6,460,641,000	45,520	100%	45,520,000	465,958,000	286,887,776	276,481,120	287,489,346	0.041418	0.042795	0.044499	0.044943	0.046437	0.048285				
13	2017	7,001,428,000	6,493,405,000	42,065	100%	42,065,000	508,023,000	245,357,152	237,273,280	249,218,444	0.035044	0.036541	0.038380	0.038026	0.039650	0.041646				
14	2018	7,076,571,000	6,524,632,000	43,916	100%	43,916,000	551,939,000	251,442,160	241,554,576	254,433,820	0.035532	0.037022	0.038996	0.038555	0.040173	0.042314				
15	2019	7,151,429,000	6,555,769,000	43,721	100%	43,721,000	595,660,000	329,014,912	311,315,776	325,126,653	0.046007	0.047487	0.049594	0.049922	0.051528	0.053814				
16	2020	7,227,236,000	6,585,641,000	45,935	100%	45,935,000	641,595,000	346,517,344	326,643,584	341,383,977	0.047946	0.049599	0.051838	0.052026	0.053820	0.056249				
17	2021	7,303,401,000	6,620,029,000	41,777	100%	41,777,000	683,372,000	476,474,848	439,758,336	455,426,392	0.065240	0.066428	0.068795	0.070792	0.072082	0.074650				
18	2022	7,380,357,000	6,653,508,000	43,477	100%	43,477,000	726,849,000	297,615,520	280,566,624	297,160,712	0.040325	0.042168	0.044662	0.043757	0.045757	0.048463				

9.85%

Supporting inputs to Table 2

Table 3: All Classes Lost Revenues (\$)		
Tracker Year	Cumulative	Incremental
2004-05	\$ 269,953	\$ 269,953
2005-06	\$ 920,328	\$ 650,375
2006-07	\$ 1,808,676	\$ 888,348
2007-08	\$ 2,818,238	\$ 1,009,562
2008-09	\$ 3,815,126	\$ 996,888
2009-10	\$ 4,799,883	\$ 984,757
2010-11	\$ 5,774,160	\$ 974,277
2011-12	\$ 6,739,806	\$ 965,646
2012-13	\$ 7,698,171	\$ 958,365
2013-14	\$ 8,650,201	\$ 952,030
2014-15	\$ 9,596,823	\$ 946,623
2015-16	\$ 10,538,985	\$ 942,162
2016-17	\$ 11,477,467	\$ 938,482
2017-18	\$ 12,412,861	\$ 935,394
2018-19	\$ 13,345,627	\$ 932,766
2019-20	\$ 14,276,128	\$ 930,501
2020-21	\$ 15,204,658	\$ 928,530
2021-22	\$ 16,131,455	\$ 926,798
2022-23	\$ 17,056,720	\$ 925,265
2023-24	\$ 17,980,617	\$ 923,897

Note: above values referenced from Tab 7. Calc Lost Revenues

Supporting data						
Northwestern Energy Default Supply Derivation of Rates Default Supply Base Rates - Prior to Cap Adjustment						
Exhibit (CAH-3) Updated Filing 6-17-04 Page 1 of 3						
Loss Factor	7/1/04 to 6/30/05 Default Supply Retail kWh Sales	7/15/04 to 6/30/05 Retail kWh Sales Adjusted for Employee Discount	7/15/04 to 6/30/05 Retail kWh Sales Weighted by Losses	Default Supply Base Rate After Losses kWh Charges	Default Supply Revenue/Cost Check	
Residential	8.5100%	2,057,294,206	2,057,294,206	2,232,369,943	\$ 0.041250	\$ 84,863,386
Residential Employee	8.5100%	5,983,408	3,590,045	3,895,557	\$ 0.024750	\$ 148,089
GS 1 Secondary NonDemand	8.5100%	292,902,396	292,902,396	317,828,390	\$ 0.041250	\$ 12,082,224
GS 1 Secondary Demand	8.5100%	2,345,857,927	2,345,857,927	2,545,490,436	\$ 0.041250	\$ 96,766,639
GS 1 Primary NonDemand	5.5400%	695,566	695,566	734,100	\$ 0.040121	\$ 27,907
GS 1 Primary Demand	5.5400%	301,724,391	301,724,391	318,439,923	\$ 0.040121	\$ 12,105,484
General Service Substation	4.6300%	278,679,506	278,679,506	291,582,368	\$ 0.039775	\$ 11,084,477
General Service Transmission	4.0000%	96,299,632	96,299,632	100,151,617	\$ 0.039536	\$ 3,807,302
Irrigation	8.5100%	95,536,037	95,536,037	103,666,153	\$ 0.041250	\$ 3,940,862
Lighting	8.5100%	63,222,104	63,222,104	68,602,305	\$ 0.041250	\$ 2,607,912
MPSC System Average	7.4708%	5,538,195,173	5,535,801,810	5,982,760,793	\$ 0.041084	\$ 227,434,283
YNP Contract		19,247,000				\$ (94)
Total Default Supply Load		5,557,442,173				\$ 227,434,189
Default Supply Costs				\$ 228,199,315		
less: YNP Contract Revenues				\$ (765,126)		
MPSC Default Supply Rate Design Revenues				\$ 227,434,189		
Total Default Supply Rate Before Losses				\$ 0.038015		
YNP Contract Load				19,247,000		
YNP May04-Apr05 Contract Supply Rate				0.039753		
YNP Default Supply Revenue				\$ 765,126		

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Table 5: Estimated Residential Bills Without Planned DSM
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											Without DSM	
Year	Calendar Year	Average Monthly Usage kwh	Supply Energy ¹ per kwh	Supply Deferred Costs per kwh	Transmission Energy ² per kwh	Distribution Energy ² per kwh	BPA Credit Exchange ² per kwh	CTC-QF ² per kwh	USBC ² per kwh	Distribution Service Charge ² per month	Monthly Bill	Annual Bill
1	2005	750	0.040634	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$62.49	\$749.89
2	2006	750	0.042308	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$63.75	\$764.95
3	2007	750	0.044238	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$65.19	\$782.32
4	2008	750	0.052800	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$71.62	\$859.38
5	2009	750	0.052747	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$71.58	\$858.91
6	2010	750	0.041685	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$63.28	\$759.34
7	2011	750	0.035233	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$58.44	\$701.28
8	2012	750	0.041922	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$63.46	\$761.48
9	2013	750	0.042242	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$63.70	\$764.36
10	2014	750	0.052316	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$71.25	\$855.02
11	2015	750	0.054305	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$72.74	\$872.93
12	2016	750	0.044943	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$65.72	\$788.67
13	2017	750	0.038026	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$60.53	\$726.41
14	2018	750	0.038555	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$60.93	\$731.18
15	2019	750	0.049922	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$69.46	\$833.48
16	2020	750	0.052026	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$71.03	\$852.42
17	2021	750	0.070792	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$85.11	\$1,021.31
18	2022	750	0.043757	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$64.83	\$777.99

Notes:

1. Residential energy supply rates without planned DSM (from PSC-026 Attachment 1, Table 2, Column Q, lines 9-26)
2. Default Supply rates as of July 1, 2005

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Table 6: Estimated Average Residential Bills; Participants and Non-Participants

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All Residential Customers -- Without DSM													Non-Participants			Participants		
Year	Calendar Year	Average Monthly Usage kwh	Supply Energy ¹ per kwh	Supply Deferred Costs per kwh	Transmission Energy ² per kwh	Distribution Energy ² per kwh	BPA Credit Exchange ² per kwh	CTC-QF ² per kwh	USBC ² per kwh	Distribution Service Charge ² per month	Monthly Bill	Annual Bill	Average Monthly Usage kwh	Monthly Bill		Average Monthly Usage kwh	Monthly Bill	
														With DSM	With DSM & LR		With DSM	With DSM & LR
1	2005	750	0.040634	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$62.49	\$749.89	750	\$ 62.83	\$ 62.91	676	\$ 57.10	\$ 57.17
2	2006	750	0.042308	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$63.75	\$764.95	750	\$ 64.29	\$ 64.47	676	\$ 58.41	\$ 58.57
3	2007	750	0.044238	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$65.19	\$782.32	750	\$ 66.12	\$ 66.42	676	\$ 60.06	\$ 60.33
4	2008	750	0.052800	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$71.62	\$859.38	750	\$ 72.51	\$ 72.94	676	\$ 65.82	\$ 66.21
5	2009	750	0.052747	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$71.58	\$858.91	750	\$ 72.43	\$ 72.99	676	\$ 65.75	\$ 66.26
6	2010	750	0.041685	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$63.28	\$759.34	750	\$ 64.19	\$ 64.88	676	\$ 58.32	\$ 58.94
7	2011	750	0.035233	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$58.44	\$701.28	750	\$ 59.40	\$ 60.20	676	\$ 54.00	\$ 54.73
8	2012	750	0.041922	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$63.46	\$761.48	750	\$ 64.34	\$ 65.26	676	\$ 58.46	\$ 59.29
9	2013	750	0.042242	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$63.70	\$764.36	750	\$ 64.58	\$ 65.63	676	\$ 58.68	\$ 59.62
10	2014	750	0.052316	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$71.25	\$855.02	750	\$ 72.15	\$ 73.31	676	\$ 65.50	\$ 66.54
11	2015	750	0.054305	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$72.74	\$872.93	750	\$ 73.74	\$ 75.01	676	\$ 66.93	\$ 68.08
12	2016	750	0.044943	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$65.72	\$788.67	750	\$ 66.84	\$ 68.23	676	\$ 60.71	\$ 61.96
13	2017	750	0.038026	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$60.53	\$726.41	750	\$ 61.75	\$ 63.25	676	\$ 56.13	\$ 57.47
14	2018	750	0.038555	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$60.93	\$731.18	750	\$ 62.14	\$ 63.75	676	\$ 56.48	\$ 57.93
15	2019	750	0.049922	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$69.46	\$833.48	750	\$ 70.66	\$ 72.38	676	\$ 64.16	\$ 65.70
16	2020	750	0.052026	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$71.03	\$852.42	750	\$ 72.38	\$ 74.20	676	\$ 65.71	\$ 67.35
17	2021	750	0.070792	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$85.11	\$1,021.31	750	\$ 86.08	\$ 88.00	676	\$ 78.05	\$ 79.79
18	2022	750	0.043757	\$0.000000	\$0.008124	\$0.025288	-\$0.001550	\$0.003344	\$0.001334	\$4.61	\$64.83	\$777.99	750	\$ 66.33	\$ 68.36	676	\$ 60.25	\$ 62.08

Notes:

1. Residential energy supply rates without planned DSM (from PSC-026 Attachment 1, Table 2, Column Q, lines 9-26)
2. Default Supply rates as of July 1, 2005

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As demonstrated in the response to Data Request PSC-026 in Docket D2004.6.90 and the Impact and Process Evaluation of NorthWestern Energy 2007-2011 Demand Side Management Programs in Montana, customers as a whole are better off because DSM can be acquired at less cost than other traditional forms of energy supply. Additional benefits accrue to DSM program participants because in addition to reduced long-term energy supply costs, they realize energy savings by adopting cost-effective DSM measures in their homes and businesses and, therefore, reduced monthly energy bills.

Beyond the value of the bill savings, in certain instances, adopted measures renew/improve facility infrastructure and can add significant value to participants' facilities.

The response to Data Request PSC-026 further illustrates why NorthWestern believes it is important to offer a suite of programs and measures that enable participation by as many customers as possible.

2. Box Two -- Audit Value to Customer:

Energy audits provide both quantitative and qualitative benefits to customers. An important aspect to the customer(s) value from the home energy audit is that it provides them with information on how they can help themselves better manage their energy use. This information comes from a trusted energy expert. Based on an inspection of their specific premises, their audit report is customized to their home and energy usage. There is also a benefit to the customer through one-to-one interaction with their utility. The audit is a gateway for NorthWestern to inform the customer(s) of additional DSM program offerings and other options for managing their energy use.

A discussion of quantitative benefits of the audit is presented in the "Impact and Process Evaluation of NorthWestern Energy 2007-2011 Demand Side Management Programs". Please refer to Section 3- E+ Audit Home or Business, specifically, Section 3.2.3. - Economic Findings beginning on page 68.

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A discussion of qualitative benefits of the audit is presented in the “Impact and Process Evaluation of NorthWestern Energy 2007-2011 Demand Side Management Programs”. Please refer to Section 3- E+ Audit Home or Business, specifically, Section 3.3.3.- Participant Findings beginning on page 74.

3. Box Three -- Total Customer Return:

Please refer to the response to “Value of Energy and Capacity Savings reflected in tariff rate reduction or reduction in tariff rate increase” (above).

Historical operation of DSM programs in Montana has produced long-term benefits that exceed costs. The DSM programs proposed for South Dakota have been tailored to mirror the Montana programs. NorthWestern expects the same results once startup is complete and programs have been established and are operating smoothly. Future evaluation of program results will include process, impact, and economic evaluation to validate these expectations and will be used to make appropriate adjustments.