

TO: COMMISSIONERS AND ADVISORS
FROM: DARREN KEARNEY AND ADAM DEHUECK (STAFF)
SUBJECT: EL15-015 STAFF RECOMMENDATION
DATE: DECEMBER 2, 2015

STAFF MEMORANDUM

1.0 OVERVIEW

On April 30, 2015, Northern States Power Company, dba Xcel Energy (Xcel), filed a Petition with the Commission requesting approval of the company's 2014 Demand Side Management (DSM) Report, proposed DSM plan for 2016, revised DSM Cost Adjustment Factor for 2016 of \$0.000448/kWh, and customer bill message. On October 5, 2015, Xcel filed a second petition requesting that the Commission approve the inclusion of new construction measures to the Business Lighting Efficiency Program and adjust the energy and demand savings goals accordingly.

Provided in this memo is a discussion on Xcel's 2014 DSM plan performance and changes to the company's proposed DSM Plan for 2016. Further, Staff provides a recommendation that the Commission approve Xcel's requests based on the supporting information provided by the company.

2.0 DISCUSSION

2.1 Report on 2014 Activities

2.1.1 Budgeted Expenses vs. Actual Expenses

In 2014, Xcel came in under budget where the company spent \$771,639 of the \$775,041 budget approved by the Commission. Table 1 shows the 2014 approved budgets for each program and the 2014 actual spending for each program. The residential programs came in at 96% of the approved budget and the business programs came in at 103% of the approved budgets.

It should be noted that actual spending on Ground Source Heat Pumps in the residential program was almost twice the approved budget. However, the increase in spending on Ground Source Heat Pumps was offset by a decrease in spending on Home Lighting and Consumer Education in the residential programs. Looking at the business programs, the Business Saver's Switch experienced increased spending as compared to the approved budget and this led to the business programs coming in slightly over budget for the year.

	B	A	V
Ground Source Heat Pump	\$ 11,600	\$ 23,895	206%
Residential Home Lighting	\$ 55,000	\$ 45,143	82%
Residential Saver's Switch	\$181,650	\$181,076	100%
Consumer Education	\$ 28,200	\$ 14,174	50%
Total Residential	\$276,450	\$264,288	96%
Lighting Efficiency	\$446,641	\$440,745	99%
Business Saver's Switch	\$ 30,950	\$ 52,534	170%
Peak and Energy Control	\$ 6,000	\$ 4,431	74%
Total Business	\$483,591	\$497,710	103%
Planning Segment	\$ 15,000	\$ 9,641	64%
All Programs	\$775,041	\$771,639	100%

Xcel charges the same energy efficiency rate to both residential and business customers. Given this, preventing cross subsidization of customer classes is managed through the budget rather than through rates. Since Xcel's 2014 actual spending aligned closely with the 2014 approved budgets, it is Staff's opinion that cross subsidization did not occur during the year.

2.1.2 Results from 2014 Program

Table 2 provides the energy savings, demand savings, and participation results from the 2014 DSM plan as compared to the approved budget. Overall Xcel was either near or exceeded its DSM plan goals for 2014. Based on these results, Staff finds that Xcel's DSM plan was well managed in 2014.

	Energy Savings (Annual kWh)			Demand Savings (kW)			Participation		
	B	A	V	B	A	V	B	A	V
Ground Source Heat Pump	32,383	38,099	118%	6	39	650%	5	19	380%
Residential Home Lighting	966,382	933,888	97%	125	114	91%	6,900	6,352	92%
Residential Saver's Switch	5,637	7,883	140%	668	701	105%	750	689	92%
Consumer Education	0	0	-	0	0	-	68,000	81,842	120%
Total Residential	1,004,402	979,870	98%	799	854	107%	75,655	88,902	118%
Lighting Efficiency	3,453,118	3,428,936	99%	975	898	92%	102	143	140%
Business Saver's Switch	144	834	579%	24	114	475%	20	73	365%
Peak and Energy Control	18,928	43,241	228%	515	785	152%	5	7	140%
Total Business	3,472,190	3,473,011	100%	1,514	1,797	119%	127	223	176%
Planning Segment	-	-	-	-	-	-	-	-	-
All Programs	4,476,592	4,452,881	99%	2,313	2,651	115%	75,782	89,125	118%

2.1.2 Benefit/Cost Test Results

Overall, Xcel's DSM Plan produced excellent benefit/cost test results in 2014. All programs, except for Ground Source Heat Pumps, had Total Resource Cost (TRC) test results greater than 2.0. When the TRC is greater than 1.0, it shows that the DSM programs benefits exceed the programs costs. Therefore, Xcel's programs were cost effective in 2014. Table 3 provides a breakdown of the benefit/cost test results that occurred in 2014. Regarding Ground Source Heat Pumps, the TRC test came in higher

than forecasted. In docket EL13-017, the Commission approved Xcel’s 2014 DSM Plan which had a forecasted TRC test of 0.63 for Ground Source Heat Pumps. It should be noted that the incremental capital costs incurred by participants to install Ground Source Heat Pumps is the factor that drives down the TRC test results for the program.¹

	TRC	Utility	Participant	RIM
Ground Source Heat Pump	0.69	3.72	0.59	1.07
Residential Home Lighting	3.31	9	8.09	0.57
Residential Saver's Switch	4.01	4.01	-	0.98
Consumer Education	-	-	-	-
Total Residential	2.6	4.62	5.97	0.79
Lighting Efficiency	2.09	6.9	3.48	0.72
Business Saver's Switch	2.86	2.86	-	0.97
Peak and Energy Control	102.55	102.55	-	3.32
Total Business	2.38	7.32	3.67	0.8
Planning Segment	-	-	-	-
All Programs	2.42	6.31	4.03	0.8

Another measure to look at the success of DSM programs is to review the program cost per kWh over the lifetime of the program. In 2014, Xcel’s DSM program had a cost of \$0.0108/kWh Lifetime.² This can be compared to the price of energy, which is approximately \$0.025/kWh. Given this, energy savings produced from Xcel’s DSM program is approximately half the cost of energy prices.

2.1.3 Performance Incentive

In its Petition, Xcel requests the Commission approve a performance incentive of \$231,492 for 2014. The incentive is a fixed percentage (30%) of actual program expenses and capped at 30% of the approved budget. The purpose of the incentive is to cover lost margins Xcel incurs as a result of DSM Plan implementation. Staff reviewed Xcel’s 2014 DSM tracker account and determined the incentive was properly calculated.

2.2 DSM Plan for 2016

2.2.1 Proposed Program Changes for 2016

In its original Petition filed on April 30, 2015, Xcel proposed no changes to its DSM Plan in 2016. However, in the Petition filed on October 5, 2015, Xcel requested that the Commission approve the inclusion of new construction measures to the Business Lighting Efficiency program. These new construction measures are provided in Xcel’s response to Staff Data Request 1-8. The effects of the inclusion of the new construction measures are highlighted in Table 4, below. It should be noted that the TRC test result, energy savings, and demand savings for both the Business Lighting Efficiency program

¹ See response to Staff Data Request 1-1, Attachment A, page 4 of 9

² See response to Staff Data Request 1-1, Attachment A, page 5 of 9

and Total Portfolio are expected to increase while the budget remains the same. Given this, Staff has no concerns with the inclusion of new construction measures to the Business Lighting Efficiency program.

Table 4. 2016 DSM Plan Comparison: Without vs. With New Construction Business Lighting Measures								
	TRC Test		Budget		Energy Savings (kWh)		Demand Savings (kW)	
	Without	With	Without	With	Without	With	Without	With
Ground Source Heat Pump	0.94	0.94	\$ 25,050	\$ 25,050	102,398	102,398	19	19
Residential Home Lighting	2.61	2.61	\$ 56,035	\$ 56,035	828,699	828,699	108	108
Residential Saver's Switch	4.05	4.05	\$ 181,650	\$ 181,650	3,954	3,954	502	502
Consumer Education	-	-	\$ 27,165	\$ 27,165	0	0	0	0
Total Residential	2.53	2.53	\$ 289,900	\$ 289,900	935,051	935,051	629	629
Lighting Efficiency	2.24	2.43	\$ 433,191	\$ 433,191	5,177,006	8,367,645	964	1,448
Business Saver's Switch	1.42	1.42	\$ 30,950	\$ 30,950	224	224	30	30
Peak and Energy Control	10.14	10.14	\$ 6,000	\$ 6,000	2,612	2,612	101	101
Total Business	2.25	2.44	\$ 470,141	\$ 470,141	5,179,842	8,370,481	1,095	1,579
Planning Segment	-	-	\$ 15,000	\$ 15,000	-	-	-	-
All Programs	2.3	2.44	\$ 775,041	\$ 775,041	6,114,893	9,305,532	1,724	2,208

2.2.2 Proposed Budget for 2016

The proposed budget for 2016 is provided in Table 4, above. Xcel is proposing no change to its budget for the 2016 DSM Plan. Given this, the proposed budget of \$775,041 is the same as previous budgets approved by the Commission in recent years. It should be noted that the size of the residential and business budgets aligns with the percentage of residential and business sales in relation to total sales. As such, the budget prevents one customer class from subsidizing the other. Finally, a budget flexibility of 10% of the approved budget will also be continued in 2016.

When reviewing the 2015 proposed budget in docket EL14-040, Staff commented that Xcel should increase the Business Lighting Efficiency program budget in 2016 as a result of the program being suspended in 2014 due to high demand.³ However, in response to the high demand, Xcel removed fluorescent lighting from the Business Lighting Efficiency Program for the 2015 DSM Plan. Xcel expects that, as a result of this program modification, demand for the Business Lighting Efficiency program will match the proposed budget.⁴ Based on the above, Staff believes Xcel's proposed budget for 2016 is adequate and is withholding Staff's recommendation to increase the Business Lighting Efficiency budget until results of the 2015 DSM Plan are reviewed.

Finally, the fixed percentage performance incentive approved in docket EL11-013 will be continued in 2016 and the cost of the incentive (capped at \$232,512) is not included in the budget provided in Table 4.

³ Verbal comments made by Staff at December 9, 2014, Commission meeting.

⁴ See Xcel Response to Staff Data Request 1-9.

2.2.3 DSM Cost Adjustment Factor for 2016

Xcel proposes a decrease of the DSM cost adjustment factor in 2016. The current DSM rate is \$0.000510/kWh and the proposed rate for 2016 is \$0.000448/kWh. Staff reviewed the forecasted 2016 DSM tracker account and agrees with Xcel's calculation of the DSM rate for 2016. Table 5 shows the estimated bill impacts that results from the DSM rate change as provided on Xcel's proposed customer bill notice filed on October 5, 2015.

Table 5: Bill Impacts of 2016 DSM Cost Adjustment Factor

Usage (kWh)	Prior Rates				New Rates				Amount of Bill Decrease	Percent Decrease
	Other Rates	Prior DSM Factor	Prior DSM	Prior Bill	Other Rates	New DSM Factor	New DSM	New Bill		
400	\$49.81	0.000510	\$0.20	\$50.01	\$49.81	0.000448	\$0.18	\$49.99	\$0.02	0.05%
500	\$60.20	0.000510	\$0.26	\$60.46	\$60.20	0.000448	\$0.22	\$60.42	\$0.03	0.05%
600	\$70.58	0.000510	\$0.31	\$70.89	\$70.58	0.000448	\$0.27	\$70.85	\$0.04	0.05%
750	\$86.17	0.000510	\$0.38	\$86.55	\$86.17	0.000448	\$0.34	\$86.51	\$0.05	0.05%
1000	\$112.14	0.000510	\$0.51	\$112.65	\$112.14	0.000448	\$0.45	\$112.59	\$0.06	0.06%
2000	\$214.35	0.000510	\$1.02	\$215.37	\$214.35	0.000448	\$0.90	\$215.25	\$0.12	0.06%

It should be noted that the proposed DSM Cost Adjustment Factor accounts for the recovery of the 2016 DSM Plan forecasted expenses, the 2016 Performance Incentive, and the forecasted carrying charges to be incurred each month.

3.0 STAFF RECOMMENDATION

For docket EL15-015, Staff makes the following recommendations:

- 1) The Commission approve Xcel's 2014 DSM tracker account;
- 2) The Commission approve the performance incentive of \$231,492 earned in 2014;
- 3) The Commission approve Xcel's proposed DSM Plan for 2016, including the addition of new construction measures to the Business Lighting Efficiency Program;
- 4) The Commission approves the proposed budget for Xcel's 2016 DSM Plan and the fixed percentage incentive to be set at 30% of actual expenses (with a cap set at 30% of the approved budget);
- 5) The Commission approves the 2016 DSM Cost Adjustment Factor of \$0.000448/kWh, with an effective date of January 1, 2016, and the associated tariff sheet; and
- 6) The Commission accept the customer bill message as filed on October 5th, 2015.