

TO: COMMISSIONERS AND ADVISORS
FROM: ERIC PAULSON AND AMANDA REISS (STAFF)
SUBJECT: EL23-013 STAFF MEMORANDUM
DATE: DECEMBER 1, 2023

STAFF MEMORANDUM

1.0 OVERVIEW

On May 1, 2023, Northern States Power Company, dba Xcel Energy (Xcel or Company), filed a Petition with the South Dakota Public Utilities Commission (Commission) requesting approval of the Company's 2022 Demand Side Management (DSM) Report, proposed DSM plan for 2024, revised DSM Cost Adjustment Factor for 2024 of \$0.000503/kWh, and associated tariff sheets. In response to Staff data request 1-1, filed on September 20, 2023, Xcel revised the proposed DSM Cost Adjustment Factor for 2024 to \$0.000487/kWh and provided updated tariff sheets.

This memo discusses Xcel's 2022 DSM plan performance and the Company's proposed DSM Plan for 2024. Ultimately, Staff recommends the Commission approve Xcel's requests in this docket based on the supporting information provided by the Company in the Petition and subsequent data requests.

2.0 DISCUSSION

2.1 Report on 2022 DSM Plan Activities

In 2022, Xcel's DSM Plan was over budget, spending \$838,836 compared to the Commission approved budget of \$821,998.¹ Table 1 shows the 2022 approved budgets and the 2022 actual spending for each program. The actual costs for residential programs were 87% of the approved budget, the business programs were 116% of the approved budget, and the planning segment was 54% of the approved budget. In total, the Company spent 102% compared to the approved budget.

¹ 2022 Budget approved in Docket EL21-014

	Budget	Actual	% of Budget
Residential Home Lighting	\$ 101,933	\$ 77,304	76%
Residential Demand Response	\$ 243,500	\$ 230,026	94%
Consumer Education	\$ 21,165	\$ 17,844	84%
Water Heating	\$ 10,250	\$ 1,494	15%
Total Residential	\$ 376,848	\$ 326,668	87%
Lighting Efficiency	\$ 399,900	\$ 486,424	122%
Business Saver's Switch	\$ 25,250	\$ 17,226	68%
Peak and Energy Control	\$ 10,000	\$ 3,151	32%
Total Business	\$ 435,150	\$ 506,802	116%
Planning Segment	\$ 10,000	\$ 5,366	54%
All Programs	\$ 821,998	\$ 838,836	102%

Table 2 provides the energy savings, demand savings, and participation results from the 2022 DSM plan as compared to the approved budget. Overall Xcel's DSM plan experienced less energy savings, more demand savings, and slightly less participation than forecasted. Increased demand savings was mainly due to the significantly higher savings that occurred in the Business Peak and Energy Control program.

	Energy Savings (Annual kWh)			Demand Savings (kW)			Participation		
	Budget	Actual	% of Budget	Budget	Actual	% of Budget	Budget	Actual	% of Budget
Residential Home Lighting	4,334,997	3,364,441	78%	587	455	78%	6,154	4,987	81%
Residential Demand Response	87,288	110,315	126%	781	745	95%	1,400	414	30%
Consumer Education	-	-	-	-	-	-	45,000	45,000	100%
Water Heating	62,033	5,341	9%	8	1	13%	21	2	10%
Total Residential	4,484,318	3,480,097	78%	1,376	1,201	87%	52,575	50,403	96%
Lighting Efficiency	5,981,518	5,215,090	87%	742	840	113%	477	201	42%
Business Saver's Switch	48	39	81%	35	29	81%	10	24	240%
Peak and Energy Control	345	2,879	834%	174	1,451	840%	1	8	800%
Total Business	5,981,911	5,218,008	87%	951	2,320	244%	488	233	48%
Planning Segment	-	-	-	-	-	-	-	-	-
All Programs	10,466,229	8,698,105	83%	2,327	3,521	151%	53,063	50,636	95%

The Residential Home Lighting program experienced lower than normal participation during the year, resulting in Xcel coming up short in the energy savings, demand savings, and participation goals while remaining well under budget. Table 3 provides the average residential LED rebates proposed in the Company's previous DSM filing compared with the actual average rebates offered in 2022.

Measure Type	Proposed	Actual	Difference
A-line	\$ 0.90	\$ 0.93	\$ 0.03
Specialty	\$ 1.30	\$ 1.06	\$ (0.24)
TLED	\$ 2.00	\$ 1.95	\$ (0.05)

The Residential Heat Pump Water Heater’s program spending was significantly less than the approved budget given there was only two participants, up from one participant in each of the previous two years. For the 2022 plan Xcel received approval to increase the incentive from \$300 to \$400 in an effort to increase participation. Xcel plans to utilize low-cost marketing tactics, partnerships with manufacturers, distributors, retailers, and trade partner outreach to increase awareness of the program. Staff has no recommendations to revise the budget for the Heat Pump Water Heating program at this time, but if actual spending continues to come in significantly under budget a revision to the budget may be warranted and if the actual TRC continues to stay below the target of 1.0, the viability of the program as a whole may need to be looked at further.

Looking at the Business programs, the Business Saver’s Switch and Peak and Energy Control programs had extremely high participation compared to projected. The Peak and Energy Control program also achieved extremely high energy and demand savings while coming in well under budget.

Overall, Xcel’s DSM Plan was cost-effective for the 2022 program year. Most programs had Total Resource Cost (TRC) test results greater than 1.0. The Residential Water Heating Program and the Business Lighting Efficiency Program both had TRC results below 1.0 Table 4 provides a breakdown of the benefit/cost test results that occurred in 2022.

Table 4. 2022 Benefit/Cost Test Results				
	TRC	Utility	Participant	RIM
Residential Home Lighting	6.65	12.33	47.40	0.27
Residential Demand Response	1.77	1.66	13.01	1.14
Consumer Education	-	-	-	-
Water Heating	0.98	1.82	5.42	0.25
Total Residential	3.48	1.49	41.94	1.48
Lighting Efficiency	0.94	4.17	2.52	0.37
Business Saver's Switch	1.21	1.21	INF	1.21
Peak and Energy Control	141.61	141.61	INF	92.86
Total Business	1.11	4.92	2.52	0.45
Planning Segment	-	-	-	-
All Programs	1.43	4.57	4.07	0.41

In its Petition, Xcel requests the Commission approve a performance incentive of \$246,599 for 2022. 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 2022 DSM tracker account and 2022 DSM tracker account adjustment and determined the incentive was properly accounted for.

2.2 DSM Plan for 2024

2.2.1 Proposed Program Changes for 2024

For the Business Lighting Efficiency and Residential Home Lighting programs, Xcel proposes to change the baseline for general service lamps, screw-in lamps and downlight retrofit kits, will change to 45 lumens per watt to align with the federal EISA Backstop legislation. There are no changes to rebate types of levels in 2024.

Xcel proposes budget changes to all of the programs in its DSM Plan portfolio.

2.2.2 Proposed Budget for 2024

The proposed budget for 2024 is provided in Table 5 below. In total, Xcel proposes an increase of \$18,189 for its 2024 DSM Plan compared to 2023, which amounts to approximately a 2% increase, with a majority of the increase coming in the Residential Demand Response program. Business Lighting and Residential Home Lighting budgets are less while all other budgets are increasing. Based on forecasted participation and associated energy savings, Xcel estimates that all programs will be cost-effective in 2024, with an estimated overall TRC ratio of 1.55. Staff has no concerns with Xcel's proposed budget for 2024 at this time.

Table 5. 2024 DSM Plan				
	2023	2024	YOY Change	TRC Ratio
Residential Home Lighting	\$ 131,615	\$ 99,539	-24%	2.90
Residential Demand Response	\$ 230,000	\$ 281,685	22%	1.60
Consumer Education	\$ 21,165	\$ 22,000	4%	-
Water Heating	\$ 10,900	\$ 11,000	1%	1.07
Total Residential	\$ 393,680	\$ 414,224	5%	1.90
Lighting Efficiency	\$ 393,373	\$ 389,418	-1%	1.41
Business Saver's Switch	\$ 25,250	\$ 26,150	4%	1.65
Peak and Energy Control	\$ 10,000	\$ 10,350	4%	5.67
Total Business	\$ 428,623	\$ 425,918	-1%	1.44
Planning Segment	\$ 10,000	\$ 10,350	4%	-
All Programs	\$ 832,303	\$ 850,492	2%	1.55

In addition, the fixed percentage incentive of 30 percent of actual spending with a cap set at 30 percent of the approved budget (\$255,148) is proposed to continue in 2024.

2.2.3 DSM Cost Adjustment Factor for 2024

In its original filing, Xcel proposed to increase the DSM Cost Adjustment Factor to \$0.000503/kWh for 2024 from \$0.000479/kWh in 2023. In response to Staff Data Request 1-1, Xcel updated its tracker account to factor in actual expenses and revenues recorded between the initial filing and Staff’s data request as well as updates due to the finalizing of Xcel’s EL22-016 rate case, Xcel identified that the rate should be revised to \$0.000487/kWh. Table 6 provides the estimated bill impacts of the proposed DSM cost adjustment factor for 2024.

Table 6: Bill Impacts of 2024 DSM Cost Adjustment Factor

Usage (kWh)	Prior Rates				New Rates				Amount of Bill Increase	Percent Increase
	Other Rates	Prior DSM Factor	Prior DSM	Prior Bill	Other Rates	New DSM Factor	New DSM	New Bill		
400	\$46.99	\$0.000479	\$0.19	\$47.18	\$46.99	\$0.000487	\$0.19	\$47.18	0.00	0.00%
500	\$56.68	\$0.000479	\$0.24	\$56.92	\$56.68	\$0.000487	\$0.24	\$56.92	0.00	0.00%
600	\$66.36	\$0.000479	\$0.29	\$66.65	\$66.36	\$0.000487	\$0.29	\$66.65	0.00	0.00%
750	\$80.89	\$0.000479	\$0.36	\$81.25	\$80.89	\$0.000487	\$0.37	\$81.26	0.01	0.01%
1000	\$105.11	\$0.000479	\$0.48	\$105.59	\$105.11	\$0.000487	\$0.49	\$105.60	0.01	0.01%
2000	\$201.96	\$0.000479	\$0.96	\$202.92	\$201.96	\$0.000487	\$0.97	\$202.93	0.01	0.00%

3.0 STAFF RECOMMENDATION

For Docket EL23-013, Staff makes the following recommendations:

- 1) The Commission approve Xcel’s 2022 DSM tracker account;
- 2) The Commission approve the performance incentive earned in 2022;
- 3) The Commission approve Xcel’s proposed DSM Plan for 2024; and
- 4) The Commission approve the 2024 DSM Cost Adjustment Factor of \$0.000487/kWh, with an effective date of January 1, 2024, and the associated tariff sheet.