

STATE OF SOUTH DAKOTA
BEFORE THE
SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE PETITION OF
NORTHERN STATES POWER COMPANY
FOR APPROVAL OF THE 2013 ANNUAL
DSM STATUS REPORT, INCLUDING 2013
COST RECOVERY AND INCENTIVE AND
APPROVAL OF THE PROPOSED 2015 DSM
PROGRAM CHANGES INCLUDING A NEW
DSM COST ADJUSTMENT FACTOR

**PETITION FOR 2013 DSM
PROGRAM APPROVAL AND
PROPOSED 2015 DSM COST
ADJUSTMENT FACTOR**

DOCKET NO. EL14- ____

OVERVIEW

Northern States Power Company, doing business as Xcel Energy, submits to the South Dakota Public Utilities Commission, this Petition seeking approval of the 2013 annual Demand Side Management Status Report, including 2013 cost recovery and incentive, as well as approval of proposed 2015 DSM Program changes, including an updated DSM Cost Adjustment Factor.

Specifically, the Company requests that the Commission:

- Approve the Company's 2013 DSM Tracker account;
- Approve the incentive earned for 2013 program performance;
- Approve the proposed 2015 DSM Cost Adjustment Factor of \$0.000507 per kWh;
- Approve the proposed program changes for 2015 summarized on pages 12-13.

The following sections explain in detail the accomplishments of Xcel Energy's 2013 programs and the proposed changes for 2015.

- I. **2013 DSM Status Report** – Presents how programs performed in 2013 and shows budgets and goals, expenditures, actual energy savings, and participation. This section also presents proposed changes by program for 2015.
- II. **2013 DSM Cost Recovery Report** – Provides the 2013 DSM Tracker. Xcel Energy seeks approval to record \$786,991 in DSM spending in its DSM Tracker account.
- III. **2013 DSM Cost Adjustment Factor Report** – Presents the calculation of the DSM Cost Adjustment Factor to be applied to customer electric usage for recovery of

2013 DSM expenditures, effective January 1, 2015. Xcel Energy is proposing a new electric DSM Cost Adjustment Factor of \$0.000507/kWh.

- IV. ***DSM Incentive Report*** – Presents the calculations of Xcel Energy’s DSM Financial Incentive. The Company requests approval to record and recover from customers \$232,512 in incentive in its DSM Tracker for calendar year 2013.
- V. ***Summary of 2015 Proposed Program Changes*** – A summary of program-specific changes proposed to be implemented in 2015. These changes will ensure the DSM portfolio stays in line with industry trends and best meets our customers’ needs.

REPORT

I. 2013 DSM Status Report

A. Executive Summary

In 2013, we continued to offer a mix of both load management and energy efficiency programs to our South Dakota customers. In its second year, the portfolio achieved more than 6.0 GWh of savings, which is over 170 percent of the filed goal, and reached total participation of 82,595, which is 112 percent of goal. Although we far surpassed the savings goal, we are pleased to report that the success was achieved while staying on target with spend. The total actual expenditures of \$786,991 is 1.5 percent over the filed budget.¹ This success is largely due to the cost-effectiveness of our program marketing, which included the highly engaged trade partners who helped educate customers on our programs.

To evaluate the cost-effectiveness of our portfolio in 2013, we look at the Total Resource Cost (TRC) ratio, which compares total benefits to total costs of the portfolio (a TRC ratio above 1.0 indicates the benefits outweigh the costs). If a program or portfolio has a TRC ratio above one, it is considered to be cost-effective by utility standards. As shown in the table below, the 2013 portfolio provided benefits to all of our South Dakota customers as demonstrated with a TRC Ratio of 2.71.

Much of our program success came from the Lighting Efficiency program, which achieved 232 percent of its filed goal for kWh savings. Business Saver’s Switch® also had a successful year, coming in at over 130 percent of its filed savings goal. On the residential side, the Residential Home Lighting program exceeded its participation goal and came in just under its energy savings goal. The table below provides a breakdown of

¹ This overspend of the approved budget is discussed in the DSM Cost Recovery Report section on pages 9-10.

2013 achievements by program. A full executive summary, which includes both a comparison of 2013 goals versus actuals and all cost-effectiveness test results, is provided as Attachment A.

Executive Summary Table – 2013 Actual Achievements					
2013	Participants	Expenditures	Generator kW	Generator kWh	TRC Ratio
Business Segment					
Lighting Efficiency	190	\$524,476	1,318	5,148,404	2.48
Business Saver's Switch	10	\$26,798	193	1,167	9.48
Peak and Energy Control	5	\$1,631	621	34,207	220.35
Business Segment Total	205	\$552,905	2,132	5,183,778	2.75
Residential Segment					
Ground Source Heat Pump	3	\$8,416	7	27,381	0.73
Residential Home Lighting	6,458	\$40,096	125	1,013,809	2.72
Residential Saver's Switch	449	\$158,862	468	4,598	3.05
Consumer Education	75,480	\$16,254	0	0	-
Residential Segment Total	82,390	\$223,628	599	1,045,788	2.56
Planning Segment					
Regulatory Affairs	0	\$10,458	0	0	-
Planning Segment Total	0	\$10,458	0	0	-
PORTFOLIO TOTAL					
	82,595	\$786,991	2,731	6,229,566	2.71

This DSM plan was created based on market assumptions and forecasts of customer interest. With this second year, we continued to see a mix of program popularity; some programs were met with an overwhelming number of applicants while others ended the year with fewer than expected participants. The budget flexibility that the Commission approved in its October 21, 2011 Order in docket No. EL11-013, which allowed us to shift funds among programs, was essential for us to respond to the unforeseen customer demand of the Lighting Efficiency program.

Overall, 2013 proved to be a successful year for our DSM portfolio. We managed a well-balanced portfolio of programs that offered something for all of our customers. More details of each program's performance in 2013 are offered in the Program Achievements section below.

B. Program Achievements

Lighting Efficiency

The Lighting Efficiency program offers rebate incentives to Xcel Energy commercial and industrial customers who purchase and install qualifying energy efficient lighting products. Rebates are offered to encourage customers to purchase energy efficient lighting by reducing the up-front costs associated with new lighting equipment. Customers apply for rebates by completing the application and providing a detailed invoice for the newly installed equipment.

2013 Program Activity and Results

It was another very successful year for the Lighting Efficiency program. Within the first four months of the year, the program received a high number of rebate applications that accounted for more than the 2013 and 2014 Lighting Efficiency program budgets combined. Unfortunately, this high customer demand, combined with limited portfolio funding, meant we had to suspend the program in April 2013.

Proposed Program Changes for 2015

In an effort to have a sustainable business lighting rebate program in the marketplace, we propose the following program changes to go into effect when we reopen the program in 2015:

- Refine the Light Emitting Diode (LED) category definitions to match the current market conditions. The market is moving further into LEDs and the program offering is expanding the categories of LED technology eligible for incentives. In 2015, the program will offer wall packs and LED troffers in addition to the LED measures it already rebated such as exit signs, interior lamps and fixtures, case lighting, canopy and soffit lighting, traffic balls and arrows, and pedestrian signs.
- Remove fluorescent options from the portfolio. We propose to focus on LED technologies where there are greater lifetime energy savings, longer product life, and more opportunity for Xcel Energy to influence customer adoption of newer lighting technologies. This focus will also allow Xcel Energy to better manage the business lighting program and maintain a consistent presence in the market.

Below is a table summarizing and comparing the proposed rebate structure (2015) to both the original program rebate structure (2012) and the current rebate structure (2014). As the LED market continues to mature, we will continue to monitor market conditions closely and manage the program's offerings to ensure market-appropriate rebate levels.

Lighting Rebate Structure Summary

Technology	2012		2014		2015	
	Retrofit Rebates (per unit)	New Construction Rebates (per unit)	Retrofit Rebates (per unit)	New Construction Rebates (per unit)	Retrofit Rebates (per unit)	New Construction Rebates (per unit)
Fluorescent fixtures with high-efficiency electronic ballasts						
T8	\$18.00 - \$28.00	N/A	\$18.00 - \$28.00	N/A	N/A	N/A
T5	\$18.00 - \$24.00	N/A	N/A	N/A	N/A	N/A
T12-T8 Optimization	\$20.00 - \$26.00	N/A	\$20.00 - \$26.00	N/A	N/A	N/A
T8-T8 Optimization	\$12.00	N/A	\$12.00	N/A	N/A	N/A
Fluorescent low-wattage lamps						
28W or less	\$1.00	\$1.00	\$1.00	N/A	N/A	N/A
CFL Plug-in	\$4.00	\$1.00	N/A	N/A	N/A	N/A
Compact Fluorescent fixtures						
Pin-based CFLs	\$25.00 - \$35.00	\$10.00 - \$20.00	N/A	N/A	N/A	N/A
High-bay fluorescent fixtures with high-efficiency electronic ballasts						
T5HO or T8	\$85.00 - \$175.00	\$40.00 - \$65.00	\$85.00 - \$175.00	N/A	N/A	N/A
High Pressure Sodium fixtures						
High pressure sodium	\$30.00 - \$45.00	N/A	N/A	N/A	N/A	N/A
Pulse start metal halide	\$60.00 - \$120.00	\$12.00 - \$28.00	N/A	N/A	N/A	N/A
Ceramic metal halide	\$25.00 - \$100.00	\$20.00 - \$45.00	N/A	N/A	N/A	N/A
Controls						
Occupancy sensors	\$25.00 - \$50.00	N/A	\$15.00 - \$40.00	N/A	\$15.00 - \$40.00	N/A
Photocells	\$25.00	N/A	\$25.00	N/A	\$ 25.00	N/A
Stairwell fixture with integral occupancy sensor	N/A	N/A	\$25.00	N/A	\$ 25.00	N/A
LED Fixtures						
LED exit signs	\$25.00	N/A	\$25.00	N/A	\$ 25.00	N/A
LED interior lamps – ENERGY STAR qualified	\$20.00 - \$35.00	\$20.00 - \$35.00	\$7.00 - \$15.00	N/A	\$7.00-\$15.00	N/A
LED interior fixtures - ENERGY STAR qualified	\$100.00 - \$125.00	\$50.00 - \$75.00	\$35.00 - \$50.00	N/A	\$35.00-\$50.00	N/A
LED interior screw-in fixture retrofit	N/A	N/A	\$15.00	N/A	\$ 15.00	N/A
LED refrigerated case lighting	\$100.00	\$70.00	\$100.00	N/A	\$ 100.00	N/A
LED exterior canopy and soffit lighting	\$275.00	\$150.00	\$175.00	N/A	\$ 175.00	N/A
LED traffic balls and arrows (red and green)	\$25.00 - \$50.00	N/A	N/A	N/A	N/A	N/A
LED pedestrian signals	\$30.00 - \$40.00	N/A	N/A	N/A	N/A	N/A
LED Troffers Retrofit	N/A	N/A	N/A	N/A	\$ 50.00	N/A
LED Troffers Retrofit Kit	N/A	N/A	N/A	N/A	\$ 30.00	N/A
LED Parking Garage and Exterior Wall Packs Less Than or = to 150 Watts	N/A	N/A	\$ 75.00	N/A	\$ 75.00	N/A

Business Saver's Switch®

Business Saver's Switch is a prescriptive load management program available to commercial customers. The program uses direct load control to cycle customers' rooftop air conditioning units during periods of peak demand, helping to maintain system

reliability. Loads are controlled through the use of load control receivers operated remotely via over-the-air signals. The program is marketed via direct mail, telemarketing and advertising.

2013 Program Activity and Results

The program under-spent its budget while exceeding the installation targets. This was primarily due to signups received in the previous year being executed in 2013.

Proposed Program Changes for 2015

None

Peak Controlled and Energy Controlled Rates

The Peak Controlled and Energy Controlled Service Rates program offers customers a monthly discount on their demand charges in return for reducing electric loads to a predetermined level when notified by Xcel Energy. The minimum load reduction requirement for program participants is 50 kW. Participating customers can save substantially on demand charges over the entire year for the demand they agree to reduce during control periods.

The target market for the Peak Controlled and Energy Controlled Rates program is any non-residential general service customer who agrees to control demand to a predetermined level whenever required by the Company. Key marketing strategies with the Peak Controlled and Energy Controlled Service Rates program include the following:

- Direct marketing through the Xcel Energy Account Management staff and the Business Solutions Center,
- Annual mailing of informational packets to existing participants providing information on program structure, rates, and control history, and
- Providing marketing materials and resources to answer questions regarding contract administration and rate options upon request.

2013 Program Activity and Results

Participation in the Electric Rate Savings program is driven by a limited number of customers that meet the program requirements and have the ability to reduce their loads. Similarly, the program traditionally has a longer selling cycle, where customers can be identified and promoted to in one year but not sign up for the program until the following year. This potential for high fluctuation in participation/savings and spend can produce significant changes in the program's net benefits.

In 2013, the program did not reach its participation or savings goals but did see an increased number of participants over 2012. This increase in participation and savings, which was achieved as a result of promotional spending that occurred in 2012, explains the high net benefits and TRC ratio for the year.

Proposed Program Changes for 2015

None.

Ground Source Heat Pump

The Ground Source Heat Pump (GSHP) program provides a rebate to Xcel Energy residential account holders who purchase and install a qualifying closed-loop GSHP where electricity is used as the primary heating and cooling source. Customers must install the GSHP for both space heating and space cooling; systems installed for the purpose of heating only or cooling only will not be rebated through the Xcel Energy program.

The program is marketed primarily via the GSHP installers. Customers are also made aware of the program via direct mail, email newsletters, consumer events and Xcel Energy's website.

2013 Program Activity and Results

Although participation was still low, the program did see a slight increase in participation over 2012 which we attribute to increased program awareness now that we are in the second year of the program. The limited number of participants was due primarily to the limited number of eligible customers who meet the electric heating and cooling source requirement noted above. This technology's installation and equipment costs, as compared to the cost of other heating and cooling options, also were factors in the program's minimal participation. The program came in under budget due to participation coming in under what was forecasted.

Proposed Program Changes for 2015

None.

Home Lighting

The Home Lighting program promotes the use of energy efficient lighting to our residential customers by offering incentives on compact fluorescent light (CFL) bulbs. The program works with bulb manufacturers, retailers and other partners to offer instant rebates enabling customers to purchase efficient lighting at a discounted price. Bulb

discounts were advertised using a variety of channels, such as in-store signage and bill insert messaging.

2013 Program Activity and Results

The program's final numbers came in just under the energy savings goal and the budget due to a slow start to the campaign. This year we launched a fall campaign with retailers and it took longer than anticipated for sales to begin. The achievement of the program can be attributed to the partnerships we share with local retailers such as True Value, Home Depot, Menards, Sam's Club and Batteries Plus.

Proposed Program Changes for 2015

None.

Residential Saver's Switch®

The Residential Saver's Switch program offers a bill discount to customers who agree to allow the Company to control remotely their central air conditioners during the summer months and their electric water heaters during any season. Saver's Switch is a significant component of Xcel Energy's load management portfolio. The program is marketed primarily through direct mail.

2013 Program Activity and Results

The program had lower than projected participation and therefore under-spent its budget. The lower than anticipated installation volume was due to delays at the installer. The installation requests remaining from the fall of 2013 will be fulfilled in 2014.

Proposed Program Changes for 2015

None

Consumer Education

Consumer Education is an indirect-impact program that focuses primarily on creating awareness of energy conservation and providing residential customers with information on how to reduce energy usage at home.

The primary objective of the Consumer Education program is to heighten residential customers' awareness about energy efficiency and conservation and develop engaged customers who will proactively take steps to reduce energy consumption. Through this engagement, customers are motivated to increase their homes' efficiency measures and thereby reduce their energy consumption.

2013 Program Activity and Results

In 2013 we employed both a seasonal email campaign as well as onsite community outreach to provide information and resources to residential customers. By utilizing the seasonal email campaign, we were able to expand communications to customers and reduce program costs. Ultimately we exceeded the participation goal while coming in under budget.

Proposed Program Changes for 2015

None.

Regulatory Affairs Administration

The Planning & Administration group manages all DSM regulatory filings, directs and prepares cost-benefit analyses, provides results of energy conservation achievements, and prepares cost recovery reports. The group also provides procedures for effectively addressing requirements for the DSM regulatory process.

2013 Program Activity and Results

The Regulatory team worked closely with program management throughout the year to respond to the needs of the portfolio of programs. In addition, the team participated in the summer workshop at the Public Utilities Commission, which provided the Commissioners with an overview of DSM process and policy, and coordinated the 2012 Status Report & 2014 Plan which was filed on May 1, 2013. In the end, the team's spend came in slightly under budget for the year.

Proposed Program Changes for 2015

None.

II. DSM Cost Recovery Report

Cost-effective conservation benefits all of our customers by reducing the need to build new power plants or other generation facilities to meet our customers' electricity needs. Conservation also has environmental benefits, including a reduction in air pollution and greenhouse gas emissions associated with using fossil fuels. This section reports the actual 2013 spending and cost recovery, as well as the Company's carrying charge rates.

In 2013, the total portfolio spend came in at \$786,991, which is 102 percent of the approved budget and falls within the 10 percent spend flexibility granted by the

Commission². In addition to the DSM expenses of \$786,991, Xcel Energy is requesting recovery of \$232,512 in financial incentive earned for our 2013 DSM performance for total recovery of \$1,019,503.

Supportive documentation for this cost recovery request, some of which falls under the category of confidential data, is provided as Attachment B of this filing and includes:

- Calculations of the Carrying Charge Rates used during 2013 and found in the 2013 DSM Tracker; and
- Xcel Energy's 2013 DSM Tracker, which documents monthly DSM expenditures and recovered costs.

III. DSM Cost Adjustment Factor Report

The current DSM Cost Adjustment Factor of \$0.000486 per customer kWh was approved by the Commission on December 3, 2013 in Docket No. EL 13-017. This rate was implemented on January 1, 2014. Xcel Energy requests a new DSM Cost Adjustment Factor of \$0.000507 per customer kWh to be effective with the first billing cycle of January 2015.

Supportive documentation for this rate change request, some of which falls under the category of confidential data, is provided as Attachment C of this filing and includes:

- Information specified in South Dakota Administrative Rule 20:10:13:26 regarding the updated DSM Cost Adjustment Factor;
- Forecasted 2014 and 2015 DSM Trackers reflecting the forecasted cost recovery with the current and proposed rates;
- Proposed customer bill notice;
- Proposed updated tariff sheet in both redlined and clean versions.

Xcel Energy will include a customer bill notice informing customers of the change in the DSM Cost Adjustment Factor. The proposed bill notice is provided on page 5 in Attachment C. In the event that Commission approval of the proposed adjustment is delayed beyond the timeframe needed to implement the rate change by January 1, 2015), the Company will continue to apply the current DSM Cost Adjustment of \$0.000486 per kWh up to the first cycle of the first full billing period following Commission approval of a revised factor.

² The Commission approved a 10% spend flexibility beginning in 2013 as part of the approval of the Company's 2012 DSM Status Report and 2014 DSM Proposed Plan. (Docket No. EL-13-017)

Xcel Energy requests a new DSM Cost Adjustment Factor of \$0.000507 per customer kWh to be effective with the first billing cycle of January 2015 and to remain in effect through December 2015 or until the Commission approves a new DSM Cost Adjustment Factor. This is an increase of \$0.000021 per kWh or four percent. This proposed factor is calculated to reduce the DSM Tracker balance to \$0 by the end of December 2015. It is based on the forecasted December 2015 unrecovered balance in the Company's DSM Tracker account. This forecasted balance is based on the forecasted January 2015 beginning balance, projected expenditures for 2015, and the forecasted 2015 incentive. The inputs and calculation are shown below.

[CONFIDENTIAL DATA HAS BEEN EXCISED]

Inputs Used to Determine the Forecasted December 2015 Balance

Forecasted beginning balance (Jan 2015)	
Approved expenditures (Jan 2015 - Dec 2015)	\$775,041
Forecasted 2015 incentive	\$232,512
Forecasted Dec 31 2015 balance	

Calculation of Revised Electric DSM Cost Adjustment Factor

(1) Forecasted Dec 2015 DSM Tracker Balance	\$	
(2) Forecasted 2015 Electric Sales (MWh)		
(3) Recalculated Electric DSM Cost Adjustment Rate = (1)/(2)	\$	/MWh
	\$	/kWh

[CONFIDENTIAL DATA HAS BEEN EXCISED]

The resulting rate is **\$0.000507 per kWh**.

IV. DSM Incentive Report

In accordance with the Commission's October 21, 2011 Order, which approved an incentive of 30 percent of expenditures capped at the approved budget of \$775,041, Xcel Energy submits the 2013 incentive calculation.

Calculation Inputs

Approved 2013 Budget	\$775,041
Actual 2013 Spend	\$786,991

Since the actual expenditure was greater than the approved budget, the incentive was capped at the approved budget amount. The incentive is calculated as follows:

Approved Budget x 30% = Awarded Incentive

\$775,041 x 30% = \$232,512

Based on the 2013 expenditures that met and slightly exceeded the approved budget, Xcel Energy respectfully requests approval of a DSM incentive of \$232,512. This incentive is accounted for in our 2013 DSM Tracker included in Attachment B.

V. Summary of 2015 Program Updates

This section includes a summary of Xcel Energy's proposed program changes for the plan going forward and provides expected participation, savings and spending levels for the 2015 program year.

Program-specific Updates

- Lighting Efficiency – The Company proposes the following changes:
 - Refine LED category definitions, and
 - Remove fluorescent options from the portfolio

The 2015 executive summary found below provides forecasted customer participation, projected savings of both demand in kW and the energy in kWh, and forecasted expenditures for the proposed 2015 DSM portfolio. The proposed program totals incorporate the changes described above as well as updated technical assumptions. As shown in the table below, the total portfolio has a passing TRC Ratio of 2.25. A full executive summary, which includes all cost-effectiveness test results, is provided as Attachment D. We respectfully request the Commission approve this revised 2015 Plan.

Executive Summary Table – 2015 Forecast					
2015	Electric Participants	Electric Budget	Generator kW	Generator kWh	TRC Ratio
Business Segment					
Lighting Efficiency	304	\$433,191	964	5,177,006	2.19
Business Saver's Switch	20	\$30,950	30	224	1.39
Peak and Energy Control	1	\$6,000	101	2,612	9.91
Business Segment Total	325	\$470,141	1,095	5,179,842	2.20
Residential Segment					
Ground Source Heat Pump	12	\$25,050	19	102,398	0.94
Home Lighting	7,129	\$56,035	104	799,473	2.63
Residential Saver's Switch	758	\$181,650	502	3,954	3.96
Consumer Education	0	\$27,165	0	0	-
Residential Segment Total	7,899	\$289,900	626	905,825	2.50
Planning Segment					
Regulatory Affairs	0	\$15,000	0	0	-
Planning Segment Total	0	\$15,000	0	0	-
PORTFOLIO TOTAL	8,224	\$775,041	1,721	6,085,667	2.25

Service of Filings

We request that communications regarding this Application be directed to:

Kari L. Valley
Assistant General Counsel
Xcel Energy Services Inc.
414 Nicollet Mall, 5th Floor
Minneapolis, MN 55401
(612) 215-4526

SaGonna Thompson
Records Analyst
Xcel Energy Services Inc.
414 Nicollet Mall, 7th Floor
Minneapolis, MN 55401
(612) 330-5500

CONCLUSION

In summary, the Company respectfully requests that the Commission:

- Approve the Company's 2013 DSM Tracker account;
- Approve the incentive of \$232,512 earned for 2013 program performance;
- Approve the proposed 2015 electric DSM Adjustment Factor of \$0.000507 per kWh; and
- Approve the proposed program changes for 2015 summarized on pages 12-13.

Xcel Energy looks forward to continuing these programs in South Dakota. The Company appreciates the interest and efforts of South Dakota policy makers in supporting this DSM portfolio.

Dated: May 1, 2014

Xcel Energy



By: _____

JAMES C. WILCOX

Principal Manager, Government & Regulatory Affairs