



**Public
Version Enclosed**

5000 West Russell Street
P.O. Box 988
Sioux Falls, SD 57101-0988

April 28, 2017

—Via Electronic Filing—

Ms. Patricia Van Gerpen, Executive Director
South Dakota Public Utilities Commission
State Capitol Building
500 East Capitol Avenue
Pierre, South Dakota 57501-5070

RE: PETITION
2016 DSM STATUS REPORT AND PROPOSED 2018 DSM PLAN

Dear Ms. Van Gerpen:

Enclosed for filing is a Petition by Northern States Power Company requesting approval of our 2016 DSM Status Report, including a request for approval of cost recovery for the 2016 actual expenditures and incentive, as well as approval of our Proposed 2018 DSM Plan and proposed DSM Cost Adjustment Factor.

In accordance with South Dakota Admin. R. 20:10:01:39 through 42, Xcel Energy respectfully requests confidential treatment of certain information contained in this filing. In compliance with South Dakota Admin. R. 20:10:01:41, we have clearly marked each page of the confidential version with the term "CONFIDENTIAL". A public non-confidential version is also being filed simultaneously.

Pursuant to S.D. Codified Laws Chapter 20:10:01:41, the Company submits the following justification for confidential treatment of this petition.

(1) An identification of the document and the general subject matter of the materials or the portions of the document for which confidentiality is being requested;

We request confidential treatment on the grounds that the material is proprietary and contains trade secret information, the disclosure of which would result in material damage to the Company's financial or competitive position. The petition contains financial information that is not available to the general public.

(2) The length of time for which confidentiality is being requested and a request for handling at the end of that time. This does not preclude a later request to extend the period of confidential treatment;

The Company requests that the petition be recognized as confidential in perpetuity.

(3) The name, address, and phone number of a person to be contacted regarding the confidentiality request;

Steve Kolbeck
Principal Manager –South Dakota
Xcel Energy
500 W. Russell Street
P.O. Box 988
Sioux Falls, South Dakota 57101
(605) 339-8303

(4) The statutory or common law grounds and any administrative rules under which confidentiality is requested. Failure to include all possible grounds for confidential treatment does not preclude the party from raising additional grounds in the future;

The Company requests confidential treatment because the information is both trade secret and proprietary. The claim for confidential treatment is based on South Dakota Admin. R. 20:10:01:39 (4) and S.D. Codified Laws Chapter 1-27-30. The information contained within the referenced documents meets the definition of “trade secret” under S.D. Codified Laws Chapter 37-29-1(4)(1), the South Dakota Uniform Trade Secrets Act, which is defined as information that “[d]erives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and... is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.” The information also meets the definition of “proprietary information” under S.D. Codified Laws Chapter 1-27-28, which is defined as “information on pricing, costs, revenue, taxes, market share, customers, and personnel held by private entities and used for that private entity's business purposes.”

Ms. Van Gerpen

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(5) The factual basis that qualifies the information for confidentiality under the authority cited.

Consistent with the terms of the Settlement Stipulation approved by the Commission in the Company's 2012 electric rate case (Docket EL12-046), the rate of return on equity is confidential.

For any questions regarding this filing, please call me at (605) 339-8350 or email at Steven.T.Kolbeck@xcelenergy.com.

Sincerely,

A handwritten signature in cursive script that reads "Steve Kolbeck". The signature is written in dark ink and is positioned above the printed name and title.

Steve Kolbeck

Principal Manager –South Dakota

**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 2016 ANNUAL
DSM STATUS REPORT, INCLUDING 2016
COST RECOVERY AND INCENTIVE AND
APPROVAL OF THE PROPOSED 2018 DSM
COST ADJUSTMENT FACTOR AND
PROGRAM PLAN

**PETITION FOR 2016 DSM
PROGRAM APPROVAL AND
PROPOSED 2018 DSM COST
ADJUSTMENT FACTOR**

DOCKET NO. EL17- ____

Northern States Power Company, doing business as Xcel Energy, submits to the South Dakota Public Utilities Commission, this Petition seeking approval of the 2016 Annual Demand Side Management Status (DSM) Report, including 2016 cost recovery and incentive, as well as approval of our Proposed 2018 DSM Plan (Plan) and Cost Adjustment Factor.

We respectfully request that the Commission approve the following:

- The Company's 2016 DSM Tracker account;
- The incentive earned for program performance in 2016;
- Our proposed 2018 DSM Cost Adjustment Factor of \$0.000515 per kWh; and
- Our Proposed 2018 DSM Plan.

The remainder of our filing will include the following sections:

- I. ***2016 DSM Status Report*** – Presents 2016 program performance including budgets, goals, expenditures, actual energy savings and participation. This section also specifies any programmatic changes for our 2018 Plan.
- II. ***2016 DSM Cost Recovery Report*** – Provides the 2016 DSM Tracker. The Company seeks approval to record \$819,918 in DSM spending in its DSM Tracker account.
- III. ***DSM Incentive Report*** – Presents the calculations of the Company's DSM Financial Incentive. We request approval to record and recover \$232,512 in incentive from customers in the DSM Tracker for calendar year 2016.

- IV. 2016 DSM Cost Adjustment Factor Report** – Presents the calculation of the DSM Cost Adjustment Factor to be applied to customer electric usage for recovery of 2016 DSM expenditures, effective January 1, 2018. We are proposing a new electric DSM Cost Adjustment Factor of \$0.000515 per customer kWh.
- V. Summary of Proposed 2018 DSM Plan** – Provides the portfolio level executive summary along with updated cost-effectiveness results.

REPORT

I. 2016 DSM STATUS REPORT

A. Executive Summary

Our DSM portfolio offers a mix of energy efficiency and load management programs to our South Dakota customers. In 2016, we continued to help customers manage their energy bills by achieving more than 4.7 GWh of energy savings.

This achievement is consistent with the past three years in which our energy savings were as follows: 2013 – 6.2 GWh, 2014 – 4.4 GWh, and 2015 – 4.5 GWh. However, compared to our projections in the 2016 Plan¹, we achieved 50 percent of our forecasted achievement. This result was not unexpected, as the Company began to observe significantly lower savings in the Business Lighting Efficiency program compared to anticipated results. Our 2017 Plan² adjusted the Business Lighting assumptions accordingly by lowering our forecasted kWh savings per measure. Our 2018 Plan continues to adjust based on further data.

The purpose of our energy efficiency portfolio is to encourage customers to adopt high efficiency equipment. As such, we identified opportunities in 2016 to increase residential participation resulting in increased spending above our anticipated budget. The total actual expenditures of \$819,918 fall above the filed budget, however, within the Commission approved budget flexibility³.

There are often times in which rebate spend in Residential Lighting (which also covers small businesses) exceeds rebate spend in the commercial programs. Based on past Commission concern, the Company offers Table 1 as verification that these programs do

¹ Docket EL 15-015, October 5, 2015.

² Docket EL 16-018, Approved December 12, 2016.

³ Docket EL. EL13-015, Commission Order December 3, 2013.

not cross subsidize each other or rather neither segment is receiving more benefit than another. These results remain consistent in 2016.

Table 1 – Cross Subsidization Review

Year	Percent of Spend (excl. Planning)		Percent of kWh		Percent of Recovery	
	Residential	Business	Residential	Business	Residential	Business
2012	28%	72%	23%	77%	35%	65%
2013	29%	71%	17%	83%	36%	64%
2014	35%	65%	22%	78%	35%	65%
2015	67%	33%	62%	38%	35%	66%
2016	34%	66%	26%	74%	35%	65%
Total	40%	60%	31%	69%	35%	65%
Average	39%	61%	30%	70%	35%	65%

To evaluate the cost-effectiveness of our portfolio for 2016, we looked at the Total Resource Cost (TRC) ratio, which compares total benefits to total costs of the portfolio⁴. If a program or portfolio has a TRC ratio above one, it is considered cost-effective. As shown in the table below, the 2016 portfolio demonstrated a TRC Ratio value of 1.59.

The 2016 DSM Plan was created based on market assumptions and a forecast of customer interest. Table 1 provides a breakdown of 2016 achievements by program. A full executive summary, which includes both a comparison of 2016 goals versus actuals and cost-effectiveness test results, is provided as Attachment A.

⁴ A TRC ratio above 1.0 indicates the benefit outweighs the costs.

Table 2 – Executive Summary Table of 2016 Actual Achievements

Executive Summary Table – 2016					
2016	Electric Participants	Electric Spend	Generator kW	Generator kWh	TRC Ratio
Business Segment					
Lighting Efficiency	183	\$ 485,750	645	3,493,233	1.32
Business Saver's Switch	70	\$ 48,239	176	1,313	3.73
Peak and Energy Control	1	\$ 2,178	158	5,815	43.17
Business Segment Total	254	\$ 536,167	979	3,500,361	1.40
Residential Segment					
Ground Source Heat Pump	11	\$ 16,940	29	68,269	1.02
Home Lighting	18,416	\$ 74,962	144	1,162,819	2.32
Residential Saver's Switch	628	\$ 168,133	431	3,493	3.60
Consumer Education	71,500	\$ 15,243	-	-	-
Residential Segment Total	90,555	\$ 275,279	604	1,234,581	2.37
Planning Segment					
Regulatory Affairs	-	\$ 8,472	-	-	-
Planning Segment Total	-	\$ 8,472	-	-	-
PORTFOLIO TOTAL	90,809	\$ 819,918	1,582	4,734,942	1.59

The Status Report shows a successful year for the DSM portfolio. We maintain a well-balanced portfolio of programs and continue to educate customers on the benefits of choosing energy efficiency. More details of each program's performance are offered in the section below.

B. DSM Program Portfolio

1. Business Lighting Efficiency

a. Description

The Lighting Efficiency program offers retrofit and new construction rebate incentives to 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.

b. 2016 Program Activity and Results

Our Lighting Efficiency program achieved 40 percent of its energy savings goal within 112 percent of its budget. This result highlights our continued challenge of estimating achievement for the program due to substantial changes made in the program to provide only the newest, most efficient technologies. In 2015, the program removed fluorescent technologies from our portfolio and moved toward incenting only LED measures. Changes of this magnitude are often slow to take hold in the marketplace.

Our savings and budget forecasts developed for 2016, and subsequently approved by the Commission, were based on conversations with lighting trade partners, customers and our experiences with DSM programs in other jurisdictions. While we anticipated customer using measures longer, actual participation skewed more heavily toward products with lower run times per unit. This resulted in less program savings. The actual spend, however, was higher than anticipated. This is attributed to the Company's efforts to make up the savings shortfall.

As requested by Commission Staff in previous years, we provide the rebates available in 2016 as Attachment B.

c. 2018 Proposed Changes

We have adjusted the 2018 technical assumptions to account for lower hours of use. As seen during the past few years, the actual mix of facility hours for South Dakota is less than anticipated because there are few 24-hour facilities. This adjustment has lowered the overall TRC. In addition, we have adjusted the participant calculation to reflect the higher lamp/fixture per customer ratio achieved in 2016.

d. Budget and Goal Considerations

The program will continue to motivate business customers to install LED fixtures with downstream incentives in the retrofit and new construction segments. Incentives make up the majority of the budget while a smaller amount is allotted to promotion for local trainings, newsletters, one-on-one communications and information materials.

2. Business Saver's Switch

a. Description

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 wireless signals. The program is marketed via direct mail, email, and via our sales team.

b. 2016 Program Activity and Results

The Business Saver's Switch program had a successful year and deployed substantially more switches than anticipated in 2016 as customers responded favorably to promotional activities such as our call center promotion conducted in spring and summer. Due to this success, the program over spent its budget by about 50 percent while deploying triple the anticipated number of switches.

In recent years, the program has had relatively few control events. The program was activated once in 2016. While control seasons in recent years have not been nearly as expansive as in the past, the company is planning to execute at a minimum one control event per cooling season to validate system operations.

c. 2018 Proposed Changes - None

d. Budget and Goal Considerations

The Company is proposing a modest increase in the program budget due to anticipated increased participation.

3. Electric Rate Savings

a. Description

The Electric Rate Savings (ERS) program is offered to business customers who can reduce their electric loads during control periods by at least 50 kW. In return for reducing their loads, customers receive a monthly discount on their demand charges. Participants save as much as 50 percent on demand charges during the year. Currently, the ERS program is promoted directly through our account representatives.

b. 2016 Program Activity and Results

Continued emphasis this year was given to educating program participants of the possibility of year round controls within the Midcontinent Independent System Operator (MISO). As a result, except for one customer who adjusted its controllable load to match its production changes, there was only slight growth to the program.

The ERS budget was underspent in 2016. As a result, the TRC test shows a significant increase based on low spend for a program in which additional participation is low. Only new participants are counted toward our 2016 DSM activity. The program itself has 108 historical participants.

Every year a program information packet is sent to each participating customer, explaining program changes, reminding them of their responsibility as an interruptible customer on a control day and providing historical event data. A customer meeting was also held to better explain the program, the impacts of MISO, and how customers may be better prepared to meet the increasing chance of future controls.

In 2016, we tested our notification system and sent messaging to customers regarding how to prepare for an actual control event. We will continue to test these resources twice a year, in the winter and in the summer.

The main components of the program budget include:

- Administration –labor costs for internal sales, sales support and fulfillment, marketing administration and planning, equipment installation and maintenance, project planning and implementation; and
- Advertising and Promotion –annual customer mailing, test event mailings, customer town meetings, and program collateral materials.

c. 2018 Proposed Changes - None

4. Ground Source Heat Pumps

a. Description

The Ground Source Heat Pump (GSHP) program provided rebates to residential customers who purchased and installed a qualifying closed-loop GSHP where electricity is used as the primary heating and cooling source. Customers had to install the GSHP for both space heating and space cooling; systems installed for only heating or cooling were not rebated through the program.

b. 2016 Program Activity and Results

There has been a decrease in participation over the past two years which is attributed to the maturity of the program, limited eligible electrical customer base in the South Dakota service territory, and the rebate covering only a small percentage of customers' total costs to install a GSHP at their homes.

Program spend was in proportion to the amount of energy savings achievement.

Our announcement regarding the closing of the program went out to the trade on November 29, 2016. Prior to this announcement the program had only eight participants or customers. After the announcement another four customers submitted projects.

c. 2018 Proposed Changes

The GSHP program was closed on December 31, 2016, as requested by the Commission, and will not be part of the 2018 portfolio filing. We continue to believe the TRC test would have been below 1.0 in 2017/2018.

5. Home Lighting

a. Description

The Home Lighting program offers discounted prices on CFL and LED bulbs. Energy efficient lights are an easy and low cost way for customers to save energy and reduce the cost of their monthly electric bills. We promote the Home Lighting program through a variety of venues including a bill onsert, digital advertising and point of purchase displays.

b. 2016 Program Activity and Results

The program surpassed our participation and energy savings goals for 2016. The increased achievements were a result of customers looking for ways to reduce their energy bills, responding favorably to promotions and acting on discounted lighting prices.

Our increased spending was a direct result of these additional incentives needed to support increased participation. The number of residential bulbs sold is defined in the table below. The total mix in bulb type was 56 percent CFLs and 44 percent LEDs.

Table 3: Home Lighting Achievement

Type of Customer	Number of Bulbs Sold	Percent of Bulbs
Residential	29,735	94%
Business*	1,800	6%

*Generally Small Business

c. 2018 Proposed Changes

The Home Lighting program will expand incentives for LED bulbs and eliminate CFL incentives in 2018.

LEDs have decreased in price significantly, making it more cost effective for customers to purchase LED bulbs. LED bulbs tend to provide higher customer satisfaction than CFL bulbs because they perform better in different lighting applications. In addition, many retailers during 2017 will discontinue stocking CFLs. This trend is expected to continue, making it increasingly more difficult to find CFLs in stores. As a result of stocking practices and the decreased prices of LEDs, we are transferring all Home Lighting program incentive funds to LED bulbs in 2018.

The Home Lighting program assumes that customers purchasing the bulbs discounted through the program are 94 percent residential and 6 percent small business customers, matching 2016. The deemed savings assumptions follow this methodology.

Additionally, we continue to partner with MidAmerican Energy Company on its gas home energy audit program *HomeCheck Assessment*. Through this partnership, MidAmerican delivers the program and installs our energy efficient bulbs in customers' homes in our service area.

d. Budget and Goal Considerations

The Company is proposing a modest increase in the program budget due to anticipated participation.

6. Residential Saver's Switch

a. Description

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

b. 2016 Program Activity and Results

In 2016, the program spent approximately 90 percent of its budget and deployed about 85 percent of the targeted switch count. Approximately one third of the deployed switches were maintenance replacements for outdated hardware in the field.

In recent years, the program has had relatively few control events. The program was activated once in 2016. While control seasons in recent years have not been nearly as expansive as in the past, the Company is planning to execute at a minimum one control event per cooling season to validate system operations.

c. 2018 Proposed Changes - None

d. Budget and Goal Considerations

The Company is proposing a modest increase in the program budget due to anticipated increased participation.

C. DSM Efforts

1. Trade Efforts

We consider our Trade Partners to be contractors, distributors, and manufacturers of energy-efficient equipment. The Company values our Trade Partners as one of the most important marketing channels for DSM. Trade Partners promote our programs to our

customers, verify that the equipment they are installing meets our program specifications and help complete the rebate paperwork. We support our Trade Partners through training workshops, sale activities, phone support and email communications.

Training workshops are utilized during times of significant program change. For example, in December of 2015, a Trade Partner workshop was held at Avera Hall at South Dakota University Center. There were 32 residential and business Trade Partners who attended to learn about the upcoming 2016 program changes. These types of training workshops will be held in 2017-2018 on an as-needed basis.

Our Account Manager in Sioux Falls has an important role in supporting the efforts of our Trade Partners in South Dakota. He is available to meet with Trade Partners for program training, site visits, and help with rebate paperwork.

We have both residential and business Trade Relations Managers in Minneapolis who assist our South Dakota Trade Partners. They provide phone support for questions on our rebate specifications and paperwork. They produce email updates to Trade Partners when there is important information to share. Trade Relations Managers are also available to travel to South Dakota to provide in-depth program training as needed.

2. Consumer Education

a. Overview

The Consumer Education program is part of our residential program portfolio. The program's focus is to provide customers with simple ways they can make their home more energy efficient while driving them to our portfolio of energy savings programs. We focused efforts in 2016 on three specific tactics: community events, digital outreach and bill communications. Utilizing different tactics is critical to reaching a wide variety of customers.

b. Community Events

The program's primary focus at community events is to drive customers to take "action" whether through a targeted program lead or a direct program signup, and provide customers with information on how they can make their home more energy efficient. Xcel Energy personnel working the Company's booth helped customers with energy-related questions and recommended energy efficiency programs and actions that were a fit for their individual homes.

In 2016, the Company participated in one large community event:

- July 15-16 – Sioux Falls Jazz Festival, Yankton Trails Park, Sioux Falls
 - The company generated 83 targeted program leads and generated 21 direct program signups

c. Digital Outreach

In addition to face-to-face community outreach, the program has invested in digital kiosks to help reach a wide variety of customers outside of targeted community events. The kiosks are loaded with a video series developed by the Company titled “This Is How,” a series of tutorials on how to make simple, no and low-cost energy saving changes to your home. Customers then have the opportunity to text themselves the video to re-watch when they return home to help them implement the changes. There were two main locations where customers could locate kiosks in 2016, chosen for ease of access and relevance:

- Siouxland Downtown Sioux Falls Public Library – January to July 2016
- Sioux Falls Museum of Visual Materials – December 2016 to present

d. Bill Communications

The program also utilizes bill communications via onserts, a cost-effective way to communicate with large groups of residential customers. Bill onserts were placed by the Company in May 2016 to promote easy ways customers could lower their summer cooling costs. This onsert was sent to 55,688 customers.

e. Participation

Participation achievement continues to be measured through a formula of various educational opportunities as noted below:

- 50 percent sponsored event attendance;
- 100 percent program signups generated at sponsored events;
- 100 percent program leads generated at sponsored events; and
- 100 percent seasonal email campaign/bill onserts.

f. 2018 Program Changes - None

3. Regulatory Affairs

a. Description

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

The following notes the Regulatory Affairs Administration budget breakout:

- 96 percent labor; and
- 4 percent promotion (bill insert).

We further note that the promotional cost will begin to decrease as the Company begins to use bill inserts rather than bill inserts.

b. 2016 Results and 2018 Change

The Planning and Administration budget was underspent in 2016. The Company is adjusting the 2018 spend forecast to reflect an average spend for the administrative budget.

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 2016 spending and cost recovery as well as the Company's carrying charge rates.

In 2016, the total portfolio spend came in at \$819,918. This amount is six percent above our approved budget of \$775,041, but falls within the ten percent spend flexibility granted by the Commission⁵. In addition to DSM expenses, the Company is requesting recovery of \$232,512 in financial incentive earned for our 2016 DSM performance for total recovery of \$1,052,430.

⁵ The Commission approved a 10 percent 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)

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

- Calculations of the Carrying Charge Rates in 2016 and found in the 2016 Tracker; and
- Xcel Energy's 2016 DSM Tracker, which documents monthly DSM expenditures and recovered costs.

III. DSM Incentive Report – Calculation Inputs

In accordance with the Commission's October 21, 2011, Order, which approved an incentive of 30 percent of expenditures capped at the approved budget. The Company submits the following 2016 incentive calculation.

Approved 2016 Budget	\$775,041
Actual 2016 Spend	\$819,918

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 2016 expenditures below the approved budget, we respectfully request approval of a DSM incentive of \$232,512. This incentive is accounted for in our 2016 DSM Tracker included in Attachment C.

IV. DSM Cost Adjustment Factor Report

The current DSM Cost Adjustment Factor of \$0.000504 per kWh was implemented on January 1, 2017⁶. The Company requests a new DSM Cost Adjustment Factor of \$0.000515 per kWh to be effective with the first billing cycle of January 2018.

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

- Information specified in South Dakota Administrative Rule 20:10:13:26 regarding the updated DSM Cost Adjustment Factor;

⁶ Docket EL16-018, Commission Order December 12, 2016.

- Forecasted 2017 and 2018 DSM Trackers reflecting the forecasted cost recovery with the current and proposed rates;
- Proposed bill insert notice; and
- Proposed updated tariff sheet in both redlined and clean versions.

In the event that Commission approval of the proposed adjustment is delayed beyond the timeframe needed to implement the rate change by January 1, 2018, the Company will continue to apply the current DSM Cost Adjustment of \$0.000504 per kWh up to the first cycle of the first full billing period following Commission approval of a revised factor.

The Company requests a new DSM Cost Adjustment Factor of \$0.000515 per customer kWh to be effective with the first billing cycle of January 2018 and to remain in effect through December 2018 or until the Commission approves a new DSM Cost Adjustment Factor. This is an increase of \$0.000011 per kWh or approximately two percent. The increase in DSM Cost Adjustment Factor is due to the cumulative effect of exceeding our approved budget in both 2016 and 2017 while under recovering throughout 2016.

This proposed factor is calculated to reduce the DSM Tracker balance to \$0 by the end of December 2018. It is based on the forecasted December 2018 unrecovered balance in the Company's DSM Tracker account. This forecasted balance is based on the forecasted January 2018 beginning balance, projected expenditures for 2018, and the forecasted 2018 incentive. The inputs and calculation are shown below.

[CONFIDENTIAL DATA BEGINS HERE]

CONFIDENTIAL DATA ENDS HERE]

The resulting rate is **\$0.000515 per customer kWh**.

V. Summary of 2018 DSM Plan

This section includes a summary of our proposed 2018 Plan. The largest and only change in 2018 will be the full removal of CFL fixtures from our Residential Lighting program. Beginning in 2018, we will be only rebating LED technologies. Additional program opportunities were reviewed for the 2018 DSM plan, however none was found to offer greater value (energy savings and customer potential related to cost) for our customers.

Table 3 summarizes our proposed goals and provides updated cost-effectiveness results by program. The total portfolio has a passing TRC Ratio of 1.23. A full executive summary, which includes all cost-effectiveness test results, is provided as Attachment E. We respectfully request the Commission approve our Proposed 2018 DSM Plan.

Table 3 – Executive Summary Table of 2018 Forecast

Executive Summary Table - 2018					
2018	Electric Participants	Electric Budget	Generator kW	Generator kWh	TRC Ratio
Business Segment					
Lighting Efficiency	170	\$389,520	425	3,364,827	1.06
Business Saver's Switch	12	\$37,213	44	108	1.28
Peak and Energy Control	1	\$10,000	102	3,707	4.71
Business Segment Total	183	\$436,733	571	3,368,641	1.08
Residential Segment					
Home Lighting	3,225	\$109,598	162	1,480,452	1.22
Residential Saver's Switch	770	\$187,913	565	1,486	3.28
Consumer Education	68,000	\$27,165	-	-	-
Residential Segment Total	71,995	\$324,676	727	1,481,938	1.85
Planning Segment					
Regulatory Affairs	-	\$13,000	-	-	-
Planning Segment Total	-	\$13,000	-	-	-
PORTFOLIO TOTAL	72,178	\$774,408	1,299	4,850,580	1.23

Service of Filings

We request that communications regarding this Application be directed to:

Carl Cronin
Records Analyst
Xcel Energy Services Inc.
414 Nicollet Mall, 401-8
Minneapolis, MN 55401
(612) 330-5500
Regulatory.Records@xcelenergy.com

CONCLUSION

In summary, the Company respectfully requests that the Commission:

- Approve the Company's 2016 DSM Tracker account;
- Approve the incentive of \$232,512 earned for 2016 program performance;
- Approve the proposed 2018 electric DSM Adjustment Factor of \$0.000515 per kWh; and
- Approve the proposed 2018 DSM Plan.

We look 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: April 28, 2017

Xcel Energy

A handwritten signature in black ink that reads "Steve Kolbeck". The signature is fluid and cursive, with a large loop at the beginning of the word "Steve".

By:

Steve Kolbeck
Principal Manager –South Dakota

Full Executive Summary Table - 2016 Actual Achievements																		
	GOAL				ACTUAL										TEST RESULTS			
	Participants	Electric Budget	Generator kW	Generator kWh	Participants	% of Goal	Electric Spend	% of Goal	Generator kW	% of Goal	Generator kWh	Lifetime years	Lifetime kWh	% of Goal	Part Ratio	Utility Ratio	RIM Ratio	TRC Ratio
2016 Business Segment	2,565	\$ 433,191	1,448	8,367,645	183	7%	\$ 485,750	112%	645	45%	3,493,233	17.30	60,432,937	42%	1.74	5.91	0.80	1.32
	20	\$ 30,950	30	224	70	350%	\$ 48,239	156%	176	588%	1,313	15.00	19,695	586%	INF	3.73	3.27	3.73
	1	\$ 6,000	101	2,612	1	100%	\$ 2,178	36%	158	156%	5,815	5.00	29,075	223%	INF	43.17	0.71	43.17
	2,586	\$ 470,141	1,579	8,370,481	254	10%	\$ 536,167	114%	979	62%	3,500,361	17.30	60,481,706	42%	1.81	5.87	0.83	1.40
Residential Segment																		
	12	\$ 25,050	19	102,398	11	92%	\$ 16,940	68%	29	152%	68,269	20.00	1,365,380	67%	0.71	6.01	1.43	1.02
	7,851	\$ 56,035	108	828,699	18,416	235%	\$ 74,962	134%	144	133%	1,162,819	12.80	14,884,078	140%	2.21	10.11	1.21	2.32
	758	\$ 181,650	502	3,954	628	83%	\$ 168,133	93%	431	86%	3,493	15.00	52,400	88%	INF	3.60	1.00	3.60
Consumer Education	68,000	\$ 27,165	0	0	71,500	105%	\$ 15,243	56%	0		0				-	-	-	-
Residential Segment Total	76,621	\$ 289,900	629	935,051	90,555	118%	\$ 275,279	95%	604	96%	1,234,581	13.20	16,301,857	132%	2.99	5.32	1.11	2.37
Planning Segment																		
	0	\$ 15,000	0	0	-	0%	\$ 8,472	56%	-	-	-	-	-	-	-	-	-	-
	0	\$ 15,000	0	0	-	0%	\$ 8,472	56%	-	-	-	-	-	-	-	-	-	-
PORTFOLIO TOTAL	79,207	\$ 775,041	2,208	9,305,532	90,809	115%	\$ 819,918	106%	1582	72%	4,734,942	16.30	76,783,563	51%	1.99	5.62	0.90	1.59

LIGHTING EFFICIENCY						2016		ELECTRIC		ACTUAL		
2016 Net Present Cost Benefit Summary Analysis For All Participants												
Input Summary and Totals												
Program "Inputs" per Customer kW												
Benefits	Lifetime (Weighted on Generator kWh)					A					17.3 years	
	Annual Hours					B					8760	
	Gross Customer kW					C					1 kW	
	Generator Peak Coincidence Factor					D					69.40%	
	Gross Load Factor at Customer					E					43.35%	
	Transmission Loss Factor (Energy)					F					5.330%	
	Transmission Loss Factor (Demand)					G					6.2900%	
	Societal Net Benefit (Cost)					H					\$920	
	Program Summary per Participant											
	Gross kW Saved at Customer					I						4.76 kW
Net coincident kW Saved at Generator					(I x D) / (1 - G)						3.52 kW	
Gross Annual kWh Saved at Customer					(B x E x I)						18,071 kWh	
Net Annual kWh Saved at Generator					(B x E x I) / (1 - F)						19,089 kWh	
Program Summary All Participants												
Total Participants					J						183	
Total Budget					K						\$485,750	
Gross kW Saved at Customer					(J x I)						870.77 kW	
Net coincident kW Saved at Generator					(I x D) / (1 - G) x J						645 kW	
Gross Annual kWh Saved at Customer					(B x E x I) x J						3,307,044 kWh	
Net Annual kWh Saved at Generator					((B x E x I) / (1 - F)) x J						3,493,233 kWh	
Societal Net Benefits					(J x I x H)						\$801,218	
Utility Program Cost per kWh Lifetime												
Utility Program Cost per kW at Gen											\$0.0080	
											\$753	

Benefits	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Total Resource Test (\$Total)	Societal Test (\$Total)
	Avoided Revenue Requirements				
	N/A	\$677,114	\$677,114	\$677,114	\$677,114
	N/A	\$256,728	\$256,728	\$256,728	\$256,728
	N/A	\$1,937,751	\$1,937,751	\$1,937,751	\$1,937,751
	N/A	N/A	N/A	N/A	\$0
	N/A	\$2,871,594	\$2,871,594	\$2,871,594	\$2,871,594
	Participant Benefits				
	\$3,108,410	N/A	N/A	N/A	N/A
\$464,854	N/A	N/A	\$464,854	\$464,854	
\$0	N/A	N/A	\$0	\$0	
\$0	N/A	N/A	\$0	\$0	
\$3,573,264	N/A	N/A	\$464,854	\$464,854	
Total Benefits					
\$3,573,264	\$2,871,594	\$2,871,594	\$3,336,448	\$3,336,448	
Costs					
Utility Project Costs					
N/A	\$0	\$0	\$0	\$0	
N/A	\$20,896	\$20,896	\$20,896	\$20,896	
N/A	\$0	\$0	\$0	\$0	
N/A	\$0	\$0	\$0	\$0	
N/A	\$464,854	\$464,854	\$464,854	\$464,854	
N/A	\$0	\$0	\$0	\$0	
N/A	\$485,750	\$485,750	\$485,750	\$485,750	
Utility Revenue Reduction					
N/A	N/A	\$3,108,410	N/A	N/A	
N/A	N/A	\$3,108,410	N/A	N/A	
Participant Costs					
\$1,952,700	N/A	N/A	\$1,952,700	\$1,952,700	
\$96,780	N/A	N/A	\$96,780	\$96,780	
\$2,049,480	N/A	N/A	\$2,049,480	\$2,049,480	
Total Costs					
\$2,049,480	\$485,750	\$3,594,159	\$2,535,229	\$2,535,229	
Net Benefit (Cost)					
\$1,523,784	\$2,385,844	(\$722,566)	\$801,218	\$801,218	
1.74	5.91	0.80	1.32	1.32	

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures

BUSINESS SAVER'S SWITCH										2016		ELECTRIC		ACTUAL	
2016 Net Present Cost Benefit Summary Analysis For All Participants										Input Summary and Totals					
										Program "Inputs" per Customer kW					
Lifetime (Weighted on Generator kWh)				A		15.0 years		8760							
Annual Hours				B											
Gross Customer kW				C		1 kW									
Generator Peak Coincidence Factor				D		18.52%									
Gross Load Factor at Customer				E		0.02%									
Transmission Loss Factor (Energy)				F		5.330%									
Transmission Loss Factor (Demand)				G		6.290%									
Societal Net Benefit (Cost)				H										\$148	
										Program Summary per Participant					
Gross kW Saved at Customer				I		12.75 kW									
Net coincident kW Saved at Generator				(I x D) / (1 - G)		2.52 kW									
Gross Annual kWh Saved at Customer				(B x E x I)		18 kWh									
Net Annual kWh Saved at Generator				(B x E x I) / (1 - F)		19 kWh									
										Program Summary All Participants					
Total Participants				J		70									
Total Budget				K		\$48,239									
Gross kW Saved at Customer				(J x I)		892.71 kW									
Net coincident kW Saved at Generator				(I x D) / (1 - G) x J		176 kW									
Gross Annual kWh Saved at Customer				(B x E x I) x J		1,243 kWh									
Net Annual kWh Saved at Generator				((B x E x I) / (1 - F)) x J		1,313 kWh									
Societal Net Benefits				(J x I x H)		\$131,892									
										Utility Program Cost per kWh Lifetime					
Utility Program Cost per kW at Gen						\$2,493									
										Utility Program Cost per kW at Gen					
						\$273									

Benefits							
		Rate		Impact		Total	
		Test		Test		Test	
		(\$Total)		(\$Total)		(\$Total)	
Avoided Revenue Requirements							
Generation		N/A	\$178,962	\$178,962	\$178,962	\$178,962	\$178,962
T & D		N/A	\$0	\$0	\$0	\$0	\$0
Marginal Energy		N/A	\$1,169	\$1,169	\$1,169	\$1,169	\$1,169
Environmental Externality		N/A	N/A	N/A	N/A	\$0	\$0
Subtotal		N/A	\$180,131	\$180,131	\$180,131	\$180,131	\$180,131
Participant Benefits							
Bill Reduction - Electric		\$6,822	N/A	N/A	N/A	N/A	N/A
Rebates from Xcel Energy		\$0	N/A	N/A	\$0	\$0	\$0
Incremental Capital Savings		\$0	N/A	N/A	\$0	\$0	\$0
Incremental O&M Savings		\$0	N/A	N/A	\$0	\$0	\$0
Subtotal		\$6,822	N/A	N/A	\$0	\$0	\$0
Total Benefits		\$6,822	\$180,131	\$180,131	\$180,131	\$180,131	\$180,131
Costs							
Utility Project Costs							
Customer Services		N/A	\$0	\$0	\$0	\$0	\$0
Utility Administration		N/A	\$48,239	\$48,239	\$48,239	\$48,239	\$48,239
Advertising & Promotion		N/A	\$0	\$0	\$0	\$0	\$0
Measurement & Verification		N/A	\$0	\$0	\$0	\$0	\$0
Rebates		N/A	\$0	\$0	\$0	\$0	\$0
Other		N/A	\$0	\$0	\$0	\$0	\$0
Subtotal		N/A	\$48,239	\$48,239	\$48,239	\$48,239	\$48,239
Utility Revenue Reduction							
Revenue Reduction - Electric		N/A	N/A	\$6,822	N/A	N/A	N/A
Subtotal		N/A	N/A	\$6,822	N/A	N/A	N/A
Participant Costs							
Incremental Capital Costs		\$0	N/A	N/A	\$0	\$0	\$0
Incremental O&M Costs		\$0	N/A	N/A	\$0	\$0	\$0
Subtotal		\$0	N/A	N/A	\$0	\$0	\$0
Total Costs		\$0	\$48,239	\$55,061	\$48,239	\$48,239	\$48,239

Net Benefit (Cost)							
		\$6,822	\$131,892	\$125,070	\$131,892	\$131,892	\$131,892
Benefit/Cost Ratio							
		INF	3.73	3.27	3.73	3.73	3.73

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures

PEAK AND ENERGY CONTROL										2016		ELECTRIC		ACTUAL	
2016 Net Present Cost Benefit Summary Analysis For All Participants										Input Summary and Totals					
										Program "Inputs" per Customer kW					
										Lifetime (Weighted on Generator kWh)					
										Annual Hours					
										Gross Customer kW					
										Generator Peak Coincidence Factor					
										Gross Load Factor at Customer					
										Transmission Loss Factor (Energy)					
										Transmission Loss Factor (Demand)					
										Societal Net Benefit (Cost)					
										Program Summary per Participant					
										Gross kW Saved at Customer					
										Net coincident kW Saved at Generator					
										Gross Annual kWh Saved at Customer					
										Net Annual kWh Saved at Generator					
										Program Summary All Participants					
										Total Participants					
										Total Budget					
										Gross kW Saved at Customer					
										Net coincident kW Saved at Generator					
										Gross Annual kWh Saved at Customer					
										Net Annual kWh Saved at Generator					
										Societal Net Benefits					
										Utility Program Cost per kWh Lifetime					
										Utility Program Cost per kW at Gen					

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures

BUSINESS SEGMENT TOTAL									
2016 Net Present Cost Benefit Summary Analysis For All Participants									
Input Summary and Totals					2016	ELECTRIC			ACTUAL
Program "Inputs" per Customer kW									
Benefits	Lifetime (Weighted on Generator kWh)				A				17.3 years
	Annual Hours				B				8760
	Gross Customer kW				C				1 kW
	Generator Peak Coincidence Factor				D				44.22%
	Gross Load Factor at Customer				E				18.24%
	Transmission Loss Factor (Energy)				F				5.330%
	Transmission Loss Factor (Demand)				G				6.2909%
	Societal Net Benefit (Cost)				H				\$494
Program Summary per Participant									
Gross kW Saved at Customer				I				8.17 kW	
Net coincident kW Saved at Generator				(I x D) / (1 - G)				3.85 kW	
Gross Annual kWh Saved at Customer				(B x E x I)				13,046 kWh	
Net Annual kWh Saved at Generator				(B x E x I) / (1 - F)				13,781 kWh	
Program Summary All Participants									
Total Participants				J				254	
Total Budget				K				\$536,167	
Gross kW Saved at Customer				(J x I)				2,074.48 kW	
Net coincident kW Saved at Generator				(I x D) / (1 - G) x J				979 kW	
Gross Annual kWh Saved at Customer				(B x E x I) x J				3,313,792 kWh	
Net Annual kWh Saved at Generator				((B x E x I) / (1 - F)) x J				3,500,361 kWh	
Societal Net Benefits				(J x I x H)				\$1,024,963	
Utility Program Cost per kWh Lifetime									
Utility Program Cost per kW at Gen								\$0.0088	

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures

GROUND SOURCE HEAT PUMP										2016		ELECTRIC		ACTUAL	
2016 Net Present Cost Benefit Summary Analysis For All Participants										Input Summary and Totals					
										Program "Inputs" per Customer kW					
				Participant Test		Utility Test		Rate Impact Test		Total Resource Test		Societal Test			
				(\$Total)		(\$Total)		(\$Total)		(\$Total)		(\$Total)			
Benefits															
Avoided Revenue Requirements															
Generation				N/A		\$35,126		\$35,126		\$35,126		\$35,126		200 years	
T & D				N/A		\$13,318		\$13,318		\$13,318		\$13,318		8760	
Marginal Energy				N/A		\$53,437		\$53,437		\$53,437		\$53,437		1 kW	
Environmental Externality				N/A		N/A		N/A		N/A		N/A		90.00%	
Subtotal				N/A		\$101,881		\$101,881		\$101,881		\$101,881		24.57%	
Participant Benefits															
Bill Reduction - Electric				\$54,368		N/A		N/A		N/A		N/A		7.280%	
Rebates from Xcel Energy				\$16,200		N/A		N/A		\$16,200		\$16,200		8.300%	
Incremental Capital Savings				\$0		N/A		N/A		\$0		\$0		\$81	
Incremental O&M Savings				\$0		N/A		N/A		\$0		\$0			
Subtotal				\$70,568		N/A		N/A		\$16,200		\$16,200			
Costs															
Total Benefits				\$70,568		\$101,881		\$101,881		\$118,081		\$118,081		11	
										Program Summary All Participants					
Total Participants										J		K		\$16,940	
Total Budget												(J x I)		29.41 kW	
Gross kW Saved at Customer												(J x I)		29 kW	
Net coincident kW Saved at Generator												(I x D) / (1 - G) x J		63,299 kWh	
Gross Annual kWh Saved at Customer												(B x E x I) x J		68,269 kWh	
Net Annual kWh Saved at Generator												((B x E x I) / (1 - F)) x J		\$2,377	
Societal Net Benefits												(J x I x H)			
										Utility Program Cost per kWh Lifetime					
Utility Program Cost per kW at Gen														\$0.0124	
Utility Program Cost per kW at Gen														\$587	

GROUND SOURCE HEAT PUMP						
2016 Net Present Cost Benefit Summary Analysis For All Participants						
	Participant Test	Utility Test	Rate Impact Test	Total Resource Test	Societal Test	
Benefits						
Avoided Revenue Requirements						
Generation	N/A	\$35,126	\$35,126	\$35,126	\$35,126	\$35,126
T & D	N/A	\$13,318	\$13,318	\$13,318	\$13,318	\$13,318
Marginal Energy	N/A	\$53,437	\$53,437	\$53,437	\$53,437	\$53,437
Environmental Externality	N/A	N/A	N/A	N/A	N/A	\$0
Subtotal	N/A	\$101,881	\$101,881	\$101,881	\$101,881	\$101,881
Participant Benefits						
Bill Reduction - Electric	\$54,368	N/A	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$16,200	N/A	N/A	\$16,200	\$16,200	\$16,200
Incremental Capital Savings	\$0	N/A	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	N/A	\$0	\$0
Subtotal	\$70,568	N/A	N/A	\$16,200	\$16,200	\$16,200
Total Benefits	\$70,568	\$101,881	\$101,881	\$118,081	\$118,081	\$118,081
Costs						
Utility Project Costs						
Customer Services	N/A	\$0	\$0	\$0	\$0	\$0
Utility Administration	N/A	\$740	\$740	\$740	\$740	\$740
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$0	\$0	\$0	\$0	\$0
Rebates	N/A	\$16,200	\$16,200	\$16,200	\$16,200	\$16,200
Other	N/A	\$0	\$0	\$0	\$0	\$0
Subtotal	N/A	\$16,940	\$16,940	\$16,940	\$16,940	\$16,940
Utility Revenue Reduction						
Revenue Reduction - Electric	N/A	N/A	\$54,368	N/A	N/A	N/A
Subtotal	N/A	N/A	\$54,368	N/A	N/A	N/A
Participant Costs						
Incremental Capital Costs	\$98,764	N/A	N/A	\$98,764	\$98,764	\$98,764
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0	\$0
Subtotal	\$98,764	N/A	N/A	\$98,764	\$98,764	\$98,764
Total Costs	\$98,764	\$16,940	\$71,308	\$115,704	\$115,704	\$115,704
Net Benefit (Cost)						
Net Benefit (Cost)	(\$28,196)	\$84,941	\$30,573	\$2,377	\$2,377	\$2,377
Benefit/Cost Ratio	0.71	6.01	1.43	1.02	1.02	1.02

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures

RESIDENTIAL HOME LIGHTING										2016		ELECTRIC		ACTUAL
2016 Net Present Cost Benefit Summary Analysis For All Participants														
Input Summary and Totals														
Program "Inputs" per Customer kW														
Lifetime (Weighted on Generator kWh)											A			12.8 years
Annual Hours											B			8760
Gross Customer kW											C			1 kW
Generator Peak Coincidence Factor											D			12.47%
Gross Load Factor at Customer											E			11.67%
Transmission Loss Factor (Energy)											F			6.868%
Transmission Loss Factor (Demand)											G			8.184%
Societal Net Benefit (Cost)											H			\$437
Program Summary per Participant														
Gross kW Saved at Customer											I			0.06 kW
Net coincident kW Saved at Generator											$(I \times D) / (1 - G)$			0.01 kW
Gross Annual kWh Saved at Customer											$(B \times E \times I)$			59 kWh
Net Annual kWh Saved at Generator											$(B \times E \times I) / (1 - F)$			63 kWh
Program Summary All Participants														
Total Participants											J			18,416
Total Budget											K			\$74,962
Gross kW Saved at Customer											$(J \times I)$			1,059.35 kW
Net coincident kW Saved at Generator											$(I \times D) / (1 - G) \times J$			144 kW
Gross Annual kWh Saved at Customer											$(B \times E \times I) \times J$			1,082,955 kWh
Net Annual kWh Saved at Generator											$((B \times E \times I) / (1 - F)) \times J$			1,162,819 kWh
Societal Net Benefits											$(J \times I \times H)$			\$463,045
Utility Program Cost per kWh Lifetime														
Utility Program Cost per kW at Gen														\$0.0050
														\$521

Benefits														
Avoided Revenue Requirements														
Generation														
T & D														
Marginal Energy														
Environmental Externality														
Subtotal														
Participant Benefits														
Bill Reduction - Electric														
Rebates from Xcel Energy														
Incremental Capital Savings														
Incremental O&M Savings														
Subtotal														
Total Benefits														
Costs														
Utility Project Costs														
Customer Services														
Utility Administration														
Advertising & Promotion														
Measurement & Verification														
Rebates														
Other														
Subtotal														
Utility Revenue Reduction														
Revenue Reduction - Electric														
Subtotal														
Participant Costs														
Incremental Capital Costs														
Incremental O&M Costs														
Subtotal														
Total Costs														

Net Benefit (Cost)	\$332,912	\$682,577	\$130,133	\$463,045	\$463,045
Benefit/Cost Ratio	2.21	10.11	1.21	2.32	2.32

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures

RESIDENTIAL SAVER'S SWITCH										2016		ELECTRIC		ACTUAL	
2016 Net Present Cost Benefit Summary Analysis For All Participants										Input Summary and Totals					
										Program "Inputs" per Customer kW					
		Participant Test		Utility Test		Rate Impact Test		Total Resource Test		Societal Test					
		(\$Total)		(\$Total)		(\$Total)		(\$Total)		(\$Total)					
Benefits															
Avoided Revenue Requirements															
Generation		N/A		\$436,969		\$436,969		\$436,969		\$436,969		A		15.0 years	
T & D		N/A		\$165,676		\$165,676		\$165,676		\$165,676		B		8760	
Marginal Energy		N/A		\$2,487		\$2,487		\$2,487		\$2,487		C		1 kW	
Environmental Externality		N/A		N/A		N/A		N/A		\$0		D		22.00%	
Subtotal		N/A		\$605,131		\$605,131		\$605,131		\$605,131		E		0.02%	
Participant Benefits															
Bill Reduction - Electric		\$439,337		N/A		N/A		N/A		N/A		F		7.280%	
Rebates from Xcel Energy		\$0		N/A		N/A		N/A		\$0		G		8.300%	
Incremental Capital Savings		\$0		N/A		N/A		N/A		\$0		H		\$243	
Incremental O&M Savings		\$0		N/A		N/A		N/A		\$0					
Subtotal		\$439,337		N/A		N/A		\$0		\$0					
Total Benefits		\$439,337		\$605,131		\$605,131		\$605,131		\$605,131		J		628	
Costs															
Utility Project Costs															
Customer Services		N/A		\$0		\$0		\$0		\$0		K		\$168,133	
Utility Administration		N/A		\$168,133		\$168,133		\$168,133		\$168,133		(J x I)		1,795.26 kW	
Advertising & Promotion		N/A		\$0		\$0		\$0		\$0		(I x D) / (1 - G) x J		431 kW	
Measurement & Verification		N/A		\$0		\$0		\$0		\$0		(B x E x I) x J		3,239 kWh	
Rebates		N/A		\$0		\$0		\$0		\$0		((B x E x I) / (1 - F)) x J		3,493 kWh	
Other		N/A		\$0		\$0		\$0		\$0		(J x I x H)		\$436,998	
Subtotal		N/A		\$168,133		\$168,133		\$168,133		\$168,133					
Utility Revenue Reduction															
Revenue Reduction - Electric		N/A		N/A		N/A		N/A		N/A					
Subtotal		N/A		N/A		\$439,337		N/A		N/A					
Participant Costs															
Incremental Capital Costs		\$0		N/A		N/A		N/A		\$0					
Incremental O&M Costs		\$0		N/A		N/A		N/A		\$0					
Subtotal		\$0		N/A		N/A		N/A		\$0					
Total Costs		\$0		\$168,133		\$607,470		\$168,133		\$168,133					
Net Benefit (Cost)															
		\$439,337		\$436,998		(\$2,339)		\$436,998		\$436,998					
Benefit/Cost Ratio		INF		3.60		1.00		3.60		3.60					

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures

RESIDENTIAL SEGMENT TOTAL										2016		ELECTRIC		ACTUAL	
2016 Net Present Cost Benefit Summary Analysis For All Participants										Input Summary and Totals					
										Program "Inputs" per Customer kW					
										Lifetime (Weighted on Generator kWh)					
										Annual Hours					
										Gross Customer kW					
										Generator Peak Coincidence Factor					
										Gross Load Factor at Customer					
										Transmission Loss Factor (Energy)					
										Transmission Loss Factor (Demand)					
										Societal Net Benefit (Cost)					
										Program Summary per Participant					
										Gross kW Saved at Customer					
										Net coincident kW Saved at Generator					
										Gross Annual kWh Saved at Customer					
										Net Annual kWh Saved at Generator					
										Program Summary All Participants					
										Total Participants					
										Total Budget					
										Gross kW Saved at Customer					
										Net coincident kW Saved at Generator					
										Gross Annual kWh Saved at Customer					
										Net Annual kWh Saved at Generator					
										Societal Net Benefits					
										Utility Program Cost per kWh Lifetime					
										Utility Program Cost per kW at Gen					
										</					

PORTFOLIO TOTAL										2016		ELECTRIC		ACTUAL												
2016 Net Present Cost Benefit Summary Analysis For All Participants																										
Input Summary and Totals																										
Program "Inputs" per Customer kW																										
Benefits	Lifetime (Weighted on Generator kWh)			A		B		C		D		E		F		G		H								
	Annual Hours			8760		1 kW		16.3 years		8760		1 kW		29.54%		10.28%		5.737%		7.444%		\$384				
	Gross Customer kW																									
	Generator Peak Coincidence Factor																									
	Gross Load Factor at Customer																									
	Transmission Loss Factor (Energy)																									
	Transmission Loss Factor (Demand)																									
	Societal Net Benefit (Cost)																									
Program Summary per Participant																										
Gross kW Saved at Customer			I		(I x D) / (1 - G)		(B x E x I) / (1 - F)		J		K		90,809		\$819,918		4,958.51 kW		1,582 kW		4,463,283 kWh		4,734,942 kWh		\$1,903,668	
Net coincident kW Saved at Generator																										
Gross Annual kWh Saved at Customer																										
Net Annual kWh Saved at Generator																										
Societal Net Benefits																										
Utility Program Cost per kWh Lifetime																										
Utility Program Cost per kW at Gen																										
Program Summary All Participants																										
Total Participants																										
Total Budget																										
Gross kW Saved at Customer																										
Net coincident kW Saved at Generator																										
Gross Annual kWh Saved at Customer																										
Net Annual kWh Saved at Generator																										
Societal Net Benefits																										
Utility Program Cost per kWh Lifetime																										
Utility Program Cost per kW at Gen																										

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures

<i>BUSINESS</i>	
<i>Lighting Efficiency</i>	
Wall mount occupancy sensor - 50 Watts to 300 Watts Controlled Load	\$ 15.00
Wall mount occupancy sensor - Greater than 300 Watts Controlled Load	\$ 25.00
Ceiling mount occupancy sensor - 50 Watts to 300 Watts Controlled Load	\$ 30.00
Ceiling mount occupancy sensor - Greater than 300 Watts Controlled Load	\$ 40.00
LED AREA LIGHTING	\$ 35.00
LED EXTERIOR LIGHTING	\$ 175.00
Exit sign retrofit and replacement	\$ 25.00
LED Interior Lamp < 5W Energy Star Rated	\$ 7.00
LED Interior Lamp Greater than 5W to 10W Energy Star Rated	\$ 12.00
LED Interior Lamp Greater than 10W to 20W Energy Star Rated	\$ 15.00
LED Interior Screw In Fixture Retrofit	\$ 15.00
LED Interior Fixture 25 Watts or Less Energy Star Rated	\$ 35.00
LED Interior Fixture Greater than 25 Watts to 50 Watts Energy Star Rated	\$ 50.00
LED Troffers 2x2 - Retrofit	\$ 50.00
LED Troffers 2x4 - Retrofit	\$ 50.00
LED Troffers 1x4 - Retrofit	\$ 50.00
LED Troffers 2x4 Retrofit Kit - Retrofit	\$ 30.00
LED Troffers 2x2 Retrofit Kit - Retrofit	\$ 30.00
LED Troffers 1x4 Retrofit Kit - Retrofit	\$ 30.00
Prescriptive Retrofit Lighting - LED Refrigerated Case Lighting	\$ 100.00
Parking Garage and Exterior LED Wall Packs less than or equal to 150 Watts	\$ 75.00
Exterior LED Canopy and Soffit Fixtures from 25 watts to 150 Watts	\$ 175.00

<i>RESIDENTIAL</i>	
<i>Home Lighting</i>	
Residential Home Lighting 2016	\$ 1.25
Residential Home Lighting 2016 Non EISA	\$ 3.00
Residential Home Lighting 2016 LEDs	\$ 3.50
Residential Home Lighting 2016 LEDs Non EISA	\$ 7.50

PUBLIC

**Xcel Energy
South Dakota Capital Structure
Carrying Charge Calculation**

**State of South Dakota Jurisdiction
2014 Rate Case-Docket EL-14-058
Base Assumptions**

<u>Capital Structure:</u>	<u>Percent</u>	<u>Cost</u>	<u>Weighted Cost</u>
Long-term Debt	[CONFIDENTIAL DATA BEGINS HERE]		
Short-term Debt			
Perferred Stock			
Common Equity			
			7.22%

<u>Weighted Cost of Capital</u>		
Equity	[CONFIDENTIAL DATA BEGINS HERE]	
Debt		
Total		
Weighted Cost of Capital		7.22%

Book Depreciation Rate	30 years	3.33%
Tax Depreciation Life - MACRS	20 years	
Composite SD Tax Rate =	35.0000%	
Composite Company Tax Rate =	40.8481%	
Property Tax Exempt =	0.000%	

Use these values beginning June 1, 2015:

(b) Composite SD Tax Rate 35.0000%

(c) Carrying Charge Rate =

[CONFIDENTIAL DATA BEGINS HERE]

CONFIDENTIAL DATA ENDS HERE]

DSM Cost Recovery & Incentive Mechanism - Total

2016	January Actual	February Actual	March Actual	April Actual	May Actual	June Actual	July Actual	August Actual	September Actual	October Actual	November Actual	December Actual	Total
[CONFIDENTIAL DATA BEGINS]													
1. Beg. Balance													
2. DSM Program Expenditures													
3. Accrued Incentive													
4. Total Expenditures + Incentive (Lines 2 + 3)													
5. Calendar Month Sales Volume (MW/h)													
6. DSM Adjustment Factor (\$/MW/h)													
7. Cost and Incentive Recovery													
8. Sub-Balance (Over)/Under Recovery (Sum Lines 1 - 3, minus Line 7)													
9. Accumulated Deferred Income Tax (Line 8 x 35%)													
10. Net Investment (Line 8 - 9)													
11. Carrying Charge Rate													
12. Carrying Charge (Line 10 x Line 11)													
13. End of Month Balance (over)/under recovered (Line 8 + 12)													
													[CONFIDENTIAL DATA ENDS]

Supporting Documentation for Updated DSM Cost Adjustment Factor

The following is information specified in South Dakota Administrative Rule 20:10:13:26 regarding the updated DSM Cost Adjustment Factor:

(1) Name and address of the public utility;

Xcel Energy
500 West Russell Street
Sioux Falls, South Dakota 57104
(605) 339-8350

(2) Section and sheet number of tariff schedule;

Xcel Energy proposes to update DSM Rate tariff sheet number 73 in Section 5 of the Xcel Energy South Dakota Electric Rate Book. Pages 6-9 of this attachment include the proposed tariff sheets with the updated DSM Rate.

(3) Description of the change;

The proposed updated DSM Rate is designed to true up the cost recovery, which is over our forecasted budget in the time period of 2016-2017 timeframe, as well as recover all forecasted 2018 DSM expenditures and incentives.

(4) Reason for the change;

As proposed in the South Dakota DSM Plan and described in the DSM Cost Adjustment Factor tariff sheet, the Company plans to update the DSM Cost Adjustment Factor on an annual basis in the May 1 Status Report filing. The updated DSM Rate is designed to true up any over-recovery or under-recovery that exists in the tracker as well as recover the forecasted DSM expenditures and incentives for the upcoming year.

(5) Present rate;

Pursuant to the Commission's December 12, 2016 Order,¹ Xcel Energy implemented the approved rate of \$0.000504 per kWh effective January 1, 2017.

¹ Docket No. EL 16-018

(6) Proposed rate;

Xcel Energy requests a new DSM Cost Adjustment Factor of \$0.000515 per customer kWh.

(7) Proposed effective date of modified rate;

Xcel Energy requests this new DSM Cost Adjustment Factor of \$0.000515 per customer kWh become effective with the first billing cycle of January 2018. We request this rate remain in effect through December 2018 or until the Commission approves a new DSM Cost Adjustment Factor.

(8) Approximation of annual amount of increase or decrease in revenue;

This new DSM Cost Adjustment Factor of \$0.000515 per customer kWh is an increase of \$0.000011 per kWh or two percent.

(9) Points affected;

The proposed updated DSM Rate would be applicable to all areas served by Xcel Energy in South Dakota.

(10) Estimation of the number of customers whose cost of service will be affected and annual amounts of either increases or decreases, or both, in cost of service to those customers;

The proposed electric tariff will apply to all customers throughout all customer classes as described within the filing. Xcel Energy presently serves just over 91,995 electric customers in 36 communities in eastern South Dakota.

(11) Statement of facts, expert opinions, documents, and exhibits to support the proposed changes.

A narrative for the calculation of the updated rate is included in the DSM Cost Adjustment Factor Report section of this filing. The following pages of this attachment include the forecasted 2017 and 2018 DSM Trackers, which are referenced in the narrative, along with the proposed customer bill insert message and the proposed updated tariff sheets in both redline and clean versions.

Table 1: 2017 DSM Tracker Forecast, With Cost Recovery in 2017

Northern States Power Company State of South Dakota- Electric Utility DSM Cost Recovery & Incentive Mechanism - Total 2017 Forecast													
2017 EXPENSES	January Actual	February Actual	March Actual	April Forecast	May Forecast	June Forecast	July Forecast	August Forecast	September Forecast	October Forecast	November Forecast	December Forecast	Total
1. Balance													
2. DSM Program Expenditures													
3. Total Incentive (Line 2 * 30%)													
4. Total Expenditures + Incentive (Line 2 + 3)													
RECOVERY													
5. DSM Adjustment Factor (\$/MWh)													
6. Calendar Month Sales Volume Forecast (MWh)													
7. Total Cost Recovery (Line 5*6)													
8. Sub-Balance (Over/Under Recovery) (Line 1 + 4 - 6)													
9. Accum Deferred Tax (Line 7 * 35%)													
10. Net Investment (Line 7 - 8)													
11. Carrying Charge Rate													
12. Carrying Charge (Line 9 * carrying charge)													
13. End of Month Balance (over)/under recovered (Line 8 + 12)													
													CONFIDENTIAL DATA ENDS

Northern States Power Company State of South Dakota- Electric Utility DSM Cost Recovery & Incentive Mechanism - Total 2018 Forecast													
	January	February	March	April	May	June	July	August	September	October	November	December	Total
2018 EXPENSES													
[CONFIDENTIAL DATA BEGINS]													
1 Balance													
2 DSM Program Expenditures													
3 Total Incentive (Line 2 * 30%)													
4 Total Expenditures + Incentive (Line 2 + 3)													
RECOVERY													
5 DSM Adjustment Factor (\$/MWh)													
6 Calendar Month Sales Volume Forecast (MWh)													
7 Total Cost Recovery													
8 Sub-Balance (Over/Under Recovery) (Line 1 + 4 - 6)													
9 Accum Deferred Tax (Line 7 * 35%)													
10 Net Investment (Line 7 - 8)													
11 Carrying Charge Rate													
12 Carrying Charge (Line 9 * carrying charge)													
13 End of Month Balance (Line 7 + 10)													
CONFIDENTIAL DATA ENDS!													

Proposed Customer Bill Onsert Language

DSM Cost Adjustment Factor Decrease

Effective January 1, 2018

Xcel Energy offers a variety of load management and demand side management (DSM) programs to our South Dakota customers to help them reduce their home's usage. The South Dakota Public Utilities Commission has approved a new Demand Side Management (DSM) Cost Adjustment Factor as a separate line item on your monthly electric bill to recover the cost of our load management and DSM programs. Beginning January 1, 2018, the rate factor will increase from \$0.000504 per kWh to \$0.000515 per kWh.

Residential Electric Service – Winter Month Bill Example

This chart provides a comparison of customer bills by applying the prior DSM rate vs. the new DSM rate.

	Prior Rates				New Rates				Amount of Bill Increase	Percent Increase
Usage (kWh)	Other Rates	Prior DSM Factor	Prior DSM	Prior Bill	Other Rates	New DSM Factor	New DSM	New Bill		
400	\$49.81	0.000504	\$0.20	\$50.01	\$49.81	0.000515	\$0.21	\$50.02	\$0.00	0.01%
500	\$60.20	0.000504	\$0.25	\$60.45	\$60.20	0.000515	\$0.26	\$60.46	\$0.01	0.01%
600	\$70.58	0.000504	\$0.30	\$70.88	\$70.58	0.000515	\$0.31	\$70.89	\$0.01	0.01%
750	\$86.17	0.000504	\$0.38	\$86.55	\$86.17	0.000515	\$0.39	\$86.56	\$0.01	0.01%
1000	\$112.14	0.000504	\$0.50	\$112.64	\$112.14	0.000515	\$0.52	\$112.66	\$0.01	0.01%
2000	\$214.35	0.000504	\$1.01	\$215.36	\$214.35	0.000515	\$1.03	\$215.38	\$0.02	0.01%

For more information

You may examine the new rate rider by visiting our website at xcelenergy.com/Company/Rates_&_Regulations. If you have further questions, please contact Xcel Energy at **1-800-895-4999**.

Legislative

Northern States Power Company, a Minnesota corporation
Minneapolis, MN 55401

PROPOSED

SOUTH DAKOTA ELECTRIC RATE BOOK - SDPUC NO. 2

DEMAND SIDE MANAGEMENT COST

Section No. 5

ADJUSTMENT FACTOR

~~4th~~^{5th} Revised Sheet No. 73
Cancelling ~~3rd~~^{4th} Revised Sheet No. 73

APPLICATION

Applicable to bills for electric service provided under the Company's retail rate schedules.

RIDER

There shall be included on each customer's monthly bill a Demand Side Management Cost Adjustment, which shall be calculated by multiplying the monthly applicable billing kilowatt hours (kWh) by the Demand Side Management Factor (DSM Factor). This Demand Side Management Cost Adjustment shall be calculated before city surcharge and sales tax.

DETERMINATION OF DSM FACTOR

A DSM Factor shall be calculated by dividing the forecasted balance of the DSM Tracker Account (Tracker), including any True Up, by the Forecasted Retail Sales for the Next Recovery Period. The DSM Factor shall be rounded to the nearest \$0.000001 per kWh.

The DSM Factor may be adjusted annually with approval of the South Dakota Public Utilities Commission (Commission). The DSM Factor is:

All Customers ~~\$0.000504~~^{\$0.000515} per kWh

DSM Tracker shall include all annual expenses, costs and incentives associated with demand side management programs and that are approved by the Commission. All revenues recovered pursuant to the Demand Side Management Cost Adjustment shall be credited to the Tracker.

Forecasted Retail Sales shall be the estimated total retail electric sales for the Next Recovery Period.

Next Recovery Period shall be that period that begins January 1 and ends December 31 following the Company's most recent May 1 filing.

TRUE-UP

True Up shall include the difference between the revenues received from customers and actual expenditures for the most recent recovery period ending December 31.

A True Up will be included in each annual May 1 filing beginning with the May 1, 2013 filing. The 2012 DSM Factor calculation will not include a True Up due to no previous cost or revenue activity prior to implementation of the Demand Side Management Cost Adjustment in 2012. Beginning with the Company's request submitted on May 1, 2013, the DSM Factor may include a True Up.

Date Filed: ~~04-29-16~~⁰⁵⁻⁰¹⁻¹⁷ By: Christopher B. Clark Effective Date: ~~01-01-17~~
President, Northern States Power Company, a Minnesota corporation
Docket No. ~~EL16-018~~^{EL17-} Order Date: ~~12-12-16~~

Non-Legislative

Northern States Power Company, a Minnesota corporation
Minneapolis, MN 55401

PROPOSED

SOUTH DAKOTA ELECTRIC RATE BOOK - SDPUC NO. 2

**DEMAND SIDE MANAGEMENT COST
ADJUSTMENT FACTOR**

Section No. 5
5th Revised Sheet No. 73
Cancelling 4th Revised Sheet No. 73

APPLICATION

Applicable to bills for electric service provided under the Company's retail rate schedules.

RIDER

There shall be included on each customer's monthly bill a Demand Side Management Cost Adjustment, which shall be calculated by multiplying the monthly applicable billing kilowatt hours (kWh) by the Demand Side Management Factor (DSM Factor). This Demand Side Management Cost Adjustment shall be calculated before city surcharge and sales tax.

DETERMINATION OF DSM FACTOR

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The DSM Factor may be adjusted annually with approval of the South Dakota Public Utilities Commission (Commission). The DSM Factor is:

All Customers	\$0.000515 per kWh
---------------	--------------------

I

DSM Tracker shall include all annual expenses, costs and incentives associated with demand side management programs and that are approved by the Commission. All revenues recovered pursuant to the Demand Side Management Cost Adjustment shall be credited to the Tracker.

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A True Up will be included in each annual May 1 filing beginning with the May 1, 2013 filing. The 2012 DSM Factor calculation will not include a True Up due to no previous cost or revenue activity prior to implementation of the Demand Side Management Cost Adjustment in 2012. Beginning with the Company's request submitted on May 1, 2013, the DSM Factor may include a True Up.

Date Filed:	05-01-17	By: Christopher B. Clark	Effective Date:
		President, Northern States Power Company, a Minnesota corporation	
Docket No.	EL17-		Order Date:

Executive Summary Table - 2018									
	Electric Participants	Electric Budget	Generator kW	Generator kWh	Participant Test Ratio	Utility Test Ratio	Ratepayer Impact Measure Test Ratio	TRC Ratio	
Business Segment									
Lighting Efficiency	170	\$ 389,520	425	3,364,827	2.15	4.91	0.50	1.06	
Business Saver's Switch	12	\$ 37,213	44	108	INF	1.28	0.64	1.28	
Peak and Energy Control	1	\$ 10,000	102	3,707	INF	4.71	1.80	4.71	
Business Segment Total	183	\$ 436,733	571	3,368,641	2.18	4.59	0.51	1.08	
Residential Segment									
Home Lighting	3,225	\$ 109,598	162	1,480,452	3.77	3.10	0.37	1.22	
Residential Saver's Switch	770	\$ 187,913	565	1,486	INF	3.28	0.86	3.28	
Consumer Education	68,000	\$ 27,165			-	-	-	-	
Residential Segment Total	71,995	\$ 324,676	727	1,481,938	5.99	2.95	0.57	1.85	
Planning Segment									
Regulatory Affairs	0	\$ 13,000	0	0					
Planning Segment Total	0	\$ 13,000	0	0					
PORTFOLIO TOTAL	72,178	\$ 774,408	1,299	4,850,580	2.63	3.83	0.53	1.23	

LIGHTING EFFICIENCY										2018		ELECTRIC		GOAL
2018 Net Present Cost Benefit Summary Analysis For All Participants														
Input Summary and Totals														
Program "Inputs" per Customer kW														
Lifetime (Weighted on Generator kWh)				A		18.3 years		A				18.3 years		
Annual Hours				B		8760		B				8760		
Gross Customer kW				C		1 kW		C				1 kW		
Generator Peak Coincidence Factor				D		55.82%		D				55.82%		
Gross Load Factor at Customer				E		51.88%		E				51.88%		
Transmission Loss Factor (Energy)				F		4.710%		F				4.710%		
Transmission Loss Factor (Demand)				G		7.380%		G				7.380%		
Societal Net Benefit (Cost)				H		\$174		H				\$174		
Program Summary per Participant														
Gross kW Saved at Customer				I		4.15 kW		I				4.15 kW		
Net coincident kW Saved at Generator				(I x D) / (1 - G)		2.50 kW		(B x E x I)				2.50 kW		
Gross Annual kWh Saved at Customer				(B x E x I)		18,861 kWh		(B x E x I) / (1 - F)				18,861 kWh		
Net Annual kWh Saved at Generator				(B x E x I) / (1 - F)		19,793 kWh						19,793 kWh		
Program Summary All Participants														
Total Participants				J		170		J				170		
Total Budget				K		\$389,520		K				\$389,520		
Gross kW Saved at Customer				(I x I)		706 kW		(I x I)				706 kW		
Net coincident kW Saved at Generator				(I x D) / (1 - G) x J		425 kW		(I x D) / (1 - G) x J				425 kW		
Gross Annual kWh Saved at Customer				(B x E x I) x J		3,206,344 kWh		(B x E x I) x J				3,206,344 kWh		
Net Annual kWh Saved at Generator				((B x E x I) / (1 - F)) x J		3,364,827 kWh		((B x E x I) / (1 - F)) x J				3,364,827 kWh		
Societal Net Benefits				(I x I x H)		\$122,599		(I x I x H)				\$122,599		
Utility Program Cost per kWh Lifetime														
Utility Program Cost per kW at Gen						\$0.0063		Utility Program Cost per kW at Gen				\$0.0063		
						\$916						\$916		

Benefits						
Participant		Rate		Total		Societal
Test	Test	Impact	Resource	Test	Test	Test
(\$Total)	(\$Total)	(\$Total)	(\$Total)	(\$Total)	(\$Total)	(\$Total)
Avoided Revenue Requirements						
Generation		N/A	\$312,189	\$312,189	\$312,189	\$312,189
T & D		N/A	\$190,166	\$190,166	\$190,166	\$190,166
Marginal Energy		N/A	\$1,409,222	\$1,409,222	\$1,409,222	\$1,409,222
Environmental Externality		N/A	N/A	N/A	N/A	\$0
Subtotal		N/A	\$1,911,578	\$1,911,578	\$1,911,578	\$1,911,578
Participant Benefits						
Bill Reduction - Electric		N/A	N/A	N/A	N/A	N/A
Rebates from Xcel Energy		N/A	\$373,290	\$373,290	\$373,290	\$373,290
Incremental Capital Savings		N/A	\$0	N/A	\$0	\$0
Incremental O&M Savings		N/A	\$0	N/A	\$0	\$0
Subtotal		N/A	\$3,816,935	N/A	\$373,290	\$373,290
Total Benefits		\$3,816,935	\$1,911,578	\$1,911,578	\$2,284,868	\$2,284,868
Costs						
Utility Project Costs		N/A	\$10,000	\$10,000	\$10,000	\$10,000
Customer Services		N/A	\$2,500	\$2,500	\$2,500	\$2,500
Utility Administration		N/A	\$3,730	\$3,730	\$3,730	\$3,730
Advertising & Promotion		N/A	\$0	\$0	\$0	\$0
Measurement & Verification		N/A	\$373,290	\$373,290	\$373,290	\$373,290
Rebates		N/A	\$0	\$0	\$0	\$0
Other		N/A	\$389,520	\$389,520	\$389,520	\$389,520
Subtotal		N/A	\$389,520	\$389,520	\$389,520	\$389,520
Utility Revenue Reduction						
Revenue Reduction - Electric		N/A	N/A	\$3,443,645	N/A	N/A
Subtotal		N/A	N/A	\$3,443,645	N/A	N/A
Participant Costs						
Incremental Capital Costs		\$1,698,596	N/A	N/A	\$1,698,596	\$1,698,596
Incremental O&M Costs		\$74,152	N/A	N/A	\$74,152	\$74,152
Subtotal		\$1,772,749	N/A	N/A	\$1,772,749	\$1,772,749
Total Costs		\$1,772,749	\$389,520	\$3,833,165	\$2,162,269	\$2,162,269

Net Benefit (Cost)		\$2,044,187	\$1,522,058	(\$1,921,588)	\$122,599
Benefit/Cost Ratio		2.15	4.91	0.50	1.06

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures

BUSINESS SAVER'S SWITCH										2018		ELECTRIC		GOAL	
2018 Net Present Cost Benefit Summary Analysis For All Participants										Input Summary and Totals					
										Program "Inputs" per Customer kW					
										Lifetime (Weighted on Generator kWh)	A	B	C	15.0 years	
										Annual Hours				8760	
										Gross Customer kW				1 kW	
										Generator Peak Coincidence Factor	D			20.00%	
										Gross Load Factor at Customer	E			0.01%	
										Transmission Loss Factor (Energy)	F			4.710%	
										Transmission Loss Factor (Demand)	G			7.380%	
										Societal Net Benefit (Cost)	H			\$51	
										Program Summary per Participant					
										Gross kW Saved at Customer	I			16.79 kW	
										Net coincident kW Saved at Generator		$(I \times D) / (1 - G)$		3.63 kW	
										Gross Annual kWh Saved at Customer		$(B \times E \times I)$		9 kWh	
										Net Annual kWh Saved at Generator		$(B \times E \times I) / (1 - F)$		9 kWh	
										Program Summary All Participants					
										Total Participants	J			12	
										Total Budget	K			\$37,213	
										Gross kW Saved at Customer		$(I \times I)$		201 kW	
										Net coincident kW Saved at Generator		$(I \times D) / (1 - G) \times J$		44 kW	
										Gross Annual kWh Saved at Customer		$(B \times E \times I) \times J$		103 kWh	
										Net Annual kWh Saved at Generator		$((B \times E \times I) / (1 - F)) \times J$		108 kWh	
										Societal Net Benefits		$(I \times I \times H)$		\$10,254	
										Utility Program Cost per kWh Lifetime					
										Utility Program Cost per kW at Gen				\$23.0528	
														\$855	

PEAK AND ENERGY CONTROL								2018	ELECTRIC		GOAL	
2018 Net Present Cost Benefit Summary Analysis For All Participants												
Input Summary and Totals												
Program "Inputs" per Customer kW												
Lifetime (Weighted on Generator kWh)			Annual Hours		Gross Customer kW		Generator Peak Coincidence Factor		Gross Load Factor at Customer		Transmission Loss Factor (Energy)	
Annual Hours			Gross Customer kW		Generator Peak Coincidence Factor		Gross Load Factor at Customer		Transmission Loss Factor (Energy)		Transmission Loss Factor (Demand)	
Societal Net Benefit (Cost)												
Program Summary per Participant												
Gross kW Saved at Customer												
Net coincident kW Saved at Generator												
Gross Annual kWh Saved at Customer												
Net Annual kWh Saved at Generator												
Program Summary All Participants												
Total Participants												
Total Budget												
Gross kW Saved at Customer												
Net coincident kW Saved at Generator												
Gross Annual kWh Saved at Customer												
Net Annual kWh Saved at Generator												
Societal Net Benefits												
Utility Program Cost per kWh Lifetime												
Utility Program Cost per kW at Gen												

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RESIDENTIAL HOME LIGHTING					2018		ELECTRIC		GOAL
2018 Net Present Cost Benefit Summary Analysis For All Participants									
Input Summary and Totals									
Program "Inputs" per Customer kW									
Lifetime (Weighted on Generator kWh)		A		B		C		5.7 years	
Annual Hours		D		E		F		8760	
Gross Customer kW		H		I		J		1 kW	
Generator Peak Coincidence Factor		K		L		M		11.70%	
Gross Load Factor at Customer		N		O		P		12.63%	
Transmission Loss Factor (Energy)		Q		R		S		5.136%	
Transmission Loss Factor (Demand)		T		U		V		8.512%	
Societal Net Benefit (Cost)		W		X		Y		\$60	
Program Summary per Participant									
Gross kW Saved at Customer		I		J		K		0.39 kW	
Net coincident kW Saved at Generator		L		M		N		0.05 kW	
Gross Annual kWh Saved at Customer		O		P		Q		435 kWh	
Net Annual kWh Saved at Generator		R		S		T		459 kWh	
Program Summary All Participants									
Total Participants		J		K		L		3,225	
Total Budget		M		N		O		\$109,598	
Gross kW Saved at Customer		P		Q		R		1,269 kW	
Net coincident kW Saved at Generator		S		T		U		162 kW	
Gross Annual kWh Saved at Customer		V		W		X		1,404,421 kWh	
Net Annual kWh Saved at Generator		Y		Z		AA		1,480,452 kWh	
Societal Net Benefits		BB		CC		DD		\$75,843	
Utility Program Cost per kWh Lifetime									
Utility Program Cost per kW at Gen		EE		FF		GG		\$0.0129	
GG		HH		II		JJ		\$675	
Participant		Rate		Total		Societal			
Test		Test		Test		Test			
(\$Total)		(\$Total)		(\$Total)		(\$Total)			
Benefits									
Avoided Revenue Requirements									
Generation		N/A		\$48,566		\$48,566		\$48,566	
T & D		N/A		\$29,401		\$29,401		\$29,401	
Marginal Energy		N/A		\$262,302		\$262,302		\$262,302	
Environmental Externality		N/A		N/A		N/A		\$0	
Subtotal		N/A		\$340,270		\$340,270		\$340,270	
Participant Benefits									
Bill Reduction - Electric		N/A		N/A		N/A		N/A	
Rebates from Xcel Energy		N/A		N/A		\$83,898		\$83,898	
Incremental Capital Savings		N/A		N/A		\$0		\$0	
Incremental O&M Savings		N/A		N/A		\$0		\$0	
Subtotal		\$900,434		N/A		\$83,898		\$83,898	
Total Benefits		\$900,434		\$340,270		\$424,168		\$424,168	
Costs									
Utility Project Costs									
Customer Services		N/A		\$21,000		\$21,000		\$21,000	
Utility Administration		N/A		\$0		\$0		\$0	
Advertising & Promotion		N/A		\$4,700		\$4,700		\$4,700	
Measurement & Verification		N/A		\$0		\$0		\$0	
Rebates		N/A		\$83,898		\$83,898		\$83,898	
Other		N/A		\$0		\$0		\$0	
Subtotal		N/A		\$109,598		\$109,598		\$109,598	
Utility Revenue Reduction									
Revenue Reduction - Electric		N/A		N/A		N/A		N/A	
Subtotal		N/A		\$816,536		N/A		N/A	
Participant Costs									
Incremental Capital Costs		\$238,727		N/A		\$238,727		\$238,727	
Incremental O&M Costs		\$0		N/A		\$0		\$0	
Subtotal		\$238,727		N/A		\$238,727		\$238,727	
Total Costs		\$238,727		\$109,598		\$348,325		\$348,325	
Net Benefit (Cost)									
Net Benefit (Cost)		\$661,708		\$230,672		(\$585,864)		\$75,843	
Benefit/Cost Ratio		3.77		3.10		0.37		1.22	

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RESIDENTIAL SEGMENT TOTAL					2018		ELECTRIC		GOAL
2018 Net Present Cost Benefit Summary Analysis For All Participants									
Input Summary and Totals									
Program "Inputs" per Customer kW									
Lifetime (Weighted on Generator kWh)					A		B		5.8 years
Annual Hours					C		D		8760
Gross Customer kW					E		F		1 kW
Generator Peak Coincidence Factor					G		H		21.04%
Gross Load Factor at Customer					I		J		5.08%
Transmission Loss Factor (Energy)					K		L		5.136%
Transmission Loss Factor (Demand)					M		N		8.553%
Societal Net Benefit (Cost)					O		P		\$151
Program Summary per Participant									
Gross kW Saved at Customer					Q		R		0.04 kW
Net coincident kW Saved at Generator					S		T		0.01 kW
Gross Annual kWh Saved at Customer					U		V		20 kWh
Net Annual kWh Saved at Generator					W		X		21 kWh
Program Summary All Participants									
Total Participants					Y		Z		71,995
Total Budget					AA		AB		\$324,676
Gross kW Saved at Customer					AC		AD		3,161 kW
Net coincident kW Saved at Generator					AE		AF		727 kW
Gross Annual kWh Saved at Customer					AG		AH		1,405,829 kWh
Net Annual kWh Saved at Generator					AI		AJ		1,481,938 kWh
Societal Net Benefits					AK		AL		\$477,005
Utility Program Cost per kWh Lifetime									
Utility Program Cost per kW at Gen					AM		AN		\$0.0380
					AO		AP		\$446
Benefits									
Avoided Revenue Requirements									
Generation					AQ		AR		
T & D					AS		AT		
Marginal Energy					AU		AV		
Environmental Externality					AW		AX		
Subtotal					AY		AZ		
Participant Benefits									
Bill Reduction - Electric					BA		BB		
Rebates from Xcel Energy					BC		BD		
Incremental Capital Savings					BE		BF		
Incremental O&M Savings					BG		BH		
Subtotal					BI		BJ		
Total Benefits					BK		BL		
Costs									
Utility Project Costs									
Customer Services					BM		BN		
Utility Administration					BO		BP		
Advertising & Promotion					BQ		BR		
Measurement & Verification					BS		BT		
Rebates					BU		BV		
Other					BW		BX		
Subtotal					BY		BZ		
Utility Revenue Reduction									
Revenue Reduction - Electric					CA		CB		
Subtotal					CC		CD		
Participant Costs									
Incremental Capital Costs					CE		CF		
Incremental O&M Costs					CG		CH		
Subtotal					CI		CJ		
Total Costs					CK		CL		
Net Benefit (Cost)									
Net Benefit (Cost)					CM		CN		
Benefit/Cost Ratio					CO		CP		

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PORTFOLIO TOTAL										
2018 Net Present Cost Benefit Summary Analysis For All Participants										
Input Summary and Totals					2018		ELECTRIC		GOAL	
Program "Inputs" per Customer kW										
Lifetime (Weighted on Generator kWh)					A					14.5 years
Annual Hours					B					8760
Gross Customer kW					C					1 kW
Generator Peak Coincidence Factor					D					27.92%
Gross Load Factor at Customer					E					12.35%
Transmission Loss Factor (Energy)					F					4.840%
Transmission Loss Factor (Demand)					G					8.251%
Societal Net Benefit (Cost)					H					\$149
Program Summary per Participant										
Gross kW Saved at Customer					I					0.06 kW
Net coincident kW Saved at Generator					$(I \times D) / (1 - G)$					0.02 kW
Gross Annual kWh Saved at Customer					$(B \times E \times I)$					64 kWh
Net Annual kWh Saved at Generator					$(B \times E \times I) / (1 - F)$					67 kWh
Program Summary All Participants										
Total Participants					J					72,178
Total Budget					K					\$774,408
Gross kW Saved at Customer					$(I \times I)$					4,268 kW
Net coincident kW Saved at Generator					$(I \times D) / (1 - G) \times J$					1,299 kW
Gross Annual kWh Saved at Customer					$(B \times E \times I) \times J$					4,615,807 kWh
Net Annual kWh Saved at Generator					$((B \times E \times I) / (1 - F)) \times J$					4,850,580 kWh
Societal Net Benefits					$(I \times I \times H)$					\$633,985
Utility Program Cost per kWh Lifetime										\$0.0110
Utility Program Cost per kW at Gen										\$596
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