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Xcel Energy

Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-1

Date Received: July 6, 2011

Question:

1-1) Referring to Table 1 on page 4, with a total resource cost ratio below 1.0, why does the Company continue the program? Did the Company remove or throw out consideration of other programs with higher ratios?

Response:

The ground source heat pump program is included in this plan regardless of its cost-effectiveness because it was originally requested by Staff as they saw a customer need for such a product. We have not implemented any programs, other than previously approved Residential Saver's Switch, Saver's Switch for Business and Peak and Energy Control Rates programs, at this time in South Dakota.

The Company will remove the program if Staff or the Commission recommends it. No other programs with higher benefit cost ratios were removed or taken out of consideration from the proposed Plan.

Response By: Bridget Nielsen McLaughlin

Title: Senior Regulatory Analyst

Department: DSM Regulatory Strategy & Planning

Telephone: 612.330.6791

Date: July 28, 2011

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Xcel Energy

Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-2

Date Received: July 6, 2011

Question:

1-2) Referring to the fifth paragraph on page 16, please provide an explanation for not allowing customers with natural gas connections to take advantage of the GSHP rebates.

Response:

The Ground Source Heat Pump rebate is proposed to be available only to electrically-heated homes to ensure that customers are not switching from a non-electric fuel source to heat their homes. Xcel Energy does not provide gas service in this territory and therefore does not offer any gas DSM programs to its customers; any switching from gas to electric would lead to load growth instead of load reduction. Since it is not known within our billing system whether an existing home is heated via electricity or a non-electric fuel source such as gas, Xcel Energy's internal rebate processing department plans to determine a customer's eligibility by reviewing the customer's electricity usage trending during heating months from prior years.

Response By: Josh Fields

Title: Marketing Assistant / Ground Source Program Manager

Department: Residential Energy Efficiency Marketing

Telephone: 612.330.2863

Date: July 28, 2011

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Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-3

Date Received: July 6, 2011

Question:

1-3) Referring to the second paragraph on page 13, how are large customers identified? Also, do such customers receive an energy audit as part of the account manager's attempt to assist such customers with the identification of energy savings opportunities?

Response:

Our customers are primarily defined by their annual peak demand. Large customers typically have an annual peak demand of 500 kW or more. While we have not proposed to offer or require an energy audit product, the account managers who call on large customers do help customers identify opportunities for lighting efficiency. A local lighting distributor or contractor is best suited to assess the current lighting system and make specific recommendations on a solution. During that process the contractor will typically inventory the current equipment, propose components for a new system and then identify the project cost, the proposed Xcel Energy rebate, and the estimated annual savings. From this, the customer can determine if the payback meets their financial hurdle.

Response By: Karen Rhodes/Kris Kohls

Title: Product Manager

Department: Energy Efficiency Marketing

Telephone: 612.330.5504

Date: July 28, 2011

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Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-4

Date Received: July 6, 2011

Question:

1-4) Referring to the first paragraph of Peak Controlled and Energy Controlled Rates on page 14, how much is the monthly discount offered to customers for reducing electric loads by a minimum of 50 kW? Also, how did the Company determine 50 kW for a minimum?

Response:

The average Peak Control customer can qualify for up to 45% savings on annual demand charges by participating in the program. For the period of June – September a customer may see a discount of \$5.12 per kW on their controllable load. Similarly, for the period of October – May, a customer may see a discount of \$2.12 per kW on their controllable load. An exact monthly discount amount will vary due to differences in customer load.

The purpose of setting a minimum controllable load limit is to help assure a reasonable expected benefit/cost ratio. There are administrative costs associated with controlling any individual customer's load, which are more or less fixed, regardless of the size of the controllable load. These costs include but are not necessarily limited to incremental metering and billing costs; interrupt notices and communications costs; after the fact controllable-load monitoring/verification costs; incremental customer service costs, information, sales and program marketing costs; etc. If the size of the controllable load is too small, these fixed administration costs can out-weigh the system avoided cost benefits.

The Company originally selected 100 kW as the minimum participation threshold. As the program expanded and matured, it was possible to reduce that original minimum size limit. Around 1990 the level was reduced to 75 kW and shortly after to 50 kW. The current limit recognizes the above listed significantly fixed costs of providing interruptible service.

Response By: Phil Zins/Steve Huso
Title: Manager, Pricing & Planning
Department: Regulatory Administration
Telephone: 612.330.6128
Date: July 28, 2011

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Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-5

Date Received: July 6, 2011

Question:

1-5) Referring to the first paragraph on page 21, why did the Company choose 12 bulbs as the limit per customer?

Response:

Xcel Energy originally chose 12 bulbs as the standard for this program based on the estimated number of fixtures in an average residential home. The Company sets a limit on the number of CFLs that each customer can purchase because it helps to ensure the bulbs are purchased for residential use, not by commercial companies, are not stock-piled for future use and are not distributed or sold to other entities. It is possible that a customer could go to a participating retailer on multiple occasions and purchase 12 bulbs on each visit, however, the intent of the policy is to discourage this and make it difficult to purchase the bulbs for anything other than residential use.

Response By: Kim Sherman

Title: Product Portfolio Manager

Department: DSM Marketing

Telephone: 612.337.2360

Date: July 28, 2011

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Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-6

Date Received: July 6, 2011

Question:

1-6) Referring to the second paragraph on page 22, please define and explain predetermined trigger points referenced.

Response:

Normally, Saver's Switch is activated if the NSP system load reaches a specific threshold above 9,060 MW. The program can also be activated on very short notice in response to a system emergency, for example, if a large generator goes offline.

Response By: Patrick Ronnings

Title: Product Portfolio Manager

Department: DSM Marketing

Telephone: 612.330.5787

Date: July 28, 2011

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Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-7

Date Received: July 6, 2011

Question:

1-7) Please explain why the Company prefers to use the same rate across all customer classes. Include an analysis of rates if the DSM Rate was split between residential and customer/industrial customers based on program costs.

Response:

While there are other DSM rate distribution options, Xcel Energy has proposed a single DSM rate to be applied to all customer classes as we believe this method is simpler to administer, reasonable as all customers benefit from the overall DSM effort and fair as the application of the proposed rate is relatively small compared to the monthly billing of both a typical residential customer and a commercial or industrial customer.

The table below breaks down the total program cost, including an estimated incentive, and sales of the residential and business sectors. The table includes a rate if the DSM rate is split between residential and business customer classes based on program costs.

Total DSM Costs		Forecasted Sales (MWh)		Rate (\$/ kWh)	
Residential	\$417,350	Residential	704,753	Residential	\$ 0.000592
Business	\$590,203	Business	1,326,524	Business	\$ 0.000445
Total	\$1,007,553	Total	2,031,277	Total	\$ 0.000496

Response By: Bridget Nielsen McLaughlin

Title: Senior Regulatory Analyst

Department: DSM Regulatory Strategy & Planning

Telephone: 612.330.6791

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Response To: SD PUC

Data Request No. 1-8

Date Received: July 6, 2011

Question:

1-8) Is the Company still providing any Energy Efficiency or Load Management programs other than those mentioned in the first paragraph of page 3?

Response:

No. The Company continues to offer only the three programs listed in the proposed Plan: Residential Saver's Switch, Saver's Switch for Business and Peak and Energy Control Rates.

Response By: Bridget Nielsen McLaughlin

Title: Senior Regulatory Analyst

Department: DSM Regulatory Strategy & Planning

Telephone: 612.330.6791

Date: July 28, 2011

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Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-9

Date Received: July 6, 2011

Question:

1-9) Please explain how the Residential Saver Switch has been modified or expanded in the proposed DSM Plan.

Response:

In an effort to expand the program, the proposed plan increases the program's budget, sets higher goals, and allows for a maintenance program to replace switches in the field deemed to be not working. For current or future participants, the specifics of the program do not change.

Response By: Patrick Ronnings

Title: Product Portfolio Manager

Department: DSM Marketing

Telephone: 612.330.5787

Date: July 28, 2011

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Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-10

Date Received: July 6, 2011

Question:

1-10) How long after Commission approval will the Company need to begin implementing the DSM Rate?

Response:

We anticipate that a product launch would be possible three months after Commission approval. Most of the product infrastructure is in place, as we currently offer these products in other states. Activities identified specifically for this product launch include: developing state-specific product tracking, tools and documentation; addressing processes for unique product differences (if any); preparing promotional materials (news release, literature, web pages, etc.); identifying key trade partners; and training staff.

Response By: Karen Rhodes/Kris Kohls

Title: Product Manager

Department: Energy Efficiency Marketing

Telephone: 612.330.5504

Date: July 28, 2011

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Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-11

Date Received: July 6, 2011

Question:

1-11) Referring to Exhibit 3, page 1, please provide an explanation of how the carrying charge rate is calculated.

Response:

We note that the monthly carrying charge rate of 0.8862% is correct, but that numbers shown under the Annual Revenue Requirements Factor and Monthly Revenue Requirements Factor were not updated and are incorrect. We apologize for this oversight and provide as Attachment A to this Response our detailed calculation of the monthly carrying charge rate. The carrying charge rate is based on the capital structure and overall rate of return from the most recently approved electric rate case (Docket EL-09-009).

We also demonstrate in Attachment A that the monthly carrying charge yields an annual effective rate of interest that is equal to the annual revenue requirement factor based on the overall rate of return approved by the Commission in Docket EL-09-009.

Response By: Carolyn Brouillard

Title: Senior Regulatory Analyst

Department: DSM Regulatory Strategy and Planning

Telephone: 612.330.5571

Date: July 28, 2011

Calculation of Monthly Carrying Charge Rate

Use these values beginning January 1, 2011:

2009 Rate Case-Docket EL-09-009**Weighted Cost of Capital**

Equity	5.28%
Debt	3.04%
Total	8.32%
Weighted Cost of Capital	8.32%

Overall Rate of Return	8.32%
Weighted Debt Cost	3.04%
SD Composite Tax Rate	35%

(a) Monthly Carrying Charge Rate Calculation

Annual Revenue Requirements Factor (Rate Base Factor)

$$= \{ \text{Overall Rate of Return} - (\text{Weighted Debt Cost} \times \text{Tax Rate}) \} / (1 - \text{Tax Rate})$$

$$= \{ 0.0832 - (0.0304 \times 0.35) \} / (1 - 0.35)$$

$$= 0.11168$$

Monthly Revenue Requirements Factor

$$= \{ (1 + \text{Annual Revenue Requirements Factor})^{(1/12)} \} - 1$$

$$= \{ (1 + 0.11168)^{(1/12)} \} - 1$$

$$= 0.008862$$

Monthly Carrying Charge Rate = 0.8862%**Calculation of the Effective Annual Rate**

Nominal Monthly Rate = 0.8862% (carrying charge rate)

Nominal Annual Rate (i) = 10.63% (monthly rate times 12)

Effective Annual Rate (r) = 11.17% $((1+i)/12)^{12}-1$

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Docket No.: EL11-013

Response To: SD PUC

Data Request No. 1-12

Date Received: July 6, 2011

Question:

1-12) Please provide the Ratepayer Impact Measure (RIM) benefit-costs ratios with calculations for all proposed programs.

Response:

The Ratepayer Impact Measure (RIM) test is calculated using the following formulas:

- $RIM \text{ Test Net Benefits} = Gen_{LAC} + T\&D_{LAC} + ME_{LAC} - PAdmin - RevL_{LC}$
- $RIM \text{ Test Net Benefits} = (Gen_{LAC} + T\&D_{LAC} + ME_{LAC}) / (PAdmin + RevL_{LC})$

where

- Gen_{LAC} = present value of future generation avoided costs over the lifetime of the equipment
- $T\&D_{LAC}$ = present value of future transmission and distribution avoided costs over the lifetime of the equipment
- ME_{LAC} = present value of future marginal energy avoided costs over the lifetime of the equipment
- $PAdmin$ = program administration costs (including rebate)
- $RevL_{LC}$ = present value of future reduced retail revenue over the lifetime of the equipment (including bill credits)

The following table outlines the RIM test benefit-cost ratios with calculations:

2011	Generation (A)	T&D (B)	Marginal Energy (C)	Utility Program Costs (E)	Revenue Reduction (F)	RIM Test Net Benefits A + B + C - E - F	RIM Test Ratio (A + B + C) / (E + F)
Business Segment							
Lighting Efficiency	\$558,713	\$194,275	\$1,465,000	\$396,266	\$1,440,520	\$381,202	1.21
Business Saver's Switch	\$136,257	\$47,376	\$652	\$33,950	\$16,519	\$133,815	3.65
Peak and Energy Control	\$715,330	\$248,718	\$31,870	\$15,000	\$595,248	\$385,670	1.63
Business Segment Total	\$1,410,299	\$490,369	\$1,497,522	\$445,216	\$2,052,286	\$900,687	1.36
Residential Segment							
Ground Source Heat Pump	\$9,366	\$3,257	\$174,935	\$63,375	\$237,225	-\$113,043	0.62
Residential Home Lighting	\$44,800	\$15,600	\$302,800	\$50,000	\$466,800	-\$153,600	0.70
Residential Saver's Switch	\$658,733	\$229,043	\$4,380	\$181,650	\$335,021	\$375,484	1.73
Consumer Education	\$0	\$0	\$0	\$19,800	\$0	-\$19,800	-
Residential Segment Total	\$712,898	\$247,899	\$482,115	\$314,825	\$1,039,046	\$89,042	1.07
Planning Segment							
Regulatory Affairs	\$0	\$0	\$0	\$15,000	\$0	-\$15,000	-
Planning Segment Total	\$0	\$0	\$0	\$15,000	\$0	-\$15,000	-
PORTFOLIO TOTAL	\$2,123,197	\$738,268	\$1,979,637	\$775,041	\$3,091,333	\$974,729	1.25

Response By: Dave Warden
 Title: DSM Regulatory and Technical Consultant
 Department: DSM Regulatory Strategy and Planning
 Telephone: 612.330.6410
 Date: July 28, 2011

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Response To: SD PUC

Data Request No. 1-13

Date Received: July 6, 2011

Question:

1-13) Please provide the estimated lifetime energy (kWh) savings for all proposed programs.

Response:

The estimated lifetime generator kWh savings for all proposed programs are outlined in the table below:

2011	Lifetime Generator kWh
Business Segment	
Lighting Efficiency	39,310,558
Business Saver's Switch	13,149
Peak and Energy Control	477,007
Business Segment Total	39,800,714
Residential Segment	
Ground Source Heat Pump	5,206,992
Residential Home Lighting	8,262,247
Residential Saver's Switch	90,301
Consumer Education	0
Residential Segment Total	13,559,540

Response By: Dave Warden

Title: DSM Regulatory and Technical Consultant

Department: DSM Regulatory Strategy and Planning

Telephone: 612.330.6410

Date: July 28, 2011