

**BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION**

IN THE MATTER OF SOUTHWESTERN )  
PUBLIC SERVICE COMPANY'S )  
APPLICATION FOR APPROVAL OF )  
ELECTRIC ENERGY EFFICIENCY AND )  
LOAD MANAGEMENT PROGRAMS AND )  
PROGRAM COST TARIFF RIDERS )  
PURSUANT TO THE NEW MEXICO PUBLIC )  
UTILITY ACT AND EFFICIENT USE OF )  
ENERGY ACT, )  
)  
)  
SOUTHWESTERN PUBLIC SERVICE )  
COMPANY, )  
)  
)  
Applicant. )

Case No. 07-\_\_\_\_-UT

**DIRECT TESTIMONY**

*of*

**DEBRA L. SUNDIN**

*on behalf of*

**SOUTHWESTERN PUBLIC SERVICE COMPANY**

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## GLOSSARY OF ACRONYMS AND DEFINED TERMS

<u>Acronym/Defined Term</u>	<u>Meaning</u>
CANM	Community Action of New Mexico
DSM	Demand-Side Management
EUEA	Efficient Use of Energy Act
KEMA Study	KEMA New Mexico DSM Potential Assessment Report
M&V	Measurement and Verification
NARUC	National Association of Regulatory Utility Commissioners
NSP	Northern States Power Company
Plan	2008 Energy Efficiency and Load Management Plan
PSCo	Public Service Company of Colorado
R	Residential
RAP	Resource Action Programs
Rule	17.7.2 NMAC
SAC	Service Availability Charge
SEER	Seasonal Energy Efficiency Ratio
SG	Secondary General – Demand Billed
SGS	Small General Service
SPS	Southwestern Public Service Company
Wiese	Wiese Research Associates, Inc.

Xcel Energy

Xcel Energy Inc.

## **LIST OF ATTACHMENTS**

<b><u>Attachment</u></b>	<b><u>Description</u></b>
DLS-1	SPS's 2008 Energy Efficiency and Load Management Program Plan
DLS-2	KEMA New Mexico DSM Potential Assessment Report
DLS-3	Lost Opportunities Calculation Example

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of  
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**I. INTRODUCTION AND QUALIFICATIONS**

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**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Debra L. Sundin. My business address is 414 Nicollet Mall, Minneapolis, Minnesota.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?**

A. I am employed by Xcel Energy Services Inc., the service company subsidiary of Xcel Energy Inc. (“Xcel Energy”), as Director, Business Product Marketing & CIP/DSM.

**Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

A. I am testifying in support of Southwestern Public Service Company (“SPS”), which is an electric utility operating company that is wholly owned by Xcel Energy.

**Q. PLEASE BRIEFLY OUTLINE YOUR DUTIES AS DIRECTOR, BUSINESS PRODUCT MARKETING & CIP/DSM.**

A. I provide strategic marketing and regulatory strategy for Xcel Energy’s utility operating companies’ energy efficiency and load management product portfolios in the business and consumer markets. I lead two teams of employees that provide product management activities for energy efficiency and load management programs in New Mexico, Texas, Colorado and Minnesota. I lead

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1 another team of employees that provides support for energy efficiency and load  
2 management strategy, planning and regulatory compliance.

3 **Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

4 A. I graduated from Bemidji State University with a Bachelor of Science degree in  
5 Business Administration and also from the University of St. Thomas with a  
6 Masters of Business Administration in Management.

7 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.**

8 A. I joined Northern States Power Company (“NSP”), Xcel Energy’s wholly owned  
9 Minnesota electric and gas utility operating company, in October 1979. From  
10 1979 to 1992, I worked in the market research department providing qualitative  
11 and quantitative research as an analyst and later as a supervisor. From 1992 to  
12 1997, I was the Manager, Residential Marketing for NSP. Between 1998 and  
13 2000, I continued to work for NSP Marketing as the Manager, Energy  
14 Management. My duties included business product marketing and energy  
15 efficiency regulatory requirements. Since the August 2000 merger between NSP  
16 and New Century Energies, Inc. that created Xcel Energy, I have been working in  
17 the Xcel Energy Marketing department. I began as a manager responsible for  
18 marketing business products including energy efficiency and, in 2002, was  
19 promoted to director and assumed additional responsibilities related to energy

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1 efficiency and load management programs offered by Xcel Energy's operating  
2 companies.

3 **Q. ARE YOU ASSOCIATED WITH ANY GROUPS OR ORGANIZATIONS**  
4 **RELATED TO ENERGY EFFICIENCY?**

5 A. Yes. I am currently serving on the leadership committee of the National Action  
6 Plan for Energy Efficiency and I am a member of the Consortium for Energy  
7 Efficiency board of directors.

8 **Q. HAVE YOU TESTIFIED BEFORE ANY REGULATORY AUTHORITIES?**

9 A. Yes. I have filed testimony with the North Dakota Public Service Commission  
10 and the Colorado Public Utilities Commission.

11

**II.**



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**ASSIGNMENT**

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**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. SPS is submitting this testimony in accordance with the Efficient Use of Energy Act, as amended (§§62-17-1 through 62-17-11 NMSA 1978 , “EUEA”), and the New Mexico Public Regulation Commission’s (“Commission” or “NMPRC”) Energy Efficiency Rule (17.7.2 NMAC, “Rule”). The purpose of my testimony is to:

- a. Provide a summary of SPS’s proposed 2008 Energy Efficiency and Load Management Plan (“Plan”);
- b. Describe SPS’s and Xcel Energy’s previous experience with energy efficiency and load management programs;
- c. Introduce the proposed programs, their budgets, goals, and cost-effectiveness test results;
- d. Describe the proposed marketing and outreach, and measurement and verification plans; and
- e. Identify the disincentives to offering energy efficiency and load management programs and detail SPS’s proposal to mitigate these disincentives.

**III.**

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**DEFINITIONS**

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**Q. IN THE REMAINDER OF YOUR TESTIMONY WILL YOU BE USING CERTAIN TERMS?**

**A.** Yes. For ease of reading and reference, I have defined the following terms that will be used throughout my testimony and in the Plan:

- Customer (meter) kWh – energy efficiency or load management program energy savings as measured at the customer site.
- Decoupling – the disassociation of a utility profits from its sales of the energy commodity. Instead, a rate of return is aligned with meeting revenue targets, and rates are trued up or down to meet the target at the end of the adjustment period. This makes the utility indifferent to selling less product and improves the ability of energy efficiency and distributed generation to operate within the utility environment.
- Deemed Savings – “expected energy and demand savings attributed to well-known or commercially available energy efficiency and load management devices or measures based on standard engineering calculations, ratings, simulation models or field measurement studies, periodically adjusted as appropriate for New Mexico specific data, including building and household characteristics, and climate conditions in pertinent region(s) within the state” (17.7.2.7(G) NMAC).
- Demand-Side Management (“DSM”) – the methods used to manage customer energy usage including energy efficiency, load management, fuel substitution and load building.
- Direct Impact – an energy efficiency or load management program that shows measurable, quantifiable energy and/or demand savings.
- Energy Conservation – “the management of energy resources through: (1) the efficient allocation and use of (a) existing and planned facilities and (b) nonrenewable energy resources; (2) the reduction in demand of energy consumption where appropriate; (3) the minimization of waste of any energy

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1 resources; and (4) the promotion and development of alternative renewable  
2 energy resources” (17.7.420.7 NMAC).

- 3
- 4 • Energy Efficiency – “measures, including energy conservation measures, or  
5 programs that target consumer behavior, equipment or devices, to result in a  
6 decrease in consumption of electricity or natural gas without reducing the  
7 level or quality of energy services” (§62-17-4 (D) of the EUEA).  
8
  - 9 • Generator kW – energy efficiency or load management program demand  
10 savings as measured based on coincidence with SPS’s system peak and  
11 grossed up for transmission and distribution system line losses and  
12 incorporating the net-to-gross ratio.  
13
  - 14 • Generator kWh – calculation of energy efficiency or load management  
15 program energy savings grossed up for transmission and distribution system  
16 line losses and incorporating the net-to-gross ratio.  
17
  - 18 • Independent Program Evaluator – a “person or group appointed by committee  
19 who will perform measurement and verification of utility energy efficiency  
20 and load management programs” (§62-17-8 of the EUEA).  
21
  - 22 • Indirect Impact – an energy efficiency or load management program offered  
23 in support of direct impact programs, such as market transformation, which  
24 does not have quantifiable or easily measured energy or demand savings (see  
25 17.7.2.9(D) NMAC).  
26
  - 27 • Large Customer – “a utility customer at a single, contiguous field, location or  
28 facility, regardless of the number of meters at that field, location or facility,  
29 with electricity consumption greater than seven thousand megawatt-hours per  
30 year or natural gas use greater than three hundred sixty thousand decatherms  
31 per year” (§62-17-4(E) of the EUEA).  
32
  - 33 • Load Management - measures or programs that target equipment or devices to  
34 decrease peak electricity demand or to shift demand from peak to off-peak  
35 periods.  
36
  - 37 • Lost Opportunity – the loss of a utility’s ability to earn a return on their  
38 investment in supply-side resources due to the investment in demand-side  
39 resources (such as energy efficiency and load management).

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- 1           • Lost Revenues – reduction in utility revenues due to utility energy efficiency  
2           and/or load management programs.  
3
- 4           • Low-Income – “residential customers with household income of less than 200  
5           percent of the federal poverty guideline” (17.7.2.7(R) NMAC).  
6
- 7           • Market Potential Assessment – a study of the size of the current and future  
8           market potential (i.e., implementation probabilities) for energy efficiency and  
9           load management measures.  
10
- 11          • Market Transformation – strategic intervention to achieve a lasting, significant  
12          share of energy-efficient products and services through fundamental, enduring  
13          changes in targeted markets.  
14
- 15          • Measurement & Verification (“M&V”) – activities to determine or  
16          approximate with a high degree of certainty the actual demand and energy  
17          reductions from energy efficiency and load management programs (see  
18          §62-17-8 of the EUEA).  
19
- 20          • Net Benefits – from the Total Resource Cost (“TRC”), avoided supply-side  
21          monetary costs (benefits) minus the monetary costs of the demand-side  
22          programs borne by both the utility and the participants (costs).  
23
- 24          • Net-to-Gross – the percent of customers who purchase energy efficient  
25          equipment who would not have done so without the existence of the utility’s  
26          energy efficiency and load management programs.  
27
- 28          • Program Design – the method by which an objective is met through an energy  
29          efficiency program.  
30
- 31          • Self-Direct Program Administrator – the utility appointee responsible for  
32          reviewing and approving large customer self-direct project and exemption  
33          applications, energy and demand savings, and project costs.  
34
- 35          • TRC Test – means a cost-effectiveness standard that is met if, for an  
36          investment in energy efficiency or load management, on a life-cycle basis the  
37          avoided supply-side monetary costs are greater than the monetary costs of the  
38          demand-side programs borne by both the utility and the participants (see  
39          §62-17-4(H) of the EUEA).

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**IV.**

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1           **OVERVIEW AND EXPERIENCE WITH ENERGY EFFICIENCY**

2   **Q.   PLEASE PROVIDE A BRIEF OVERVIEW OF SPS'S PROPOSED**  
3           **ENERGY EFFICIENCY PROGRAM PORTFOLIO.**

4   A.   As discussed in detail in the Plan, SPS has developed a set of energy efficiency  
5           programs that target measures with low performance risk and with which SPS and  
6           its affiliated operating companies have had success. The programs will use  
7           proven program delivery methods to provide opportunities for broad participation  
8           within each customer class. Each of the proposed programs meets the cost-  
9           effectiveness requirements of §62-17-5(B) of the EUEA and 17.7.2.9(c)(1)  
10          NMAC. SPS's proposed Plan seeks to achieve 11,257,276 kWh in first-year  
11          energy savings at the generator, and demand savings of 1,166 system peak  
12          (generator) kW. The proposed budget for 2007 and 2008 combined is  
13          \$1,819,720. This includes estimated 2007 costs of \$52,000 for product  
14          development and \$60,000 for planning and administration.

15

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1   **Q.   HAVE YOU INCLUDED ANY ATTACHMENTS IN SUPPORT OF YOUR**  
2   **TESTIMONY?**

3   A.   Yes. I have included as Attachment DLS-1, SPS’s Plan which provides detailed  
4   information regarding each proposed program, including:

- 5           • Energy and demand savings, budget and participation goals;
- 6
- 7           • Cost-effectiveness results (including inputs and assumptions);
- 8
- 9           • Rebate structure;
- 10
- 11          • Program administration;
- 12
- 13          • Marketing and outreach plan; and
- 14
- 15          • M &V plan.
- 16

17   In addition, at the portfolio level, the Plan provides:

- 18           • Energy and demand savings, budget and participation goals by segment;
- 19
- 20           • A description of programs reviewed but not proposed at this time; and
- 21
- 22           • A description of conservation programs SPS offered through 2006.
- 23

24   In addition, I have also included the KEMA New Mexico DSM Potential  
25   Assessment Study (“KEMA Study”) as Attachment DLS-2 and a calculation of  
26   lost earnings opportunities as Attachment DLS-3. Each of these Attachments is  
27   discussed in more detail later in my testimony.

28

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1 **Q. DID SPS PREVIOUSLY OFFER ENERGY EFFICIENCY PROGRAMS IN**  
2 **NEW MEXICO?**

3 A. Yes. SPS previously offered energy efficiency programs to its New Mexico  
4 customers. SPS closed these programs in 2006 in anticipation of the need to file  
5 new programs that comply with the requirements of the EUEA. In the Plan, SPS  
6 provides a brief history of these programs dating back to the early 1980s. These  
7 programs were primarily focused on encouraging residential customers to install  
8 more energy efficient electric heat pumps and business customers to install more  
9 energy efficient lighting. In 2005 and 2006, SPS distributed free packages of  
10 compact fluorescent light bulbs to low-income customers through the state Low-  
11 Income Home Energy Assistance Program agencies in SPS's service territory.

12 **Q. DO SPS'S AFFILIATED OPERATING UTILITIES HAVE EXPERIENCE**  
13 **RUNNING ENERGY EFFICIENCY AND LOAD MANAGEMENT**  
14 **PROGRAMS IN OTHER JURISDICTIONS?**

15 A. Yes. SPS's affiliated operating utilities have considerable experience and success  
16 designing and operating energy efficiency and load management programs in  
17 Minnesota and Colorado. Xcel Energy's Minnesota operating company, NSP, is  
18 legislatively mandated to spend 2 percent of its electric and 0.5 percent of its gas  
19 gross operating revenues (retail sales to ultimate consumers) on energy efficiency  
20 and load management programs. In 2007, this translates into an approved budget



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1 of \$47 million for electric programs and \$5 million for gas programs in  
2 Minnesota. In addition, Xcel Energy's Colorado operating company, Public  
3 Service Company of Colorado ("PSCo"), entered into a settlement agreement as  
4 part of its 2003 Least Cost Planning process, which committed PSCo to achieve  
5 electric efficiency savings of 320 MW and 800 GWh at a cost of no more than  
6 \$196 million between 2006 and 2013.

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**V. PROGRAM DETAIL**

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**Q. PLEASE DESCRIBE THE PROGRAMS SPS IS PROPOSING TO OFFER.**

A. As discussed in detail in the Plan (Attachment DLS-1), SPS proposes to offer eight programs grouped into four customer segments: Residential, Low-Income, Business, and Large Customer, as described below. A fifth segment consists of Planning & Research, which includes the functions and costs for providing support for the direct impact programs.

Residential Segment

Within the Residential Segment, SPS is proposing:

- Air-Source Heat Pump Rebates – The Air-Source Heat Pump program offers customers rebates for purchase of air-source heat pumps rated 14 Seasonal Energy Efficiency Ratio (“SEER”) or higher.
- Home Lighting – The Home Lighting program promotes, through direct sales and in-store rebates, customer purchase and installation of energy efficiency compact fluorescent bulbs for their homes.
- LivingWise® – LivingWise® combines a set of classroom activities with projects in the home to encourage 5<sup>th</sup> grade students to install energy efficient products. SPS will partner with Resource Action Programs® (“RAP”) to offer the LivingWise® program.

Low-Income Segment

Within the Low-Income Segment, SPS is proposing:

- Low-Income Program – This program is designed to help low-income residential customers to lower their energy bills. It will include the following components:

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- 1                   ○ Electric Heat Weatherization;
- 2                   ○ Home Lighting Giveaway; and
- 3                   ○ Energy Efficient Refrigerator Upgrade and Old Refrigerator
- 4                   Recycling.

5

6                   Business Segment

7                   Within the Business Segment, SPS is proposing:

- 8                   • Business Cooling Efficiency – Business Cooling Efficiency will provide
- 9                   rebates for customer purchases of energy efficient electric cooling
- 10                  equipment.
- 11
- 12                  • Business Custom Efficiency – Business Custom Efficiency provides
- 13                  rebates for energy efficient customer projects not covered by SPS’s
- 14                  Business Cooling Efficiency or Business Lighting Efficiency programs.
- 15                  This program addresses the unique needs of our customers and encourages
- 16                  them to develop and implement innovative, cost-effective energy efficient
- 17                  measures and process changes.
- 18
- 19                  • Business Lighting Efficiency – The Business Lighting Efficiency program
- 20                  provides customer rebates for purchase and installation of energyefficient
- 21                  lighting equipment

22

23                  Large Customer Segment

24                  Within the Large Customer Segment, SPS is proposing the following to customers

25                  with electricity consumption greater than 7,000 MWh:

- 26                  • Self-Direct – The Self-Direct opportunity offers large customers the
- 27                  option to implement their own energy efficiency projects and receive
- 28                  credits against paying up to 70 percent of the tariff rider.
- 29
- 30                  • Exemption – The Exemption opportunity allows a large customer who can
- 31                  demonstrate to the satisfaction of the Self-Direct Program Administrator
- 32                  that they have exhausted all cost-effective efficiency opportunities to
- 33                  receive a two-year exemption from 70 percent of the tariff rider.

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1        Planning & Research Segment

2        The Planning & Research Segment consists of internal functions (not customer-  
3        facing), which support the direct impact programs. This segment includes energy  
4        efficiency and load management program-related expenses for:

- 5            • Planning & Administration – Includes labor for coordination of all New  
6            Mexico energy efficiency and load management related regulatory filings,  
7            tracking of program achievements, reporting on cost recovery, and  
8            cost-effectiveness calculations.  
9
- 10          • Product Development – Internal labor for the group who identifies,  
11          assesses, and develops new energy efficiency and load management  
12          programs.  
13
- 14          • General Advertising – Allows for energy efficiency and load management  
15          advertising that is not targeted at a single program.  
16
- 17          • Market Research – Provides internal management of large-scale  
18          assessment studies like the Home Use Study and efforts to gauge  
19          awareness and interest around energy efficiency. This budget also  
20          provides for comprehensive program-specific research, including  
21          evaluations of individual programs.  
22

23        **Q.    HOW DID SPS CHOOSE THE PROGRAMS THAT MAKE UP ITS**  
24        **ENERGY EFFICIENCY PORTFOLIO?**

25        A.    In developing this proposal, SPS used a comprehensive product development  
26        process to analyze, prioritize, and select the programs to include in its energy  
27        efficiency portfolio. The product development process utilizes traditional  
28        stage/gate methods in order to develop sound ideas that meet customer needs,  
29        both internal and external. The process begins by analyzing service territory

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1 characteristics (e.g., number and types of customers, climate, and market  
2 potential) to develop a list of suitable programs that have been successfully  
3 operated in other jurisdictions. The specific stages that the product development  
4 process then follows are: Ideation, Framing, Design, Build, Test, and Launch.  
5 Management reviews ideas at the transition points between each stage, which  
6 allows for proper culling of less effective ideas early in the process before  
7 significant work is done. This product development process was originally  
8 developed for use with energy efficiency and load management programs in  
9 Minnesota and Colorado.

10 As part of its program selection process, SPS used two sources of data: the  
11 KEMA Study (refer to Attachment DLS-2) to assess its long-term energy  
12 efficiency and load management goals, and the Wiese Research Associates  
13 (“Wiese”) 2005 Home Use Study database for general service territory  
14 characteristics.

15 **Q. PLEASE EXPLAIN THE KEMA STUDY AND HOW IT WAS**  
16 **DEVELOPED?**

17 A. In each jurisdiction with active energy efficiency and load management programs,  
18 the Xcel Energy operating utilities periodically perform market potential studies  
19 to determine the amount of efficiency potential in their service territory. In early  
20 2006, PSCo contracted with KEMA Consulting to conduct a comprehensive

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1 market potential study for the Colorado territory. When the energy efficiency  
2 rulemaking was approved in New Mexico, SPS saw value in having a market  
3 potential study performed for New Mexico. However, in order to keep costs low,  
4 SPS and KEMA Consulting did not collect any primary field data, but were able  
5 to leverage and adapt the Colorado study to determine high-level New Mexico  
6 market potential. The objectives of the KEMA Study were to:

- 7 • Identify long-term (2006-2015) energy efficiency and load management  
8 potential for SPS's New Mexico service territory, specifically for the  
9 Residential, Commercial, Industrial and Potentially Exempt customer  
10 classes;
- 11 • Determine customer sensitivities to different rebate levels including  
12 scenarios of rebates at 33, 50, and 75 percent of the incremental measure  
13 costs; and
- 14 • Limit study to measures that are presently commercially available and that  
15 are cost-effective, with a TRC Test ratio above 1.0.

16  
17  
18  
19 **Q. HOW DID THE KEMA STUDY FACTOR INTO SPS'S SELECTION OF**  
20 **PROGRAMS?**

21 A. The KEMA Study was completed after SPS had already completed the majority  
22 of its product development work. Although this study was not completed before  
23 the Plan was developed, the results show consistency with the portfolio and  
24 support the types of programs proposed. Therefore, SPS has used and will  
25 continue to use the study for long-term planning and determining how to best  
26 achieve the legislative goals of the EUEA. In the future, SPS will use the KEMA

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1 Study to provide directional indications of the types of programs that might be  
2 successful in the marketplace.

3 Xcel Energy's operating companies have found that nothing substitutes for  
4 true, on the ground experience in implementing programs in its service territories.  
5 Further, the operating companies have found that, as with any new market, there  
6 is a learning period during which the utility, vendors, contractors, participants,  
7 and regulators develop a better understanding of the opportunities and difficulties  
8 associated with operating such programs. So, although the KEMA Study may be  
9 used in guiding selection of its program offerings, SPS knows that the portfolio  
10 will require periodic modification and augmentation to adapt programs to meet  
11 the specific service territory's needs.

12 **Q. WHAT INFORMATION WAS USED TO DETERMINE THE CUSTOMER**  
13 **CHARACTERISTICS OF SPS'S NEW MEXICO SERVICE TERRITORY?**

14 A. SPS contracted with Wiese to collect data on residential household characteristics  
15 and demographics for the 2005 Home Use Study. Wiese interviewed a total of  
16 400 SPS New Mexico residential customers by telephone to determine details on:  
17 dwelling type, square footage, age of home, household composition, household  
18 income, age, marital status, education levels, Internet access, number and type of  
19 appliances used in the home, the main fuel sources used, and average  
20 temperatures maintained during heating and cooling months.

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1           The Home Use Study reported that 93 percent of survey participants had  
2           some type of air conditioning, with 23 percent using an air-source heat pump and  
3           another 23 percent using evaporative cooling. The high percentage of customers  
4           with some sort of cooling equipment indicated that it is important for SPS to offer  
5           a cooling rebate program, which led SPS to include an Air-Source Heat Pump  
6           program in the current filing and to conduct further research on other cooling  
7           technologies such as evaporative cooling for possible inclusion in future filings.  
8           Further, the Home Use Study reported that 18 percent of survey respondents use  
9           air-source heat pumps to heat their homes. This helped SPS determine that,  
10          despite recent increases in federal minimum standards for cooling measures  
11          (which has made it difficult to develop cost-effective central air conditioning  
12          programs), air-source heat pumps would be a good program addition because the  
13          combined heating and cooling benefits of this equipment make the installation of  
14          14+ SEER units cost-effective in this service territory. As discussed in more  
15          detail below, SPS is also looking at electric heat weatherization, electric water  
16          heating and refrigerator recycling for future programs.

17   **Q.   WHAT ENERGY EFFICIENCY PROGRAMS WERE STUDIED AND**  
18   **REJECTED?**

19   A.   There was only one program that SPS studied and decided not to offer at this time  
20   — the Refrigerated Air Conditioning program. This program offers customers



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1 rebates for purchasing air conditioning equipment of SEER 14 and higher.  
2 However, due to the recent increase in minimum federal efficiency standards from  
3 SEER 10 to 13 for cooling equipment, the incremental savings of a SEER 14 or  
4 higher do not justify the incremental costs to purchase such units, making the  
5 program non-cost-effective at this time for both residential and business  
6 customers. Therefore, despite the interest in achieving energy and demand  
7 savings from cooling equipment, SPS was unable to include a central air  
8 conditioning rebate program in its portfolio. SPS will reconsider this program  
9 offering should the incremental cost of SEER 14 and higher units decrease.

10 Since much of the effort in developing the Plan focused on measures and  
11 programs that SPS knows through experience work well, no other programs were  
12 rejected.

13 **Q. DOES SPS HAVE PLANS FOR ANY OTHER PROGRAM OFFERINGS IN**  
14 **THE FUTURE?**

15 A. SPS has several potential Residential programs under consideration for inclusion  
16 in future energy efficiency filings, including: Electric Heat Weatherization,  
17 Electric Water Heating, Evaporative Cooling, Refrigerator Recycling, and Saver's  
18 Switch (air conditioning load control). SPS did not have the technical  
19 information finalized at the time of this filing to include these programs in the

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1 Plan; however, these programs are currently under consideration and will be  
2 discussed further in future filings.

3 In the Business Segment, most cost-effective opportunities can be handled  
4 through SPS's existing proposed program offerings, as the Custom Efficiency  
5 program provides rebate opportunities for cost-effective measures not covered  
6 through the prescriptive programs. However, if a new end-use becomes more  
7 popular or feasible within the Custom Efficiency program, SPS will evaluate  
8 adding it to the portfolio as a stand-alone prescriptive program.

9 **Q. WHY ARE LOAD MANAGEMENT PROGRAMS NOT INCLUDED IN**  
10 **SPS'S PROPOSED PLAN?**

11 A. Although SPS does not include any load management in its Plan, SPS presently  
12 offers an Industrial Interruptible tariff program in New Mexico, which has six  
13 industrial participants. In that program, automatic controls are triggered and  
14 customers are notified to lower their demand to a contract level during peak  
15 demand periods. Currently, the costs associated with the Industrial Interruptible  
16 tariff are dealt with through the base ratemaking process.

17 In addition, as stated earlier in my testimony, SPS is considering the  
18 inclusion of the Saver's Switch air conditioning load control program in future  
19 filings. SPS's affiliated operating companies have successfully operated both  
20 residential and commercial/industrial load management programs (mainly air

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1 conditioning cycling programs) in other jurisdictions for many years. Due to the  
2 dependence of such programs on weather and climate conditions, SPS is gathering  
3 more data to determine how best to operate load management in the New Mexico  
4 service territory. SPS expects to provide further information on these programs in  
5 its 2009 Energy Efficiency and Load Management Plan.

6 **Q. WHAT ARE THE ENERGY AND DEMAND SAVINGS, BUDGETS,  
7 PARTICIPANT NUMBERS AND TOTAL RESOURCE COST TEST  
8 RESULTS FOR EACH OF SPS'S PROPOSED PROGRAMS?**

9 A. Table 1 provides the estimated participation, budgets, energy and demand  
10 savings, and TRC Test results for the proposed programs. Included in this table  
11 are estimated 2007 costs of \$112,000 associated with program development, and  
12 planning and administration. Please note that this table does not include any  
13 values for its Large Customer Segment. SPS has identified approximately 29  
14 large customers at 44 customer sites who may qualify for the Large Customer  
15 Segment, however it is unknown at this time who will choose to participate.  
16 Although the program requires that customers notify SPS by November 30th of  
17 the year prior to their self-directed project or exemption, SPS intends to waive this  
18 requirement for 2008 and will accept applications throughout the year.

19

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**Table 1: 2007/2008 Proposed Goals and Budget**

<b>Program</b>	<b># of Participants</b>	<b>Budget</b>	<b>Gen kW</b>	<b>Gen kWh (1st yr)</b>	<b>TRC Test</b>
Residential Home Lighting	20,000	\$284,644	99	1,509,753	1.40
Residential Air-Source Heat Pumps	200	\$130,880	90	292,827	1.47
Residential LivingWise®	3,018	\$134,285	25	1,055,961	2.33
<b>Residential Total</b>	<b>23,218</b>	<b>\$549,809</b>	<b>214</b>	<b>2,858,541</b>	<b>1.62</b>
<b>Low-Income Total</b>	<b>16,200</b>	<b>\$197,089</b>	<b>82</b>	<b>1,555,576</b>	<b>1.99</b>
Business Cooling Efficiency	90	\$130,335	86	249,303	1.16
Business Custom Efficiency	49	\$263,486	382	4,609,451	2.15
Business Lighting Efficiency	73	\$319,073	403	1,984,406	2.21
<b>Business Total</b>	<b>212</b>	<b>\$712,893</b>	<b>871</b>	<b>6,843,159</b>	<b>2.07</b>
<b>Large Customer Total</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>
Market Research	N/A	\$107,500	N/A	N/A	N/A
General Advertising	N/A	\$58,000	N/A	N/A	N/A
Product Development	N/A	\$42,000	N/A	N/A	N/A
Planning & Administration	N/A	\$40,429	N/A	N/A	N/A
<b>Planning &amp; Research Total</b>	<b>N/A</b>	<b>\$247,929</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>2008 Sub-Total</b>	<b>39,630</b>	<b>\$1,707,720</b>	<b>1,166</b>	<b>11,257,276</b>	<b>N/A</b>
2007 Product Development	N/A	\$52,000	N/A	N/A	N/A
2007 Planning & Admin.	N/A	\$60,000	N/A	N/A	N/A
<b>2007 Sub-Total</b>	<b>N/A</b>	<b>\$112,000</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>2007/2008 TOTAL</b>	<b>39,630</b>	<b>\$1,819,720</b>	<b>1,166</b>	<b>11,257,276</b>	<b>1.78</b>

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1 **Q. HOW WERE SPS'S PROPOSED BUDGET AND PARTICIPATION**  
2 **LEVELS DETERMINED?**

3 A. SPS took a number of factors into consideration when developing its energy  
4 efficiency program goals and budgets for the Plan. These factors included: the  
5 historical and expected participation levels, the incremental cost of the energy  
6 efficient equipment replacement, the Home Use Study, and the cost-effectiveness  
7 of measures at different participation rates.

8 **Q. ARE THESE APPROPRIATE TARGETS FOR EACH OF THE**  
9 **PROPOSED PROGRAMS?**

10 A. SPS believes that these goals are a good starting point for the proposed programs.  
11 However, SPS and its affiliated operating companies experience operating energy  
12 efficiency and load management programs has demonstrated that there is no good  
13 substitute for actual program experience in a service territory. Therefore, SPS  
14 proposes only its first-year program goals at this time. With more experience in  
15 New Mexico, SPS may offer multi-year goals in future Plans. Further, in an  
16 effort to meet the overall first-year goals, SPS may shift budgets between  
17 programs within a particular customer segment to match customer demand.

18 **VI.**

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**PROGRAM DESIGN, ADMINISTRATION AND MARKETING**

1                   **PROGRAM DESIGN, ADMINISTRATION AND MARKETING**  
2   **Q.   WHAT METHODS WILL SPS USE TO ENCOURAGE CUSTOMERS TO**  
3                   **PARTICIPATE IN ITS ENERGY EFFICIENCY AND LOAD**  
4                   **MANAGEMENT PROGRAMS?**

5   A.   SPS has found rebates to be an extremely effective and flexible tool in marketing  
6                   and selling energy efficiency to its customers and plans to employ similar  
7                   strategies in the future. Depending on consumer response to a particular rebate  
8                   level, SPS can vary rebates to either increase or reduce customer participation.  
9                   SPS's affiliated operating companies have used this mechanism for over twenty  
10                  years in other jurisdictions to help influence consumer behavior toward purchase  
11                  and implementation of more energy efficient measures.

12 **Q.   HOW DOES SPS PLAN TO ADMINISTER ITS PROPOSED**  
13 **PROGRAMS?**

14 A.   For the most part, SPS intends to self-administer its proposed programs, meaning  
15                  that internal staff will handle product development, program planning, technical  
16                  analysis, sales and marketing, rebate processing, and regulatory support. This  
17                  will be true for the business programs (Cooling Efficiency, Custom Efficiency  
18                  and Lighting Efficiency), as well as residential Home Lighting and Air-Source  
19                  Heat Pump Rebates. Actual sale and delivery of energy efficiency measures to  
20                  end-use customers will be provided through either retail suppliers or vendors.

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1 SPS has generally found this approach to be both the most effective and efficient  
2 for operating energy efficiency and load management programs.

3 The three programs that will use different approaches are the  
4 LivingWise<sup>®</sup>, Low-Income, and Large Customer programs. The LivingWise<sup>®</sup>  
5 program will be administered by RAP, which will design, market and deliver the  
6 program. Similarly, SPS will contract with local community action agencies  
7 (Community Action Agency of Southern New Mexico and Eastern Plains Council  
8 of Governments) to administer its Low-Income program. Partnering with  
9 community groups enables SPS to leverage existing infrastructure, knowledge,  
10 and relationships to deliver the program benefits of residential programs. Finally,  
11 unlike the other programs, the Large Customer program will not require as much  
12 administration due to its design as a self-direct or exemption opportunity. SPS  
13 will designate a Self-Direct Program Administrator who will review and approve  
14 customer applications and project savings and will rely on the committee  
15 appointed by the Commission to select an Independent Program Evaluator to  
16 perform measurement and verification of the projects.

17 **Q. WHAT IS SPS'S MARKETING AND OUTREACH STRATEGY?**

18 A. SPS has developed an extensive marketing and outreach plan to target business,  
19 residential, and low-income customers throughout the service territory. In  
20 general, SPS will place targeted newspaper and radio advertisements in English

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1           and Spanish throughout the service territory. In addition, SPS intends to staff  
2           booths at local community events to deliver brochures for both residential and  
3           business programs. Further, SPS will seek to collaborate on outreach with  
4           regional environmental organizations to the extent feasible. SPS has developed  
5           specific marketing and outreach plans for each customer segment, which are  
6           discussed in more detail in the Plan.

7   **Q.   WHAT IS THE PURPOSE OF SPS’S PLANNING & RESEARCH**  
8   **SEGMENT?**

9   A.   The Planning and Research Segment includes energy efficiency program-related  
10       expenses for Planning & Administration, Product Development, General  
11       Advertising, and Market Research. These activities support the direct impact  
12       programs and activities contained in the remainder of SPS’s portfolio. They  
13       comply with the requirements of 17.7.2.9(D) NMAC, which dictate that these  
14       activities “are permissible to the extent that those measures do not negate the  
15       overall cost effectiveness of the utility’s energy efficiency portfolio.” SPS’s  
16       overall portfolio is cost-effective with these activities included.

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**PUBLIC PARTICIPATION PROCESS**

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**Q. PLEASE PROVIDE INFORMATION ABOUT THE PUBLIC PARTICIPATION PROCESS.**

A. In accordance with 17.7.2.8(A) NMAC, SPS invited the general public, the Commission Staff, large customers, the New Mexico Attorney General, the New Mexico Energy, Minerals and Natural Resources Department, environmental group representatives, and consumer advocates to a public meeting to solicit non-binding recommendations on the design and implementation of the proposed Plan. Invitations were sent out on January 2, 2007, and the meeting was scheduled for January 25, 2007, in Roswell, New Mexico. Upon learning that the majority of potential attendees were likely to be in Santa Fe at that time because the Legislature was in session, SPS changed the public meeting to be a conference call to provide the most access possible. A PowerPoint® presentation was sent out on January 23, 2007. On the day of the meeting, the following organizations attended the call: Kathryn Turnipseed and Jami Porter Lara from Community Action of New Mexico (“CANM”), Jake Arnold of the Commission Staff, Joe Doubraza from Chevron, Steve McCutcheon from Intrepid, and Keith Wagner from Mosaic. SPS presented the proposed programs and potential cost recovery, and answered questions. SPS received specific written feedback from CANM. Following the meeting, SPS individually contacted the Southwest Energy

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1 Efficiency Project, Eastern Plains Council of Governments, Community Action  
2 Agency of Southern New Mexico, and six of our largest commercial and  
3 industrial customers in order to receive their feedback on the proposed Plan. SPS  
4 also met on two occasions with Commission Staff to further discuss the details of  
5 the proposed portfolio and issues related to cost recovery.

6 **Q. DID YOU RECEIVE FEEDBACK ABOUT SPS'S PROPOSED LOW-**  
7 **INCOME PROGRAM AS PART OF THE PUBLIC PARTICIPATION**  
8 **PROCESS?**

9 A. Yes, as stated previously, CANM attended SPS's presentation of its proposed  
10 program on January 25, 2007, and provided comments that were generally  
11 supportive of the portfolio. They requested that SPS increase its participation  
12 goals and SPS responded with an increase of approximately 50 percent. In  
13 addition, CANM asked that SPS coordinate its program with the federally-funded  
14 Weatherization Assistance Program. SPS will ensure that such coordination is  
15 incorporated into the request for proposals used to select community agencies and  
16 that such coordination occurs in practice.

17 **VIII.**

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**MEASUREMENT AND VERIFICATION PLAN**

1  
2 **Q. PLEASE DESCRIBE SPS'S PLANS FOR MEASUREMENT AND**  
3 **VERIFICATION OF THE PROPOSED PROGRAMS.**

4 A. SPS's M&V plan covers two areas: (1) plans and procedures for program-level  
5 M&V, i.e., estimating energy and demand savings for each of the respective  
6 programs; and (2) a procedure for selecting the Independent Program Evaluator  
7 (17.7.2.13(E)(1) NMAC) and facilitating the review of the entire portfolio. The  
8 program-level M&V will include efforts such as spot checks of rebate forms for  
9 accuracy of inputs and sampling of lighting installations to ensure consistency  
10 with claimed savings. Generally, the proposed residential and business programs  
11 will use a "deemed savings" approach for estimating energy and demand savings  
12 associated with individual programs. M&V plans are detailed further in the Plan.

13 The exceptions to this approach apply to the LivingWise<sup>®</sup> program, the  
14 Business Custom Efficiency program, and the Large Customer program.

- 15 • The LivingWise<sup>®</sup> program contractor, RAP, will utilize student and  
16 teacher surveys regarding installations to calculate the resulting energy  
17 savings. RAP's annual report will summarize knowledge gained,  
18 measures installed, self-audit information, participant satisfaction, and  
19 resource savings results.
- 20 • The Business Custom Efficiency program will use a pre-approval process  
21 wherein the participant submits applications that provide the specific  
22 details of the proposed energy efficiency measure before such a measure is  
23 installed. This approach helps reduce free-riders by ensuring that the  
24 participant's decision to install the more energy efficient measure was  
25 influenced by the program rebate. SPS engineering staff will review and  
26

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1 approve these applications based on program criteria and provide their  
2 own engineering-based estimates of the savings that will result from the  
3 measure. Projects that do not use deemed savings to determine their  
4 impact will receive pre-and post-project monitoring to validate  
5 engineering estimates.  
6

- 7 • For the Large Customer program, SPS will utilize internal resources to  
8 review and approve customer applications, similar to the review  
9 undertaken for the Custom Efficiency program.

10  
11 **Q. PLEASE DESCRIBE SPS'S PROPOSAL FOR THE PROCESS TO  
12 SELECT THE EVALUATOR.**

13 A. With respect to engaging the Evaluator, SPS will participate in the Commission's  
14 efforts to establish evaluation committees for New Mexico utilities as part of Case  
15 No. 07-00365-UT. A proposed timeline for this process follows from the recent  
16 Order for Solicitation and Appointment of Energy Efficiency Evaluation  
17 Committee Members, and is presented below.

18 **Table 2: Proposed Timeline for Selecting an Independent Program Evaluator**  
19

<b>Responsible Party</b>	<b>Activity</b>	<b>Date</b>
Commission	Solicits self-nominations of committee members	13-Sept-07
Self-Nominees	Submit applications for committee membership	31-Oct-07
Commission	Appoints M&V Committee for each utility	15-Jan-08
SPS	Sends RFP to Prospective Bidders	1-Mar-08
Committee	Select M&V Contractor	1-June-08
SPS	Completes Contract	1-July-08
Committee/SPS	Kick-off Meeting	1-Aug-08
Committee	Evaluator Delivers Draft M&V Report	1-May-09
Committee	Final M&V Report	1-July-09
SPS	SPS's 2008 Annual Report	1-Aug-09

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1           **IX. PROPOSED METHOD FOR REMOVING DISINCENTIVES**

2   **Q. DO UTILITIES HAVE DISINCENTIVES TO INVESTING IN ENERGY**  
3   **EFFICIENCY PROGRAMS?**

4   A   Yes. The regulated utility is no different from other businesses in that its  
5       shareholders benefit from increased sales and revenues, as long as it can generate  
6       those revenues in a manner that covers its costs. In this way, the traditional  
7       regulated utility model discourages investments in energy efficiency. More than  
8       two decades of research and public policy support this contention. For example,  
9       in 1989, the National Association of Regulatory Utility Commissioners  
10      (“NARUC”) adopted a resolution that explicitly recognized the fact that utilities  
11      lose revenues and profits when they or their customers invest in cost-effective  
12      energy efficiency programs.

13               More recently, in 2006, NARUC endorsed the principles embodied in the  
14      *Resolution Supporting the National Action Plan on Energy Efficiency*, including  
15      its recommendations that utility commissions “modify policies to align utility  
16      incentives with the delivery of cost-effective energy efficiency and modify  
17      ratemaking practices to promote energy efficiency investments.”

18               A recent U.S. Department of Energy report, *State and Regional Policies*  
19      *that Promote Energy Efficiency Programs Carried Out by Electric and Gas*  
20      *Utilities: A Report to the United States Congress Pursuant to Section 139 of the*

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1        *Energy Policy Act of 2005* (March 2007) further supported this observation. The  
2        report states, “Investor-owned electric and gas utilities may face a variety of  
3        disincentives to implementing energy efficiency programs rather than investing in  
4        physical assets such as power plants and transmission lines. Under traditional  
5        ratemaking practices, retail rates are determined in periodic regulatory  
6        proceedings called “rate cases,” based on a projection of utility operating costs  
7        and an allowable rate of return on investments” (pages 15-16). This report  
8        describes three types of disincentives: lost revenues, lost opportunities, and cost  
9        recovery, each of which is described in more detail below.

- 10        • Lost revenues refer to the fact that under normal operating conditions,  
11        utility shareholders are financially rewarded for increasing electricity and  
12        gas sales. Conversely, if utilities’ electricity and gas sales are decreased  
13        by offering energy efficiency programs, the results is a loss of revenues  
14        for the utility.  
15
- 16        • Lost opportunities refer to the fact that under normal operating conditions,  
17        a utility’s shareholders earn a rate of return on prudently incurred capital  
18        investments (e.g., power plants). In contrast, utilities often do not have  
19        any opportunity to earn a return on comparable demand-side (energy  
20        efficiency) spending because such expenditures are typically expensed. In  
21        addition, even if energy efficiency investments were afforded such a  
22        return, due to their relatively low cost per kWh and kW as compared with  
23        supply-side investments, the size of the earnings opportunity, would be  
24        significantly smaller.<sup>1</sup>

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<sup>1</sup> As the California Division of Ratepayer Advocates stated in 1991, “Had this type of earnings comparison been made in the past, we would have seen very clearly that previous DSM mechanisms offered significantly lower earnings opportunity for DSM than for supply-side alternatives.” (California Public Utilities Commission, Decision 91-10-059, p. 52).

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- 1           • Cost recovery refers to the fact that certainty and timeliness of cost  
2           recovery are important to a utility because unrecovered costs lower the  
3           utility's earnings.  
4

5   **Q.   WHY IS SPS FILING TO REMOVE DISINCENTIVES?**

6   A.   From SPS's perspective, a successful long-term commitment to energy efficiency  
7       programs is not possible without timely cost recovery and a workable mechanism  
8       for eliminating disincentives. This position is entirely consistent with the EUEA.  
9       The EUEA seeks to encourage utilities to implement cost-effective energy  
10      efficiency and load management programs by providing cost recovery and  
11      facilitating Commission approval of mechanisms to eliminate disincentives to  
12      offering such programs. SPS considers its proposals to recover costs and  
13      eliminate disincentives to be essential elements of its Plan.

14   **Q.   DOES THE EUEA PROVIDE A WAY TO ADDRESS THESE**  
15   **DISINCENTIVES?**

16   A.   Yes. The EUEA references disincentives in three places (§§62-17-2(E), 62-17-3,  
17      and 62-17-5(F)). The most pointed reference is contained in §62-17-5(F) which  
18      states, "[t]he commission shall, upon petition or its own motion, open a docket to  
19      identify any disincentives or barriers that may exist for public utility expenditures  
20      on energy efficiency and load management measures and, if found, ensure that  
21      they are eliminated and that an appropriate ratemaking treatment and  
22      performance-based, financial or other incentives are considered in order that



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1 public utilities are financially neutral in their preference for acquiring demand- or  
2 supply-side utility resources.”

3 **Q. IS THE COMMISSION GUIDED BY ANY OTHER PROVISIONS OF**  
4 **LAW OR REGULATION RELATING TO DISINCENTIVES?**

5 A. Yes. 17.7.2.9(K) NMAC provides further detail on how disincentives should be  
6 addressed. This section of the Rule states that: “(1) the utility shall file (*emphasis*  
7 *added*) a proposal for the commission to remove any disincentives or barriers to  
8 utility-provided energy efficiency or load management which the utility believes  
9 to exist.” (*emphasis added*) In other words, if SPS believes disincentives or  
10 barriers to investing in energy efficiency exist, it is obligated to file a proposal to  
11 remove them.

12 **Q. HAS SPS QUANTIFIED ANY FINANCIAL LOSSES FOR WHICH IT**  
13 **WOULD SEEK COMPENSATION?**

14 A. Yes, SPS has identified the disincentives and estimated the financial losses for  
15 which it seeks compensation. The following discussion: (1) identifies the  
16 disincentives for loss of revenues and for lost earnings opportunities; (2) estimates  
17 the financial losses for which SPS seeks compensation; (3) proposes the preferred  
18 method for mitigating such disincentives; (4) demonstrates why the disincentives  
19 are not offset; and (5) shows why the method for mitigating disincentives helps

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1           assure that SPS is financially neutral in its preference for acquiring demand- or  
2           supply-side utility resources.

3   **Q.   HAS SPS ESTIMATED THE FINANCIAL LOSSES RELATING TO LOST**  
4   **REVENUES?**

5   A.   Yes. Using information from SPS's recently filed general rate case (Case No.  
6       07-00319-UT), SPS calculated the reduction in revenues that would result from  
7       implementation of the proposed energy efficiency programs during 2008. As  
8       shown in Table 3, the reduction in revenues is \$855,357 per year. Assuming SPS  
9       files a rate case every three years, and therefore updates its revenue requirements  
10      based on a 2009 test year, the revenue reductions occur for three years.  
11      Multiplying \$855,357 by three results in lost revenues of \$2,566,072. However, a  
12      simple focus on lost revenues ignores the fact that certain costs (variable costs)  
13      decline with lower sales. The primary variable cost is fuel. Therefore, it is  
14      important to analyze the portion of revenues designated to recover fixed costs.  
15      This information is also presented in Table 3, rows 10 through 12. The revenues  
16      related to fixed cost recovery equal \$312,768 for one year and \$947,305 for three  
17      years.

18

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**Table 3: 2008 Energy Efficiency and Load Management Plan Lost Revenues**

Customer Class			Residential	Business - SGS	Business - SG	TOTAL
<b>Proposed Savings (at the customer)</b>	1	2008 Energy (kWh) <sup>a</sup>	3,928,564	3,113,637	3,113,637	<b>10,155,839</b>
	2	2008 Demand (kW) <sup>a</sup>	2,805	659	659	<b>3,967</b>
<b>Total Revenues</b>	3	Per kWh <sup>b</sup>	\$0.086	\$0.087	\$0.077	
	4	Per kW <sup>b</sup>	N/A	N/A	\$ 16.71	
	5	1 year (row 1 * row 3)	\$336,314	\$269,696	\$249,347	<b>\$855,357</b>
	6	2 year (row 5 * 2)	\$672,629	\$539,392	\$498,694	<b>\$1,710,715</b>
	7	3 year (row 5 * 3)	\$1,008,943	\$809,088	\$748,041	<b>\$2,566,072</b>
<b>Revenues to Cover Fixed Costs</b>	8	Per kWh <sup>b</sup>	\$0.033	\$0.032	N/A	
	9	Per kW <sup>b</sup>	N/A	N/A	\$ 10.74	
	10	1 year (row 1 * row 8) <sup>c</sup>	\$130,282	\$100,596	\$84,890	<b>\$315,768</b>
	11	2 year (row 10 * 2)	\$260,564	\$201,192	\$169,781	<b>\$631,537</b>
	12	3 year (row 10 * 3)	\$390,846	\$301,788	\$254,671	<b>\$947,305</b>

<sup>a</sup> Source: 2008 Energy Efficiency and Load Management Plan, Attachment DLS-1, Table 4.

<sup>b</sup> Direct Testimony of Daniel J. James, *In the Matter of Southwestern Public Service Company's Application for Revision of its Retail Electric Rates Pursuant to Advice Notice Nos. 208 and 209 and all Associated Approvals* (Case No. 07-00319-UT), Attachment DJJ-2.

<sup>c</sup> The Business - SG column = (row 2 \* row 9 \* 12)

**Q. PLEASE EXPLAIN HOW THE VALUES IN THIS TABLE WERE CALCULATED.**

A. Using the proposed rates from the general rate case, SPS calculated per kWh and per kW factors for three rate classes divided between: revenues to recover fixed costs, revenues to recover variable costs and revenues from the Service Availability Charge ("SAC").<sup>2</sup> Although the energy efficiency programs are available to all classes of customers, to simplify the calculation, SPS isolated three classes: Residential ("R"), Small General Service ("SGS") and Secondary

<sup>2</sup> The SAC recovers fixed customer charges; however, energy efficiency and load management program savings do not affect these revenues because the SAC is based on number of customers.

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1 General – Demand Billed (“SG”). SPS further assumed that business program  
2 energy and demand savings would be evenly divided between SGS and SG  
3 customers (thus, the energy and demand savings are divided by two). Table 4  
4 shows these calculations.

**Table 4: Energy Efficiency and Load Management  
Rate Case Fixed and Variable Costs**

<b>Customer Class</b>		<b>Residential</b>	<b>Business – SGS</b>	<b>Business - SG</b>
<b>Proposed Savings (at the customer)</b>	Energy (kWh) <sup>a</sup>	3,928,564	3,113,638	3,113,638
	Demand (kW) <sup>a</sup>	2,805	659	659
<b>Total Revenues</b>	Per kWh	\$0.086	\$0.087	\$0.077
	Per kW	N/A	N/A	\$16.71
<b>Revenues to Cover Fixed Costs</b>	Per kWh	\$0.033	\$0.032	N/A
	Per kW	N/A	N/A	\$10.74
<b>Revenues to Cover Variable Costs</b>	Per kWh	\$0.046	\$0.046	\$0.046
	Per kW	N/A	N/A	N/A
<b>Service Availability Charge</b>	Per kWh	\$0.007	\$0.008	\$0.001
	Per kW	N/A	N/A	N/A

<sup>a</sup> Source: 2008 Energy Efficiency and Load Management Plan, Attachment DLS-1, Table 4.

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11 The SAC is designed to recover customer costs that can be directly  
12 attributed to individual customers such as the service loop and meter, as well as  
13 expense items such as meter reading, billing and postage costs (refer to Case No.  
14 07-00319-UT, Direct Testimony of Daniel J. James, p. 13). A reduction in sales  
15 does not affect revenues collected through the service availability charge because  
16 the charge is per bill rather than per kWh or kW.

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1   **Q.   HAVE YOU ESTIMATED THE FINANCIAL LOSSES RELATING TO**  
2   **LOST EARNINGS OPPORTUNITIES?**

3   A.   Yes. One can calculate such lost earnings opportunities by: (1) determining the  
4   portion of the investment in power plants and transmission and distribution  
5   infrastructure that the energy efficiency and load management program avoids  
6   and (2) determining the shareholder earnings opportunities associated with this  
7   investment.

8               SPS's Plan has goals of 11.3 GWh and 1.2 MW (at the generator), and  
9   10.2 GWh and 3.97 MW (at the customer). The weighted average lifetime of the  
10   measures is 13 years. The amount of energy saved through SPS's programs  
11   would be approximately equivalent to a 4.3 MW combustion turbine operating at  
12   a 30 percent capacity factor, with corresponding energy output of 11.3 GWh per  
13   year for 13 years.

14              Using this information and the revenue requirements for a generic 143  
15   MW combustion turbine (this is the smallest generic resource used for resource  
16   planning due to modeling constraints), SPS calculated the foregone earnings  
17   opportunities associated with its proposed energy efficiency proposal. The  
18   analysis resulted in a net present value as of January 1, 2008, of after-tax profit  
19   for SPS shareholders of \$893,449, calculated based on what would have been

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1           earned on a comparable supply side investment. Refer to Attachment DLS-3 for  
2           the detail of this calculation.

3   **Q.   WHAT IS SPS’S PREFERRED METHOD FOR MITIGATING SUCH**  
4   **DISINCENTIVES?**

5   A.   SPS’s proposes a “Shared Savings” method for mitigating disincentives based on  
6           sharing the net benefits associated with energy efficiency and load management  
7           investments between customers and shareholders in an 85/15 ratio. In other  
8           words, 85 percent of the net benefits associated with SPS’s energy efficiency  
9           programs would stay with SPS’s New Mexico customers and 15 percent would go  
10          to shareholders. Assuming energy and demand savings as proposed in the Plan  
11          (see Table 4, page 12 of the Plan), such an approach would divide the \$2,932,325  
12          in estimated net benefits between customers (\$2,492,477) and shareholders  
13          (\$439,849). This approach would encourage SPS to maximize the efficiency of  
14          its delivered savings from energy efficiency programs since net benefits increase  
15          with the cost-effectiveness of the programs.

16   **Q.   HOW DID YOU ARRIVE AT AN 85/15 SHARED SAVINGS RATIO?**

17           The shared savings mechanism is intended to approximate the financial losses  
18           associated with offering energy efficiency and load management programs.  
19           Although the shareholders’ percentage – 15 percent equating to \$439,849 – is less  
20           than the estimate of financial losses using lost revenues and lost opportunities

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1 analyses, it is a fair, if not conservative, apportioning of the net benefits between  
2 customers and shareholders. It also is generally consistent with legislation  
3 recently adopted in Colorado which places a cap of 20 percent on the portion of  
4 net benefits retained by shareholders (see Colorado House Bill 1037, signed by  
5 Governor Bill Ritter on May 22, 2007).

6 **Q. IS THIS A REASONABLE APPROACH?**

7 A. Yes. A reasonable approach to mitigating disincentives would be to compensate  
8 the utility for its lost revenues and/or lost opportunities. Various forms of lost  
9 revenue adjustment mechanisms were popular in the 1990s (about 22 states and  
10 the District of Columbia had such mechanisms in 1995 according to Oak Ridge  
11 Laboratory's *Assessment of Net Lost Revenue Adjustment Mechanisms for Utility*  
12 *DSM Programs*, January 1995). However, this approach fell out of favor for a  
13 variety of reasons, including: (1) it led to very contentious reconciliation  
14 proceedings; (2) these mechanisms were designed to work within a context of  
15 frequent rate cases (and these stopped during the 1990s); and (3) energy  
16 efficiency programs declined with the advent of electric restructuring. Instead,  
17 SPS proposes a more measured approach, one that is inherently "performance  
18 based" and encourages investment in cost-effective energy efficiency by sharing  
19 the savings between customers and shareholders. The approach is inherently

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1 performance-based because a utility can earn more for its shareholders by  
2 producing energy and demand savings at a lower cost.

3 In comparison to lost revenues and lost earnings opportunities methods  
4 described above, the shared savings method is both modest and reasonable. As  
5 stated earlier, the approximate losses based on a lost revenues approach equal  
6 \$947,305 over three years and the approximate losses based on a lost earnings  
7 opportunities approach equal \$893,449. In fact, these losses are additive. In  
8 comparison, the \$439,849 of the shared savings methodology constitutes a  
9 measured approach to mitigating the disincentives associated with investments in  
10 energy efficiency. This approach is also transparent in that it is easily calculated  
11 and verified, as ‘net benefits’ must be calculated in order to demonstrate cost  
12 effectiveness.

13 **Q. PLEASE EXPLAIN WHY SPS IS NOT PROPOSING OTHER**  
14 **MECHANISMS TO MITIGATE DISINCENTIVES.**

15 A. SPS examined a number of alternative mechanisms before selecting its shared  
16 savings approach. These other mechanisms included: (1) percentage of  
17 expenditures; (2) currently authorized or increased rate of return on investments  
18 in energy efficiency and load management programs; (3) increase in SPS’s overall  
19 rate of return based on energy efficiency and load management program  
20 performance; (4) decoupling; and (5) some form of performance-based



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1 mechanism linked to specific energy and demand savings goals. SPS rejected  
2 these other approaches mainly because they either did not reward superior  
3 performance (with the exception of alternative (5)) or were not applicable to a  
4 utility with increasing sales per customer (i.e., decoupling). Although SPS  
5 generally prefers performance-based approaches based on energy and demand  
6 savings goals, it feels that such an approach may be more applicable after a few  
7 years of program operating experience wherein annual goals could be more  
8 reliably developed.

9 **Q. HOW DOES THIS APPROACH COMPARE TO THE WAY**  
10 **INVESTMENTS IN ENERGY EFFICIENCY ARE TREATED IN XCEL**  
11 **ENERGY'S OTHER OPERATING UTILITY JURISDICTIONS?**

12 In Minnesota, NSP has operated its programs under a shared savings incentive  
13 mechanism since 2000. In Colorado, a new law (H.B.1037) requires the Colorado  
14 Public Utilities Commission to provide an opportunity for utility investments in  
15 energy efficiency and load management to be more profitable than other utility  
16 investments and includes a shared savings approach as one of the available  
17 options.

18 **Q. PLEASE EXPLAIN HOW THE PROPOSED METHOD FOR**  
19 **MITIGATING DISINCENTIVES HELPS ASSURE THAT SPS IS**



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**CONCLUSION**

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**Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

A. Consistent with the EUEA and Rule, SPS is proposing eight new energy efficiency programs to be launched following Commission approval:

- Residential Home Lighting;
- Residential Air Source Heat Pump Rebates;
- Residential LivingWise<sup>®</sup>;
- Low-Income;
- Business Cooling Efficiency;
- Business Custom Efficiency;
- Business Lighting Efficiency; and
- Large Customer.

These programs were designed to offer SPS’s customers opportunities for broad participation and the ability to reduce their energy consumption and peak demand. Each of the programs passes the TRC Test with a ratio greater than one, while the overall portfolio results in a ratio of 1.84.

SPS sought public input on its proposal from interested stakeholders, including large customers, environmental and low-income advocates, and modified the Plan accordingly. The Plan represents the first year of SPS’s commitment to meet the legislative goals of reducing retail sales by five percent by 2020.

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1   **Q.   WERE ATTACHMENTS DLS-1 THROUGH DLS-3 PREPARED BY YOU**  
2           **OR UNDER YOUR DIRECT SUPERVISION?**

3   **A.   Yes.**

4   **Q.   DOES THIS CONCLUDE YOUR TESTIMONY?**

5   **A.   Yes.**

**VERIFICATION**

**STATE OF MINNESOTA )**  
**) ss.**  
**COUNTY OF HENNEPIN )**

Debra L. Sundin being first duly sworn on oath, deposes and states that she is the witness identified in the foregoing prepared testimony, that she has read the testimony and is familiar with its contents, and that the facts set forth are true to the best of her knowledge, information, and belief.

\_\_\_\_\_

SUBSCRIBED AND SWORN TO before me this \_\_\_\_\_ day of September, 2007.

\_\_\_\_\_  
Notary Public  
My Commission Expires:\_\_\_\_\_