

SOUTHWESTERN PUBLIC SERVICE COMPANY

2008 Energy Efficiency and Load Management Plan

**Prepared in Compliance with the Efficient Use of Energy Act
and 17.7.2 NMAC (Energy Efficiency Rule)**

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Glossary of Acronyms and Defined Terms

<u>Acronym/Defined Term</u>	<u>Meaning</u>
ASHP	Air Source Heat Pumps
BSC	Business Solutions Center
C&I	Commercial and industrial
CFL	compact fluorescent lightbulb
Chillers	Centrifugal and Air Cooled Chillers
Commission or NMPRC	New Mexico Public Regulation Commission
Community Agencies	Eastern Plains Council of Governments and Community Action Agency of Southern New Mexico
CU	Condensing Units
EER	Energy Efficiency Ratio
EUEA	New Mexico Efficient Use of Energy Act, as amended by Senate Bill 418, §§62-17-1 through 62-17-11 NMSA 1978
GSHP	Ground Source Heat Pump
Home Use Study	Wiese Research Associates 2005 Home Use Study
HVAC	Heating, ventilation and air conditioning
IPMVP	International performance measurement and verification protocols

<u>Acronym/Defined Term</u>	<u>Meaning</u>
KEMA Study	KEMA New Mexico DSM Potential Assessment Study
LIHEAP	Low-Income Home Energy Assistance Program
M&V	Measurement and verification
NEB	Non-energy benefits
NSP	Northern States Power Company
O&M	Operations and Maintenance
Plan	2008 Energy Efficiency and Load Management Plan
PNM	Public Service Company of New Mexico
PTAC	Packages Terminal Air Conditioners
PSCo	Public Service Company of Colorado
RAP	Resource Action Programs
RTU	Rooftop Units
Rule	NMPRC Energy Efficiency Rule, 17.7.2 NMAC
SEER	Seasonal Energy Efficiency Ratio
SPS	Southwestern Public Service Company
SS	Split Systems
Tracker	SPS's proposed cost tracking mechanism
TRC	Total Resource Cost
VAV	Air Handling systems

Acronym/Defined Term

Meaning

Wiese

Wiese Research Associates

WSHP

Water Source Heat Pump

Xcel Energy

Xcel Energy Inc.

XES

Xcel Energy Services Inc.

Executive Summary

In accordance with the Efficient Use of Energy Act, as amended by Senate Bill 418 (2007) (§§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”), Southwestern Public Service Company (“SPS”) respectfully submits for Commission review this proposal for the SPS’s 2008 Energy Efficiency and Load Management Plan (the “Plan”). The EUEA and its associated Rule requires public utilities to offer cost-effective energy efficiency and load management programs and authorizes them to receive cost recovery for qualified expenditures. The Plan serves to fulfill SPS’s obligations under the EUEA and the Rule.

SPS serves many small municipalities in eastern and southeastern New Mexico, including: Artesia, Carlsbad, Clovis, Dexter, Eunice, Hagerman, Hobbs, Jal, Lake Arthur, Loving, Portales, Roswell, Texico, and Tucumcari. The main industries in its New Mexico service territory are agriculture, oil and gas production, and potash mining.

In 2006, SPS-New Mexico had an annual system peak of 754 MW. The total consumption for all retail customers was 3,883 GWh. For calendar year 2008, SPS proposes an energy efficiency and load management budget of \$1,819,720 and goals of 1,166 generator kW and 11,257,276 generator kWh, distributed among the customer segments as shown in Table 1 below. SPS’s Plan represents first-year savings of 0.15 percent of system peak demand and 0.3 percent of retail energy sales. In future years, SPS will increase its energy efficiency and load management commitments to meet the Senate Bill 418 goal of achieving a five percent reduction in retail sales by 2020.

Table 1: 2008 Plan Budgets & Goals By Segment

2008	Electric Participants	Electric Budget	Customer kW	Generator kW	Generator kWh
Residential Segment Total	23,218	\$549,809	1,291	214	2,858,541
Low-Income Segment Total	16,200	\$197,089	1,514	82	1,555,576
Business Segment Total	212	\$712,893	1,503	871	6,843,159
Large Customer Segment Total	TBD	TBD	TBD	TBD	TBD
Planning & Research Segment Total	N/A	\$359,929	N/A	N/A	N/A
TOTAL	39,630	\$1,819,720	4,308	1,166	11,257,276

A. Energy Efficiency Programs

Drawing on the experience with energy efficiency and load management programs offered by SPS's affiliated operating companies in other jurisdictions, SPS has developed a portfolio of electric energy efficiency direct impact programs in four main customer segments: Residential, Low-Income, Business, and Large Customers. In addition, the Plan includes a Planning & Research Segment, which provides support functions for the direct impact programs.

The proposed programs were designed to accommodate diverse customer lifestyles and provide convenient participation and information to assist customers in making wise energy choices. In addition to its direct impact program portfolio, SPS plans to conduct measurement and verification ("M&V"), market research, product development, marketing and promotion, general advertising, and planning and administration to support these programs.

SPS proposes to market to each customer segment based on the number of customers, relative size of each customer, and amount of conservation potential at the customer site. SPS uses a more personal sales approach for large commercial and industrial ("C&I") customers because they generally have larger and more complex energy efficiency and load management opportunities. Small business customers are marketed through the Business Solutions Center. In contrast, energy efficiency potential for an individual residential customer is small and costs per participant need to be strictly controlled; therefore, for this segment, SPS relies most heavily on mass-market advertising and promotion. These customer segments are more thoroughly discussed in the Program Detail section below.

B. Cost Recovery

The EUEA authorizes SPS to recover the costs of eligible expenses associated with its energy efficiency and load management programs up to \$75,000 per customer per year. To recover its costs, SPS is proposing a tariff rider charge equal to 0.695 percent of each customer's bill excluding taxes and franchise fees. The Energy Efficiency tariff rider will approximate contemporaneous cost recovery of Plan expenditures. Expenditures and cost recovery will be recorded through a tracking mechanism ("Tracker"). In its annual report filed on or before August 1st, SPS will include the Tracker showing any under- or over-recovery, and propose a revised tariff rider percentage charge to recover:

- any true-up required from the previous year's recovery;
- forecasted expenditures for the next calendar year; and
- any approved disincentive mitigation for the previous year.

The costs associated with voluntary programs that SPS offered through the end of 2006 are to be recovered through rate case proceedings and are not considered for cost recovery under the EUEA. SPS requests that the costs incurred in 2007 for product development and planning and administration be recovered together with the 2008 program costs identified in the Plan. SPS requests to recover initial program costs of \$1,819,720, which would increase customer electric billings by 0.695% on an annual basis if the Energy Efficiency Tariff Rider were to become effective on January 1, 2008.

I. Background

This document provides the background, description, and methodology for selection of the eight direct impact programs proposed by SPS for calendar year 2008. These programs have been designed to serve all of SPS's New Mexico jurisdictional customers with a variety of offerings that address specific customer needs.

A. History of SPS-New Mexico's Energy Efficiency Programs

SPS has offered voluntary energy programs in its New Mexico service territory since 1980. SPS's efforts began with heat pump and efficient central air conditioning rebates, and expanded to commercial lighting and customized rebates in 2002. Beginning in 2005, SPS began distributing free packages of compact fluorescent light bulbs ("CFL") to low-income customers through community agencies in its service territory. SPS also regularly sends energy efficiency information to customers in English and Spanish through bill inserts and separate mailings. In anticipation of impending rulemaking on the EUEA, SPS did not offer a full suite of efficiency programs in 2006 or 2007.

In addition to formal rebate and incentive programs, SPS maintains a large database of energy information on its website (www.xcelenergy.com). Customers and the general public are able to access information on the latest technologies and practices available for saving energy. Residential customers can access information on energy saving tips, low/no cost ways to save energy, an online energy assessments, and appliance energy calculators. Business customers can keep up-to-date on new technologies and access one of several energy advisor or energy assessment tools.

The following table describes SPS's energy efficiency achievements in New Mexico over the last five years:

Table 2: 2002-2006 Historical Energy Efficiency Achievements

Year	Customer kW Saved	Customer kWh Saved	Participants	Budget
2002	3,614	5,266,000	869	\$1,200,000
2003	2,260	5,145,400	1,075	\$900,000
2004	2,643	8,028,528	1,311	\$1,200,000
2005	2,771	5,684,304	1,360	\$1,300,000
2006	1,350	4,268,424	55	\$700,000

The 2008 Plan continues SPS's commitment to energy efficiency in New Mexico. Since 2002, SPS has invested over \$5,000,000 resulting in 28 GWh of electric energy savings, and 12 MW of electric demand savings in its New Mexico service territory.

B. Experience in Other Jurisdictions

Xcel Energy Inc. ("Xcel Energy"), the parent company of SPS, also has a long history of offering energy efficiency and load management programs in many of its other service territories, Minnesota (Northern States Power Company or "NSP") and Colorado (Public Service Company of Colorado or "PSCo") being the largest and most long-standing. In Minnesota, NSP was historically legislatively mandated to spend 2 percent of its electric and 0.5 percent of its gas gross operating revenues (retail sales to ultimate consumers) on energy efficiency and load management programs. In 2007, this translates into an approved budget of \$47 million for electric programs and \$5 million for gas programs in Minnesota. In Colorado, PSCo entered into a settlement agreement as part of its 2003 Least Cost Plan process, which committed PSCo to achieve electric efficiency savings of 320 MW and 800 GWh at a cost of no more than \$196 million between 2006 and 2013.

SPS's affiliated operating companies offer a wide variety of programs to all customer classes in Minnesota and Colorado. For commercial and industrial customers, they provide rebates to install high efficiency compressed air, cooling, computer power supplies, energy management systems, lighting, motors, and refrigeration, as well as customized process improvements, large building new construction, and recommissioning for existing buildings.

For residential customers, SPS's affiliated operating companies offer rebates for the proper installation and sizing of central air conditioners, compact fluorescent light bulbs, and new and existing home efficiency improvements. Low-income customers are uniquely eligible for no-cost services such as refrigerator, freezer, and room air conditioner replacements, free compact fluorescent light bulbs, and home visits. SPS's affiliated operating companies offer the Saver's Switch[®] air conditioner and electric water heater cycling load management program to its residential customers, and interruptible programs for many of its commercial and industrial customers. In addition, NSP-Minnesota offers a variety of indirect impact programs intended to educate customers and assist them with auditing their energy usage to encourage participation in our direct impact programs.

SPS is able to draw on this long history with energy efficiency and load management programs in developing its programs for New Mexico. Specifically, SPS adapted its affiliated operating companies' existing Business Cooling Efficiency, Custom Efficiency, and Lighting Efficiency programs, as well as its Residential Air-Source Heat Pump, and Home Lighting programs for the New Mexico service territory. These proposed

programs are described in more detail below. SPS looks forward to offering these programs in New Mexico and developing a deeper understanding of the marketplace. This deeper understanding will facilitate refinements to existing programs and the ability to expand its energy efficiency and load management offerings.

II. Program Rationale and Selection Criteria

A. Introduction

This section provides the rationale for program selection, consistent with 17.7.2 NMAC. 17.7.2.9 NMAC provides the requirements for program approval. Specifically, 17.7.2.9 (C)(1) NMAC specifies that cost effectiveness is a mandatory criterion for program approval. 17.7.2.9(C)(2) NMAC further details the criteria utilities must use in prioritizing and selecting amongst cost-effective programs, including:

- the extent to which the program provides significant system benefits to all members of a customer class, including non-participants;
- the extent to which the program offers broad participation within a class;
- the program's Total Resource Cost ("TRC") Test results;
- the program's total estimated energy and demand savings;
- the existence of non-energy benefits ("NEBs");
- administrative ease of program deployment;
- overall portfolio development considerations; and
- performance risk of technologies and methods required for program.

B. System Benefits

All of the programs proposed by SPS in this Plan deliver system benefits through reductions in the amount of generation, transmission, and distribution expansion necessary to meet its customers' growing demand. These avoided expenditures reduce costs for all customers, including the non-participants.

C. Broad Participation within Classes

SPS distinguishes several end-uses in its retail rates including: residential, irrigation, agricultural processing, oil well pumping, grain elevators, industrial, gas pipeline compression, Cannon Air Force Base, municipal street lighting, guard lights, flood lights, public and parochial schools, and photovoltaic water pumping customers. For the purposes of this Plan, all end-uses have been divided into four customer segments: Residential, Low-Income, Business, and Large Customers. Household customers may fall into the Residential and/or the Low-Income segments. Business, agricultural, municipal, and industrial customers will fall into the Business segment, while a subset of these customers will also qualify for the Large Customer segment. Specific participation

requirements are listed within each program description in the Program Details section of this Plan.

D. TRC Cost-Effectiveness Results

All of the programs proposed by SPS in this Plan are cost-effective (TRC Test greater than 1.0) at the estimated budget and participation levels. Individual program-level TRC results are provided in Table 4. The Rule specifies that all programs, but not all measures, must be cost-effective. Hence, this portfolio contains one measure, Low-Income Refrigerator Upgrades, which is not estimated to be cost-effective. However, even with this measure included, the Low-Income Program and the overall portfolio remain cost-effective.

E. Estimated Energy and Demand Savings

SPS strives to run its programs as cost-effectively as possible in order to maximize its energy and demand savings at reasonable cost. The 2008 estimated energy and demand savings of the individual programs are shown in Table 4. The proposed Plan represents a budget and goals that assume that the programs would be offered over a 12-month period. However, depending on when the Plan is approved, SPS may not meet these first year goals. SPS proposes to open these programs beginning within one month of Plan approval, and will keep them open until the Commission approves a new Plan or discontinuation of existing programs.

F. Non-Energy Benefits

NEBs are those savings to the customer or utility as a result of participation in an energy efficiency or load management program, but that are not directly related to the consumption of fuel (e.g., electricity, natural gas, propane, wood, etc.). Such NEBs include savings from reduced outages, arrearages, or emissions, and incremental savings of labor, maintenance, or materials. SPS recognizes that there may be NEBs associated with the proposed energy efficiency and load management programs, but has not included these benefits in the cost-effectiveness analyses presented in this Plan because these benefits are difficult to quantify and thought to be small in magnitude compared to other system benefits. However, the individual Custom Efficiency and Self-Direct projects, which may have significant and easily identifiable NEBs, will include these benefits in their cost-effectiveness analyses.

G. Ease of Program Deployment

SPS serves a sparsely populated, large geographic area in New Mexico and, as such, has only one Program Manager on site. To ease the administrative burden, SPS will use a number of program deployment methods to bring its energy efficiency programs to the market. For the majority of offerings, SPS will leverage its large institutional infrastructure, with internal capabilities in product development, program management,

rebate processing, and regulatory administration, to develop, implement, and administer its energy efficiency and load management programs. By taking advantage of existing resources, SPS will avoid many of the pitfalls associated with new programs. Specifically, programs were selected that could be integrated with existing infrastructure. For instance, this Plan proposes Business Lighting and Cooling Efficiency programs that are similar to those which SPS previously operated in New Mexico. In addition, SPS is proposing a Home Lighting program that parallels similar programs offered in Minnesota and Colorado. Finally, the Plan includes two programs that will be administered by third-party providers with proven track records of program delivery in order to ensure the most seamless process, LivingWise[®] and Low-Income. Further, SPS's energy efficiency and load management programs will be supported by the broader Xcel Energy organization.

H. Overall Portfolio Development Considerations

In developing this proposal, SPS used a comprehensive product development process to analyze, prioritize and select the programs to include in its energy efficiency portfolio. The product development process utilizes traditional stage/gate methods in order to develop sound ideas that meet customer needs, both internal and external. The process begins by analyzing service territory characteristics (e.g. number and types of customers, climate, and market potential) to develop a list of relevant programs that Xcel Energy's operating companies have successfully operated in other jurisdictions. The specific stages that the product development process then follows are: Ideation, Framing, Design, Build, Test, and Launch. Management reviews ideas at the transition points between each stage, which allows for proper culling of less effective ideas early in the process before significant work is done. This product development process was originally developed for use with energy efficiency and load management programs in Minnesota and Colorado.

As part of its program selection process, SPS used two sources of data: the KEMA New Mexico DSM Potential Assessment Study ("KEMA Study," which is attached to the Direct Testimony of Debra L. Sundin at Attachment DLS-2) to assess its long-term energy efficiency and load management goals, and the Wiese Research Associates ("Wiese") 2005 Home Use Study ("Home Use Study") database for general service territory characteristics. Both studies are discussed in more detail below.

I. Risk of Technologies and Methods

As discussed above, SPS's affiliated operating companies have extensive experience with operating energy efficiency and load management programs in a variety of jurisdictions. This Plan benefits from those years of experience and expertise and allows SPS to have greater confidence in its program proposals. The proposed programs have been offered successfully either in New Mexico or in other jurisdictions. The third-party partnerships

are with reputable, long-standing organizations. Therefore, SPS does not perceive a great risk with the technologies or methods it has chosen.

J. Programs Studied and Rejected and Future Programs

SPS drew on the depth of experience from Xcel Energy's other jurisdictions and had many pre-existing energy efficiency programs to choose from when developing its portfolio for New Mexico. There was only one program that SPS studied and decided not to offer at this time: Refrigerated Air Conditioning Equipment.

1. Refrigerated Air Conditioning

The Refrigerated Air Conditioning program offers customers rebates for purchasing air conditioning equipment of Seasonal Energy Efficiency Ratio ("SEER") 14 and higher. However, due to the recent increase in minimum federal efficiency standards from SEER 10 to 13 for cooling equipment, the incremental savings of a SEER 14 or higher do not justify the incremental costs to purchase such a unit, making the program non-cost-effective at this time for both Residential and Business customers. Therefore, despite the interest in achieving energy and demand savings from cooling equipment, SPS was unable to include a central air conditioning rebate program in its portfolio. SPS will reconsider this program offering should the incremental cost of SEER 14 and higher units decrease. SPS is still able to provide the air-source heat pump rebate, despite its similar SEER rating, because the incremental costs for the efficient models are more closely matched with the incremental savings, thus enabling this program to be cost-effective. Note that, in the case of the TRC Test, the value of the rebate does not impact the cost-effectiveness of the program because the rebate is included as both a benefit (to the participant) and a cost (to the utility).

2. Future Programs

SPS has several potential Residential programs under consideration for inclusion in future Plans, including: Electric Heat Weatherization, Electric Water Heating, Evaporative Cooling, Refrigerator Recycling, and Saver's Switch. SPS did not have the technical information finalized to include these programs in the 2008 Plan; however, these programs are currently under consideration and will be discussed further in future filings. In the Business segment, the most cost-effective opportunities can be handled through SPS's existing proposed program offerings, as the Custom Efficiency program provides rebate opportunities for cost-effective measures not covered through the prescriptive programs. However, if a new end-use becomes more popular or feasible within the Custom Efficiency program, SPS will evaluate adding it to the portfolio as a stand-alone deemed savings program.

K. Other Factors in Program Selection

1. Energy Efficiency Market Potential Study – KEMA Study

In preparation for the expansion of energy efficiency programs in its New Mexico service territory, SPS contracted with KEMA Consulting to conduct a market potential study (KEMA Study) (refer to Attachment DLS-2 to the Direct Testimony of Debra L. Sundin). The objectives of the KEMA Study were to:

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

In order to limit the cost of the market potential study, KEMA Consulting and SPS employed a “top-down” analysis methodology that allowed adaptation of the results of its previous market potential study of the Colorado jurisdiction to the New Mexico service territory. This resulted in significant cost savings, but led to less detailed market potential data.

The following table provides the projected achievable potential demand and energy savings, as well as program costs, for SPS’s New Mexico service territory between 2006 and 2015.

Table 3: New Mexico Market Potential Study Results for 2006 to 2015

Rebate Level	Generator Demand* (MW)	Generator Energy (GWh)	Program Costs (\$M)
33%	17 MW	41 GWh	\$14M
50%	21 MW	71 GWh	\$23M
75%	37 MW	143 GWh	\$49M

*Assumed constant 11 MW of load management across all rebate levels.

Although this study was not completed before the Plan was developed, the results show consistency with the portfolio and support the types of programs proposed. Therefore, SPS has used and will continue to use this study for long term planning and to determine how to best achieve the legislative goals of the EUEA. In the future, SPS will use the KEMA Study to provide directional indications of the types of programs that might be successful in the marketplace.

2. Home Use Study

SPS also used a database of residential home characteristics, which was produced by Wiese. Wiese was contracted to collect data on household qualities and demographics for the Home Use Study. Wiese interviewed a total of 400 SPS-New Mexico residential customers by telephone to determine details on dwelling type, square footage, age of home, household composition, household income, age, marital status, education levels, Internet access, number and type of appliances used in the home, the main fuel sources used, and average temperatures maintained during the heating and cooling months. This information is very useful when selecting and designing energy efficiency programs for residential customers. It should be noted that the Home Use Study is a database, and as such has no report or executive summary from the contractor.

The Home Use Study included the following key findings:

- Almost all households (93 percent) use some variety of cooling equipment (central air conditioning, an air-source heat pump, or an evaporative cooler), of which 81 percent are less than 15 years old.
- Approximately one-third (36 percent) of New Mexico residential households use electricity to heat their homes. Of those, 29 percent have an air-source heat pump.
- 40 percent of households use electricity for their water heaters.

The high percentage of customers with cooling equipment indicated that it is important for SPS to offer a cooling rebate program, which led SPS to include an Air-Source Heat Pump program in the current filing and to conduct further research on other cooling technologies such as Evaporative Cooling for possible inclusion in future filings. Further, given that 18 percent of survey respondents use air-source heat pumps to heat their homes, SPS determined that, despite recent increases in federal minimum standards for cooling measures (which has made it difficult to develop cost-effective central air conditioning programs), air-source heat pumps would be a good program addition because the combined heating and cooling benefits of this equipment make the installation of SEER 14+ units cost-effective in this service territory. As discussed in more detail below, SPS is also looking at Electric Heat Weatherization, Electric Water Heating and Refrigerator Recycling for future programs.

L. Goal Setting

SPS took a number of factors into consideration when developing its energy efficiency program goals and budgets for the Plan, including:

- Historical and expected participation levels;
- Incremental cost of energy efficient equipment;
- Results of market potential and home use studies; and
- Cost-effectiveness.

III. Program Detail

SPS proposes a total of eight direct impact programs spread across four customer segments. These programs are intended to be open to all customers within their respective class and are intended to provide broad opportunities for participation.

Table 4, below, provides the estimated participation, budgets, energy and demand savings, and TRC Test results for the proposed programs. Included in this table are estimated 2007 costs of \$112,000 associated with program development, and planning and administration. Please note that this table does not include any values for its Large Customer Segment. SPS has identified approximately 29 large customers at 44 customer sites who might qualify for the Large Customer Segment; however, it is unknown at this time who will choose to participate. Although the program requires that customers notify SPS by November 30th of the year prior to their self-directed project or exemption, SPS intends to waive this requirement for 2008 and will accept applications throughout the year.

Table 4: Summary of 2007/2008 Program Goals and Expenditures

Program	First Yr. Parts.	Budget	Net Customer kW	Net Customer Annual kWh	Gen kW	Gen kWh (1st yr)	TRC Test
Residential Home Lighting	20,000	\$284,644	884	1,343,680	99	1,509,753	1.40
Res Air-Source Heat Pumps	200	\$130,880	90	260,616	90	292,827	1.47
Res Living Wise Program	3,018	\$134,285	162	939,805	25	1,055,961	2.33
Residential Total	23,218	\$549,809	1,135	2,544,102	214	2,858,541	1.62
Low-Income Total	16,200	\$197,089	1,514	1,384,463	82	1,555,576	1.99
Business Cooling Efficiency	90	\$130,335	114	226,865	86	249,303	1.16
Business Custom Efficiency	49	\$263,486	770	4,194,600	382	4,609,451	2.15
Business Lighting Efficiency	73	\$319,073	433	1,805,809	403	1,984,406	2.21
Business Total	212	\$712,893	1,317	6,227,275	871	6,843,159	2.07
Large Customer Total	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Market Research	N/A	\$107,500	N/A	N/A	N/A	N/A	N/A
General Advertising	N/A	\$58,000	N/A	N/A	N/A	N/A	N/A
Product Development	N/A	\$42,000	N/A	N/A	N/A	N/A	N/A
Planning & Administration	N/A	\$40,429	N/A	N/A	N/A	N/A	N/A
Planning & Research Total	N/A	\$247,929	N/A	N/A	N/A	N/A	N/A
2008 Sub-Total	39,630	\$1,707,720	3,967	10,155,839	1,166	11,257,276	N/A
2007 Product Development	N/A	\$52,000	N/A	N/A	N/A	N/A	N/A
2007 Planning & Administration	N/A	\$60,000	N/A	N/A	N/A	N/A	N/A
2007 Sub-Total	N/A	\$112,000	N/A	N/A	N/A	N/A	N/A
2007/2008 TOTAL	39,630	\$1,819,720	3,967	10,155,839	1,166	11,257,276	1.78

A. Residential Segment

The Residential Segment includes nearly 81,000 single-family dwellings, apartments and condominiums in southeastern New Mexico. The marketing strategy for the Residential

Segment is to build awareness and provide consumers a mix of conservation offerings including direct impact products, indirect-impact services and educational tools. SPS will target this customer segment through the use of strategically placed advertising, bill inserts, community outreach, events at local home improvement centers, and content on the Xcel Energy website (www.xcelenergy.com). The following table provides the populations of the largest cities in SPS's New Mexico service territory.

Table 5: Population of Largest Cities in the SPS Service Territory

City	Population	City	Population
Artesia	10,692	Hobbs	28,311
Carlsbad	25,303	Jal	1,996
Clovis	32,815	Loving	1,326
Dexter	1,235	Portales	11,131
Eunice	2,562	Tucumcari	5,989
Hagerman	1,168	Roswell	44,228

Source: 2000 U.S. Census

The Residential Segment used approximately 911 GWh of electricity in 2006. Primary energy usage for this segment includes lighting, cooling, and heating. The programs offered in this segment include: Air-Source Heat Pump Rebates, Home Lighting, and LivingWise[®]. SPS proposes the following goals for its Residential Segment.

Table 6: Proposed Residential Segment Goals

Residential Segment	2008 Goal
Budget	\$549,809
Generator kW	214 kW
Generator kWh	2,858,541 kWh
Participation	23,218

1. Air-Source Heat Pumps

a. Program Description

This program provides equipment rebates for air-source heat pumps rated SEER 14 or higher and is available to all SPS residential electric customers who install a qualifying unit. Existing homeowners and new homebuilders will be the primary targets for this program.

SPS previously offered equipment rebates for both central air conditioning and air-source heat pumps. However, in 2006, the federal efficiency standards for cooling equipment changed from SEER 10 to SEER 13. This change caused the central air conditioning rebate program to become non-cost-effective, as the incremental savings of more efficient units (SEER 14 or greater) were no longer sufficient to merit the incremental costs.

Though measured by the same efficiency standard, the incremental costs of efficient air-source heat pumps are low enough, and the savings high enough due to the number of operating hours in the year, that this rebate program remains cost-effective.

Table 7: Proposed Air-Source Heat Pump Goals

Air-Source Heat Pumps	2008 Goal
Budget	\$130,880
Generator kW	90 kW
Generator kWh	292,827 kWh
Participation	200

b. Rebate Structure

Rebates are based on the SEER level and the incremental cost of the unit and are listed in Table 8.

Table 8: Proposed Rebates for Air-Source Heat Pumps

Efficiency	Rebate
SEER 14	\$45 /Ton
SEER 15	\$90 /Ton
SEER 16+	\$135 /Ton

c. Program Administration

Rebate forms are available from the equipment vendor, installation contractor, the Xcel Energy website, and the Xcel Energy call center, and must be returned within 12 months of purchase along with the original receipt. The homeowner or homebuilder must agree to inspections of the installed unit for M&V purposes. Rebates may be paid to the customer, or they can be assigned to the contractor as partial payment for high efficiency equipment.

d. Marketing and Outreach Plan

SPS will make an effort to leverage its rebates with other offers from equipment distributors and retailers, as well as with any tax credits that may become available. In addition, SPS will pursue trade partnerships with heating, ventilation, and air conditioning (“HVAC”) and general contractors in order to market this program most effectively, including participation in cooperative advertising that promotes more efficient equipment with these trade allies. These marketing efforts will be conducted in English and Spanish when possible, and include:

- Work with cooling equipment distributors starting in late 2007. Coordinate discounts and seasonal incentives with program rebates, and offer package savings on energy efficient products or technologies;

- Communicate with HVAC contractors through letters, brochures, and meetings in early 2008 (after Commission approval) to educate them on the available programs, processes and application materials;
- Conduct newspaper and radio advertisements in early 2008;
- Include bill inserts to customers in Spring and Summer 2008;
- Update Xcel Energy website content and link to program materials; and
- Develop and post a list of preferred contractors who participate in our rebate programs.

If SPS's customers or the equipment vendors identify equipment cost as a barrier, SPS may also investigate if local lending institutions are interested in providing financing for approved high efficiency cooling products.

e. Measurement and Verification Plan

This program will be based on deemed savings and will use the M&V plan outlined in Section IV.B of this document.

f. Cost Effectiveness Tests

See Appendix A.

2. Home Lighting

a. Program Description

The Home Lighting program provides incentives that motivate consumers to purchase CFLs for their homes. It is open to all SPS residential customers. The objective of the program is to increase the use of energy-efficient lighting products in the residential market and help customers save money and energy. The program uses two components to promote CFLs: Direct Sales and In-Store Rebates.

Direct Sales

The Direct Sales component sells a wide variety of CFLs through a third-party vendor at competitive prices. The actual sale and fulfillment of the bulbs is handled through the lighting vendor, who also manages and owns the lighting inventory. Table 10 provides a list of bulbs available through direct sales.

SPS will promote the Direct Sales bulbs through direct mail, bill inserts, newsletters and the Internet. Customers can order bulbs via the mail, phone, Internet and fax.

In-Store Rebates

SPS will also promote CFLs through In-Store Instant Rebates. In these promotions, the bulb manufacturer, retailer and SPS combine funds to offer instant rebates enabling customers to purchase a CFL for under a dollar. SPS uses big box retailers as well as

chain stores to promote the bulbs. One example of In-Store Rebates is SPS's participation in the national ENERGY STAR Change-A-Light promotion, which is a national promotion that provides instant rebates for CFL purchases. The Change-A-Light campaign leverages nationwide efforts providing a consistent message and economies of scale in promotion costs. CFLs are promoted through print advertising and public relations efforts.

SPS proposes the following Direct Sales and In-Store Rebate combined Home Lighting goals for 2008:

Table 9: Proposed Home Lighting Goals

Home Lighting	2008 Goal
Budget	\$284,644
Generator kW	99 kW
Generator kWh	1,509,753 kWh
Participation*	20,000

*One bulb = one participant

b. Rebate Structure

The following table shows a sample of the products available for direct sale and their wholesale price. For every \$35 purchase, SPS will provide one free CFL.

Table 10: Sample of Lighting Products Available Through Direct Sales

Lighting Measure	Wattage Replaced	L" x W"	Average Life (Hrs)	Lumens	Price
13W Mini-Twist	60W	4.25 x 1.6	6,000	800	\$3.99
13W Full Spectrum Twist	60W	4 x 1.75	12,000	900	\$6.99
15W Twist	60W	4.9 x 2	10,000	850	\$6.99
19W Mini-Twist	75W	5.25 x 2	8,000	1,200	\$3.99
20W Dimmable Twist	75W	5.3 x 2.5	10,000	1,200	\$13.99
20W Wet Location Twist	75W	5.5 x 2.2	10,000	1,200	\$9.99
23W Mini-Twist	90W	5.8 x 2	8,000	1,600	\$4.99
23W Fresh2 Air Purifier Twist	90W	5 x 2.3	10,000	1,600	\$9.99
25W Dimmable Twist	100W	6.2 x 2.5	10,000	1,500	\$13.99
27W Full Spectrum Twist	100W	6.2 x 2.2	10,000	1,750	\$7.99
30W Mini-Twist	100W	6.1 x 2	8,000	2,000	\$6.99
42W Twist	150W	7 x 2.4	10,000	2,800	\$12.95
12/20/28W 3-Way	30/70/100W	7.25 x 2	6,000	600/1,100	\$9.99

Lighting Measure	Wattage Replaced	L” x W”	Average Life (Hrs)	Lumens	Price
Twist				/1,600	
14W Twist 4 Pack	60W	4.7 x 1.7	10,000	800	\$10.00
20W Twist 4 Pack	75W	4.8 x 2.1	10,000	1,200	\$11.00
23W Twist 4 Pack	90W	5.0 x 2.2	10,000	1,425	\$12.00
27W Twist 4 Pack	100W	6.2 x 2.2	10,000	1,750	\$13.00

c. Program Administration

SPS’s affiliated operating companies currently use the vendor Service Lighting, based in Maple Grove, Minnesota for its Direct Sales to Minnesota and Colorado Home Lighting customers and will continue to utilize this channel for its residential electric customers in New Mexico.

d. Marketing & Outreach Plan

SPS has developed a comprehensive marketing and outreach plan for the Home Lighting program, which includes:

- Press release and kick off of the new program. Retail promotion using a buy-down strategy at CFL retailers: Home Depot, Wal-Mart, Lowe’s, and other hardware and grocery stores;
- Press release and newspaper ads promoting the ENERGY STAR Change-A-Light Campaign. Retail promotion using a buy-down strategy at select CFL retailers;
- Community outreach utilizing SPS Community Service Managers – promote Home Lighting program and benefits to community groups and offer special bulk pricing for community/private customer events;
- Newspaper and radio advertisements in early 2008;
- Bill inserts in the lighting season – first, third and fourth quarters of 2008; and
- Trade and customer events around Cinco de Mayo celebrations and county fairs, offer education materials in Spanish and English, and bulb comparison demonstration and free bulb samples.

e. Measurement & Verification Plan

This program will be based on deemed savings and will use the M&V plan outlined in Section IV.B of this document.

f. Cost-Effectiveness Tests

See Appendix A.

3. LivingWise®

a. Program Description

LivingWise® is a turn-key program that combines a set of classroom activities targeted to 5th grade students with projects in the home to install energy efficiency products. LivingWise® is marketed and managed by Resource Action Programs (“RAP”) of Modesto, California. RAP markets this program directly to 5th grade teachers, who are provided with lesson plans, program materials, and a LivingWise® Activity Kit for each student. Participation in the LivingWise® program is limited to 5th grade students in participating classrooms and their families. Kits contain one of each of the following:

- CFL bulb;
- Electroluminescent night light;
- FilterTone® alarm (for furnace air filter);
- Oxygenics® showerhead (low-flow showerhead);
- Kitchen faucet aerator;
- Flow rate test bag (for shower);
- Toilet leak detector tablets;
- Air temperature ruler;
- Water temperature check card; and
- Resource Fact Wheel.

SPS proposes the following goals for the LivingWise® program:

Table 11: Proposed LivingWise® Goals

LivingWise®	2008 Goal
Budget	\$134,285
Generator kW	25 kW
Generator kWh	1,055,961 kWh
Participation	3,018

b. Rebate Structure

There is no rebate given for this program. Each participant receives a free LivingWise® Activity Kit.

c. Program Administration

This turnkey program is managed by RAP of Modesto, California.

d. Marketing & Outreach Plan

RAP will manage all aspects of marketing and outreach for the program. They will identify the schools that are within SPS’s New Mexico service territory and determine the

approximate number of eligible teachers and students. Then, RAP will send out customized marketing materials to help enroll the classrooms. These materials explain the program, its benefits to the classroom environment and the fact that it is offered free of charge to their classroom thanks to the sponsoring agency (SPS).

The teachers may enroll through various means (i.e., fax, phone, email, mail and website). If teacher response is not sufficient, RAP will redesign the marketing materials and/or offer incentives to the teachers to participate. RAP does not use incentives in every program, but if the enrollment or data collection portions are not at a satisfactory level, incentives are used to get numbers to the level desired by the program sponsor. Incentives might include Starbucks or Target gift cards, etc.

Upon enrollment, the teachers dictate to RAP when in the school year they would like to use the program materials and provide accurate enrollment/participant numbers. RAP sends the teachers the LivingWise® program materials close to the time when they indicated they would like to use the program. RAP staff will remain in contact with the teachers via fax, phone, email and mail at various times throughout the program to provide support for the teachers and to request the return of the audit forms. Participants are provided with a toll free number to call if they need help.

e. Measurement & Verification Plan

RAP will determine the demand and energy savings from the kits based on surveys of the participating students and teachers to identify the number of CFLs, filter alarms, low-flow showerheads, and faucet aerators installed. RAP will provide a Summary Report each year the program is offered. This report compiles information taken from student and teacher surveys about what was installed and calculates the resulting energy savings. The report summarizes knowledge gained, measures installed, self-audit information, participant satisfaction, and resource savings results.

f. Cost-Effectiveness Tests

See Appendix A.

B. Low-Income Segment

1. Low-Income Program

a. Program Description

The Low-Income Segment will serve the estimated 40 percent of SPS New Mexico residential customers with a household income of less than 200 percent of the federal poverty level, as identified by local community agencies. The purpose of this program is to help lower-income customers reduce their energy bills. SPS believes it is important to offer an additional portfolio of energy efficiency programs dedicated to the specific needs of low-income customers. The Low-Income Segment will offer the following

opportunities: Lighting Giveaway, Refrigerator Upgrade, and Electric Heat Weatherization; however, low-income customers are eligible for all of the programs offered in both the Residential and Low-Income Segments.

SPS will partner with its local community agencies, including Eastern Plains Council of Governments and Community Action Agency of Southern New Mexico (“Community Agencies”), to identify potential customers and administer the programs. Further, SPS’s call center representatives will be trained to discuss these opportunities with customers experiencing ability-to-pay problems. Customers with ability-to-pay problems may also receive bill inserts or separate communications to notify them of opportunities to help them reduce their energy bills.

SPS proposes the following goals for the Low-Income Segment:

Table 12: Proposed Low-Income Segment Goals

Low-Income Segment	2008 Goal
Budget	\$197,089
Generator kW	82 kW
Generator kWh	1,555,576 kWh
Participation	16,200

*Note that the participation goal includes the 16,000 participants of the Low-Income Home Lighting Giveaway, where one bulb equals one participant.

In more detail, the Low-Income program will offer the following components:

Table 13: Low-Income Program Components

Program Component	Participation	Budget	TRC Test
Electric Heat Weatherization	100	\$59,499	1.80
Home Lighting Giveaway	16,000	\$75,923	3.00
Refrigerator Upgrades	100	\$61,667	0.83
TOTAL	16,200	\$197,089	1.99

Electric Heat Weatherization

Low-Income customers who qualify for home weatherization services may receive the following services:

- Department of Energy standard energy audit including blower door test;
- Mechanical repairs to ensure safety prior to weatherization work;
- Detailed specifications for all weatherization measures;
- Work assigned to appropriate contactors;
- Sidewall and attic insulation;

- Insulation of tuck under garages, foundations, crawlspaces, and rim joists where needed;
- Blower door-assisted air sealing; and
- Outdoor venting on dryers and exhaust fans.

Home Lighting Giveaway

SPS will distribute approximately 16,000 CFLs (packs of two 14W and two 19W bulbs) to low-income customers in 2008 through the Community Agencies.

Refrigerator Upgrades

This program will recycle existing refrigerators and replace them with ENERGY STAR models. The partnering Community Agencies have estimated that they can perform 100 upgrades per year. This program is available to qualified low-income customers who meet the following criteria:

- Customer must own the refrigerator being replaced;
- Refrigerator being replaced must be used on a regular basis;
- Refrigerator being replaced must be in working condition; and
- Refrigerator being replaced must be the primary one used in the home.

At this level of service and participation, the Refrigerator Upgrade measure does not pass the TRC Test, achieving a ratio of 0.83. However, SPS believes that this is an important offering for customers with old refrigerators that make up a large portion of the monthly electricity consumption.

b. Rebate Structure

SPS will not require participants in its low-income programs to pay for efficiency measures, and therefore, customers do not receive rebates.

c. Program Administration

The Low-Income program will be administered through local Community Agencies. SPS will work with its internal Sourcing Department to develop a Request for Proposals and contract with well-qualified agencies that currently implement programs for low-income customers, who will then integrate SPS's energy efficiency services with their own.

d. Marketing & Outreach Plan

In accordance with the distribution of information required by 17.5.410 NMAC, SPS will notify customers about energy efficiency opportunities available through the Low-Income program, as well as the state Low-Income Home Energy Assistance Program ("LIHEAP") deadlines for assistance. Further, if a customer notifies SPS of an ability-to-pay problem, the customer will be directed to a local agency that might be able to assist. Those agencies include: LIHEAP, Eastern Plains Council of Governments, Southeast

New Mexico Community Action, New Mexico Division of Vocational Rehabilitation, Salvation Army, San Jose Catholic Church, Faith Christian Family Church, Home Education and Livelihood Help, or Kingswood Methodist Church. If the customer needs further assistance, SPS will allow them to make payment arrangements.

Once selected, the contracted community agencies will be solely responsible for all marketing and outreach, as follows:

- Provide supporting customer collateral as needed (English & Spanish);
- Provide CFLs for installation related to home weatherization services;
- Provide CFLs at local community or association events; and
- Provide upgrades for qualifying customers as part of the home weatherization visit/upgrade.

e. Measurement & Verification Plan

This program will be based on deemed savings and will use the M&V plan outlined in Section IV.B of this document. However, because the Low-Income program will be administered by local community agencies, SPS will rely on these groups for record keeping.

f. Cost Effectiveness Tests

See Appendix A.

C. Business Segment

SPS has approximately 19,000 commercial, industrial, and agricultural customers in its Business Segment in New Mexico, which consists of commercial and industrial customers of all sizes. These customers consume approximately 77 percent of the total retail kWh in the service territory. As a result, SPS will target the Business Segment for the majority of the planned energy efficiency achievements in this Plan. It is expected that the Business Segment will account for 65 percent of SPS's total electric energy savings achievements. The programs offered in this customer segment include: Cooling Efficiency, Custom Efficiency, and Lighting Efficiency. These programs will be open to all SPS electric business customers who purchase qualifying equipment.

Although economies of scale enable this customer segment to provide the lowest cost efficiency per unit of energy and demand saved, business energy efficiency can be some of the most difficult to achieve over time. This is the case because business customers tend to require very short paybacks on investments and do not readily respond to traditional mass marketed appeals. SPS will use account managers, end-use equipment vendors, energy services companies and the Business Solutions Center ("BSC") to drive energy efficiency achievements in this customer segment. Typically, the larger customers are assigned an account manager, while the smaller business customers are

directed to the BSC. Although participation by the largest business customers often requires personal visits, SPS will also utilize newsletters, customer events, direct mail, email communications, and awareness advertising to reach the Business Segment. The following table provides the number and load breakout of customers who are account-managed and BSC-managed.

Table 14: Business Customer Characteristics

Type	Customer Premises	July 2007 kW	2007 kWh (8/1/06 – 7/31/07)
BSC-Managed			
Commercial	13,729	192,255	963,066,399
Industrial	2,266	40,871	301,923,250
Account-Managed			
Commercial	617	57,889	317,332,442
Industrial	1,556	198,006	1,422,748,020
TOTAL	18,168	489,021	3,005,070,111
Potential Self-Direct	44	229,772	1,640,976,376

Note: Potential Self-Direct customers are included in the Total numbers.

SPS proposes the following goals for the Business Segment:

Table 15: Proposed Business Segment Goals

Business Segment	2008 Goal
Budget	\$712,893
Generator kW	871 kW
Generator kWh	6,843,159 kWh
Participation	212

1. Cooling Efficiency

a. Program Description

The Cooling Efficiency program provides financial incentives for customers to purchase the most energy efficient electric cooling equipment. Eligible equipment includes:

- Packaged Terminal Air Conditioners (“PTAC”);
- Air, Ground, or Water Source Heat Pumps (“ASHP”, “GSHP”, or “WSHP”);
- Rooftop Units (“RTU”);
- Condensing Units (“CU”);

- Split Systems (“SS”);
- Air Handling systems (“VAV”); and
- Centrifugal and Air Cooled Chillers (“Chillers”).

All business customers who purchase qualifying equipment are eligible to participate in this program. SPS proposes the following goals for the Cooling Efficiency program:

Table 16: Proposed Business Cooling Efficiency Goals

Cooling Efficiency	2008 Goal
Budget	\$130,335
Generator kW	86 kW
Generator kWh	249,303 kWh
Participation	90

b. Rebate Structure

The following table describes the requirement and incentives included within the Cooling Efficiency program:

Table 17: Proposed Cooling Efficiency Rebates

Cooling Measure	Equipment Type	Unit Tonnage	Minimum SEER/EER	Integrated Part Load Value	Base Rebate (\$/ton)	Incremental Rebate (\$/ton)
PTAC	Electric Resistance Heating	All	EER 9.2	N/A	\$7.50	\$1.25
PTAC	Heat Pump Heating	All	EER 9.2	N/A	\$7.50	\$2.50
ASHP	N/A	All	SEER 14	N/A	\$45.00	N/A
ASHP	N/A	All	SEER 15	N/A	\$90.00	N/A
ASHP	N/A	All	SEER 16+	N/A	\$135.00	N/A
GSHP	N/A	All	SEER 14+	N/A	\$20.00	N/A
WSHP	N/A	All	SEER 12	N/A	\$10.00	\$1.00
RTU ^a	< 65,000 Btuh	<5.4	SEER 13.5	N/A	\$14.00	\$4.00
RTU	65,000 ≤ X < 135,000 Btuh	5.5 – 11.3	SEER 10.3	10.6	\$14.00	\$4.00
RTU	135,000 ≤ X < 240,000 Btuh	11.4 – 19.9	SEER 9.7	9.9	\$14.00	\$4.00
RTU	240,000 ≤ X < 760,000 Btuh	20.0 – 63.3	SEER 9.5	9.7	\$14.00	\$4.00
RTU	760,000+ Btuh	63.3+	SEER 9.2	9.4	\$14.00	\$4.00
SS	<65,000 Btuh	<5.4	SEER 13-13.4	N/A	\$150.00	N/A
SS	<65,000 Btuh	<5.4	SEER 13.5-13.9	N/A	\$300.00	N/A
SS	<65,000 Btuh	<5.4	SEER 14+	N/A	\$350.00	N/A
CU	65,000<X<135,000 Btuh	5.5-11.3	EER 10.3	N/A	\$14.00	\$4.00
CU	135,000 Btuh	11.4	EER 10.1	N/A	\$14.00	\$4.00
VAV	Replace Constant Volume	N/A	N/A	N/A	\$200/unit	N/A
Chillers	<150 tons (Centrifugal or Screw); FLV 0.650 kW/ton	N/A	N/A	N/A	\$20.00	\$5.00
Chillers	>150 tons (Centrifugal or Screw); FLV 0.600 kW/ton	N/A	N/A	N/A	\$20.00	\$5.00
Chillers	>150 tons (Centrifugal only); FLV 0.600 kW/ton, NPLV 0.560 kW/ton	N/A	N/A	N/A	\$17.50	\$2.00

^a Please note that prescriptive rebates for DX/Air-Cooled RTUs are limited to 150 tons per facility. All larger installations, as well as other installations not covered under the Cooling Efficiency program, must be approved through the Custom Efficiency program.

Except where noted, rebates are available on a dollar per ton basis with an incremental rebate based on a dollar per ton per Energy Efficiency Ratio (“EER”) 0.1 above the base minimum efficiency level. This incentive mechanism encourages customers to choose equipment that is more energy-efficient than the minimum requirements.

c. Program Administration

SPS's program manager, account managers, and community service managers will deliver this program to business customers. Implementation of this program will be primarily through the HVAC vendor and contractor community.

d. Marketing & Outreach Plan

Initially, SPS will strive to educate HVAC distributors, wholesalers, installation contractors and customers on the existence of the new program, its participation details and rebate requirements. Internal account managers will contact large customers to inform them of the new prescriptive rebates and SPS will make presentations to various trades to help spread the word on the program benefits. Additional information will be sent to customers through bill inserts. SPS will also partner with HVAC contractors on cooperative advertising for energy efficient equipment.

The payback periods for these types of energy efficiency investments are somewhat longer in this service territory because of the low commercial rates for both energy and demand. Therefore, emphasis will be placed on saving the environment and being good corporate citizens. Recognition will be given to companies that significantly reduce demand or consumption.

Because of the high capital outlay and long payback periods for these projects, every effort will be made to be proactive and introduce rebate opportunities early in the design process. This will require an educational campaign with local architectural and engineering firms on the benefits of our programs.

The marketing and outreach efforts will include:

- Work with cooling product distributors starting in late 2007 to coordinate distributor discounts and seasonal incentives, and to offer package savings on energy efficient products or technologies;
- Pre-visit with large customers in late 2007 and early 2008;
- Conduct large C&I customer visits January-March 2008 (Marketing & Account Management) to go through details of all business programs and possible opportunities for the customer;
- Train the Business Solutions Center to educate business customers about the efficiency programs when they call about unrelated items;
- Develop program collateral including feature sheets, case studies, and the rebate application; and
- Educate local/regional vendors and trade on programs through personal meetings, workshops and training sessions.

e. Measurement & Verification Plan

This program will be based on deemed savings and will use the M&V plan outlined in Section IV.B of this document.

f. Cost-Effectiveness Tests

See Appendix A.

2. Custom Efficiency

a. Program Description

The Custom Efficiency program encourages customers to implement projects by offering rebates to reduce incremental project costs for customers who install higher efficiency options than the standard. Since energy applications and building system complexity can vary greatly by customer type, this program addresses the unique needs of our customers and encourages them to develop and implement innovative, cost effective energy-efficient measures. The program provides rebates for energy saving business projects or process changes that are not covered by the prescriptive programs. These may include, but are not limited to, the following applications:

- Compressed air systems and components;
- Cooling systems and components;
- Lighting equipment and lighting systems;
- Motors and motor systems; and
- Custom – all other (heat recovery, humidification, welders, controls, refrigeration systems and components, etc.).

All business customers who purchase qualifying equipment or make qualifying process changes are eligible to participate in this program. SPS proposes the following goals for the Custom Efficiency program:

Table 18: Proposed Custom Efficiency Goals

Custom Efficiency	2008 Goal
Budget	\$263,486
Generator kW	382 kW
Generator kWh	4,609,451 kWh
Participation	49

Customers must apply for project approval prior to purchasing or implementing efficiency measures. Each application is reviewed for cost-effectiveness before a Custom Efficiency rebate is offered. The Custom Efficiency review process for rebates has three steps:

1. Pre-approval – The application must be submitted, and subsequently pre-approved, prior to equipment purchase and installation. The application form requests a description of the project, operating hours and estimated demand and energy savings.
2. Project Review – The SPS Program Manager reviews the proposal with emphasis on the demand and energy savings of the proposed system relative to industry standards and the interactive energy effects of the system components. To qualify for a rebate, projects must pass the TRC Test and have a payback between 1 and 15 years. The TRC analysis takes into consideration non-energy benefits such as maintenance and process improvements. (Please refer to Section II.F for further discussion of non-energy benefits.)
3. Notification – SPS notifies the customer if the project qualifies for a rebate along with the rebate amount.

SPS uses six different ways to analyze conservation projects, depending on the project circumstances, as described in the following scenarios:

- **Option 1:** SPS customer replaces old equipment with new more efficient equipment. Production or output remains constant. SPS will offer a rebate to a customer if s/he replaces an old inefficient system with a new more efficient system.
- **Option 2:** SPS customer purchases more efficient equipment than standard equipment for new construction or added production. Production or output will increase accordingly. SPS will offer a rebate to the customer if s/he buys the more efficient equipment instead of standard efficiency equipment.
- **Option 3:** SPS customer replaces more than one piece of old equipment with one new more efficient piece of equipment. Production or output remains constant. SPS will offer a rebate for a customer to replace multiple old inefficient systems with one new more efficient system.
- **Option 4:** SPS customer increases production with current old equipment by adding a second shift or adds production using new more efficient equipment. SPS will offer a rebate to the customer to buy a new more efficient system that can handle the increased production instead of adding a second shift to an old inefficient system.
- **Option 5:** SPS customer adds standard efficiency production to an old inefficient existing line or replaces the old line with a new larger standard efficiency line. SPS will offer a rebate for the customer to replace an old inefficient system with a new more efficient system. Rebates and energy savings will be given for the production or output levels of the original production level.
- **Option 6:** SPS customer adds standard efficiency production to an old inefficient existing line or replaces the old line with a new larger high efficiency line. Production or output will increase accordingly. SPS will offer a rebate for the

customer to buy the most efficient equipment instead of standard efficiency equipment. Total energy and demand savings will be considered on a case-by-case basis.

b. Rebate Structure

The Custom Efficiency program offers rebates based on expected savings up to 50 percent of incremental costs and \$200 per kW saved.

c. Program Administration

Implementation of this program will be primarily through SPS program and account managers. SPS will use internal technical resources to evaluate Custom Efficiency applications and approve projects for rebate.

d. Marketing & Outreach Plan

Due to the complexity of the Custom Efficiency program, SPS will rely on its account managers to market to customers and help them conceptualize what equipment qualifies for the program. Customers often need assistance filling out applications because information needed for analysis varies by project type. Upon Commission approval of the Plan, SPS will conduct visits with large customer in spring 2008 to go through details of all business programs and possible opportunities for the customer.

e. Measurement & Verification Plan

This program will be based on calculated savings and will use the M&V plan outlined in Section IV.B of this document.

f. Cost-Effectiveness Tests

See Appendix A.

3. Lighting Efficiency

a. Program Description

For many businesses, the electricity used to light their facilities can account for up to 44 percent of their monthly energy expenditures. SPS's proposed Lighting Efficiency program offers rebates for customers to install more efficient lighting. Any SPS-New Mexico business customer who purchases qualifying lighting equipment may participate. Office buildings, restaurants, retail stores, food stores, schools, colleges, hospitals, hotels, and other miscellaneous buildings are thought to have the most energy savings potential.

SPS offers the following Lighting Efficiency opportunities to drive customers to purchase and install more energy-efficient lighting equipment:

- Lighting Retrofit Rebates - Available for existing facilities of any size; rebates help offset the cost of installing more efficient lighting equipment.
- New Construction Lighting Rebates - Available for new facilities or any facility going through major renovations; rewards customers for choosing lighting options that are more energy-efficient than standard options.
- Custom Efficiency Lighting Rebates - Available for existing or new facilities; provides custom lighting rebates for customers purchasing and installing energy-efficient equipment that is not listed on our prescriptive retrofit or new construction lighting schedules. Pre-approval is required before a customer purchases and installs the equipment.

SPS proposes the following goals for its Lighting Efficiency program:

Table 19: Proposed Lighting Efficiency Goals

Lighting Efficiency	2008 Goal
Budget	\$319,073
Generator kW	403 kW
Generator kWh	1,984,406 kWh
Participation	73

b. Rebate Structure

The rebates assume a one-to-one lamp or fixture replacement in retrofit situations or installation of new lamps/fixtures in new construction. The following tables describe SPS’s rebates for new construction (Table 20) and Retrofit (Table 21) installations.

Table 20: Prescriptive Lighting Rebates for New Construction

Prescriptive New Construction Lighting Measure	Equipment Type	Rebate (\$/Unit)
Fluorescent Super T8 Lamp with Electronic Ballast	4 ft. or less, 1- & 2-lamp	\$2.50
Fluorescent Super T8 Lamp with Electronic Ballast	4 ft. or less, 3- & 4-lamp	\$3.00
Low-Wattage Fluorescent T8 Lamp	4 ft, 28W or less	\$0.75/lamp
High-Bay Fluorescent T8 Lamp with Electronic Ballast	4 ft., 6- & 8-lamp	\$20.00
High-Bay Fluorescent T5 HO Lamp with Electronic Ballast	4 ft. or less, 4-lamp	\$20.00
Hard-Wired Compact Fluorescent Fixtures (excludes screw-based CFLs)	18W or less	\$8.00
Hard-Wired Compact Fluorescent Fixtures (excludes screw-based CFLs)	19W to 32W	\$10.00
Hard-Wired Compact Fluorescent Fixtures (excludes screw-based CFLs)	33W to 56W	\$12.00
Pulse-Start Metal Halide Fixtures	175W or less	\$6.00
Pulse-Start Metal Halide Fixtures	176W to 319W	\$20.00
Pulse-Start Metal Halide Fixtures	320W to 749W	\$18.00
Pulse-Start Metal Halide Fixtures	750W+	\$15.00

Table 21: Prescriptive Lighting Rebates for Retrofits

Prescriptive Retrofit Lighting Measure	Equipment Type	Equipment Replaced	Rebate (\$/Unit)
Fluorescent T8 Lamp with Electronic Ballast	4 ft. or less, 1- & 2-lamp	Incandescent or T12	\$10
Fluorescent T8 Lamp with Electronic Ballast	4 ft. or less, 3- & 4-lamp	Incandescent or T12	\$20
Fluorescent T8 Lamp with Electronic Ballast	5 ft to 8 ft., 1-lamp	Incandescent or T12	\$15
Fluorescent T8 Lamp with Electronic Ballast	5 ft to 8 ft., 2-lamp	Incandescent or T12	\$20
Fluorescent Super T8 Lamp with Electronic Ballast	4 ft. or less, 1- & 2-lamp	Incandescent or T12	\$20
Fluorescent Super T8 Lamp with Electronic Ballast	4 ft. or less, 3- & 4-lamp	Incandescent or T12	\$22
Low-Wattage Fluorescent T8 Lamp	4 ft, 28W or less	400W HID	\$0.75 /lamp
Fluorescent T5 Lamp with Electronic Ballast	4 ft. or less, 1- & 2-lamp	Incandescent or T12	\$10
Fluorescent T5 Lamp with Electronic Ballast	4 ft. or less, 3- & 4-lamp	Incandescent or T12	\$16
High-Bay Fluorescent T8 Lamp with Electronic Ballast	4 ft., 6- & 8-lamp	400W HID	\$75
High-Bay Fluorescent T5 HO Lamp with Electronic Ballast	4 ft. or less, 4-lamp	400W HID	\$75
Hard-Wired Compact Fluorescent Fixtures (excludes screw-based CFLs)	18W or less	Incandescent	\$10
Hard-Wired Compact Fluorescent Fixtures (excludes screw-based CFLs)	19W to 32W	Incandescent	\$18
Hard-Wired Compact Fluorescent Fixtures (excludes screw-based CFLs)	33W to 56W	Incandescent	\$24
Metal Halide & High Pressure Sodium Fixtures	151W to 250W	Incandescent, high-pressure sodium or mercury vapor	\$30
Metal Halide & High Pressure Sodium Fixtures	251W+		\$45
Metal Halide & High Pressure Sodium Fixtures	Industrial Multi-CFL		\$25

Prescriptive Retrofit Lighting Measure	Equipment Type	Equipment Replaced	Rebate (\$/Unit)
Pulse-Start Metal Halide Fixtures	175W or less	Incandescent, high-pressure sodium or mercury vapor	\$40
Pulse-Start Metal Halide Fixtures	176W to 319W		\$60
Pulse-Start Metal Halide Fixtures	320W to 749W		\$75
Pulse-Start Metal Halide Fixtures	750W+		\$100
Automatic Controls	Wall-Mount Occupancy Sensor		\$15
Automatic Controls	Ceiling-Mount Occupancy Sensor		\$40
Automatic Controls	Photocell		\$25
LED Exit Signs		Incandescent	\$6
LED Traffic Signals	Red or Green Globe		\$40
LED Traffic Signals	Red Arrow		\$40
LED Traffic Signals	Pedestrian Signal		\$40

c. Program Administration

Implementation of this program will be primarily through the lighting vendor and contractor communities. SPS will inform lighting distributors, wholesalers, and installation contractors of the program details and rebate requirements. SPS account managers will also contact large customers and inform them of the new programs. SPS will make presentations to various trades to help spread the word on the program benefits.

d. Marketing & Outreach Plan

The Lighting Efficiency program offers SPS the greatest potential for both energy and peak demand savings. With that in mind, SPS will devote a large portion of its marketing efforts to this program. SPS will make presentations to individual business customers, chambers of commerce, trade organizations, and architectural and engineering firms to persuade them to design more energy efficient lighting systems in new or retrofit applications. SPS will incorporate electric bill inserts and targeted individual mailings in order to reach as many customers as possible, and will pursue trade partnerships with electricians, energy service companies, and general contractors. Other marketing and outreach efforts will include:

- Work with lighting distributors starting in late 2007 to coordinate distributor discounts and seasonal incentives with program rebates, and offer package savings on energy efficient products or technologies;
- Pre-visit with customers in late 2007 and early 2008;
- Conduct large C&I customer visits January-March 2008 (Marketing & Account Management) to go through details of all business programs and possible opportunities for the customer;

- Train the Business Solutions Center to educate business customers when they call about unrelated items;
- Develop program collateral including feature sheets, case studies and rebate applications; and
- Educate local/regional vendors and trade on programs through personal meetings, workshops and training sessions.

e. Measurement & Verification Plan

This program will be based on deemed savings and will use the M&V plan outlined in Section IV.B of this document.

f. Cost-Effectiveness Tests

See Appendix A.

D. Large Customer Segment

The Large Customer Segment is available to SPS customers with contiguous facilities that use over 7,000 MWh per year. These large customers account for 47 percent of the peak kW and 55 percent of the annual consumption of the entire commercial and industrial customer base, but only account for two-tenths of one percent (0.2 percent) of total commercial and industrial premises. Customers will have the opportunity to either self-direct their own energy efficiency projects or opt-out of the energy efficiency rider tariff if they can prove they have completed all cost-effective conservation. Customers in this segment are also eligible for the Business Segment programs.

1. Large Customer Program

a. Program Description

The Large Customer program entitles customers who use more than 7,000 MWh per year at a single, contiguous facility to either:

- A bill credit of up to 70 percent of the energy efficiency tariff rider charges for incremental expenditures made towards cost-effective energy efficiency or load management; OR
- An exemption from the energy efficiency tariff rider for 24 months if the customer demonstrates that it has exhausted all cost-effective energy efficiency or load management projects at its facility.

In this context, cost-effective means projects with a simple payback period of more than one year, but less than seven years.

The Large Customer program will be available to any SPS Large Customer, as defined by the EUEA, which states: “Large Customer means a utility customer at a single contiguous

field, location, or facility, with electricity consumption greater than seven (7) thousand megawatt-hours per year.” To claim a credit, the customer must submit to the Self-Direct Administrator an energy efficiency project description, along with relevant engineering studies showing the projected savings, expenditures, and cost effectiveness, by November 30 of the year preceding the installation of the project. To claim an exemption, the customer must submit to the Self-Direct Administrator a detailed engineering study showing the absence of cost effective energy efficiency investments and an affidavit confirming the results of the engineering study from the Independent Program Evaluator by November 30 of the year preceding the exemption. Approvals or disapprovals of credits or exemptions are subject to commission review per 17.7.2.11 (E) NMAC. SPS intends to waive its November 30 deadlines for 2008 and will accept self-direct and exemption applications throughout the year.

A project must reduce electric energy consumption or peak demand and be cost effective in order to qualify for a credit. Large Customers will be able to receive the credit only after expenditures have been made, the project has been completed and an Independent Program Evaluator has determined that the efficiency measures are properly installed and are able to deliver the expected energy or peak demand savings. For projects that last longer than one year, annual credits for operating energy efficiency measures can be determined by the Independent Program Evaluator. Eligible Expenses incurred in excess of \$52,500 in any year can be recovered in the subsequent year.

All actual expenses reasonably incurred by an Eligible Customer in connection with construction, installation, or implementation of an Eligible Project, including but not limited to equipment costs, engineering and consulting expenses, and finance charges. Energy efficiency expenses are eligible only to the extent that incremental expenses are incurred to achieve energy efficiency levels that exceed industry standards as determined by the Independent Program Evaluator based on practices set forth in 17.7.2.11(G) NMAC.

SPS does not propose any goals for the Large Customer program because it is unknown at this time who will choose to participate. SPS has identified approximately 29 large customers at 44 customer sites who might qualify for the Large Customer Segment.

b. Rebate Structure

While not technically a rebate, customers will be eligible for a bill credit of up to 70 percent of the energy efficiency tariff rider charges for incremental expenditures made towards cost-effective energy efficiency or load management or an exemption of up to 70 percent of the energy efficiency tariff rider for 24 months if the customer demonstrates that it has exhausted all cost-effective energy efficiency or load management projects at its facility.

c. Program Administration

The Large Customer program allows customers to identify and administer their own energy efficiency and load management projects. As such, the program will not be administered in the same way that SPS's other proposed programs will. Instead, SPS will appoint a Self-Direct Program Administrator to evaluate and approve customer project applications.

d. Marketing & Outreach Plan

Marketing and outreach for the Large Customer Segment will be similar to that for the Custom Efficiency program. SPS's account managers will meet with large customers upon Plan approval to make them aware of the new energy efficiency programs in general, and the Self-Direct/Exemption program in particular, and gauge their interest in participating. SPS will market to this segment through account managers, as the Self-Direct program is likely to generate unique and complex energy efficiency projects.

e. Measurement & Verification Plan

This program will be based on calculated savings and will use the measurement and verification plan outlined in Section IV.B of this document.

f. Cost-Effectiveness Tests

In accordance with the Rule, the Large Customer program is not subject to the same cost-effectiveness tests as SPS's other proposed programs. Rather, the Rule states that in order to be cost-effective, Large Customer projects must achieve a payback of greater than one year, but less than seven years. For this reason, and because SPS does not yet know what types of projects might be proposed in this program, no cost-effectiveness analysis has been performed on this program.

E. Planning and Research Segment

1. Overview

The Planning & Research Segment consists of internal functions (not customer-facing), which support the direct impact programs. The Segment includes energy efficiency-related expenses for Market Research, Product Development, Planning & Administration, and General Advertising.

The overall purpose of the Planning & Research Segment is to:

- Provide strategic direction for SPS's energy efficiency programs;
- Ensure regulatory compliance with energy efficiency legislation and rules;
- Guide SPS internal policy issues related to energy efficiency;
- Train SPS Marketing staff for effective performance;
- Evaluate program technical assumptions, program achievements, and marketing strategies;
- Provide segment and target market information;
- Analyze overall effects of SPS's energy efficiency portfolio on customer usage and overall system peak demand and system energy usage;
- Measure customer satisfaction with the SPS's energy efficiency efforts; and
- Develop new conservation and load management programs.

Because of the indirect and non-customer facing nature of the Planning & Research Segment, the normal program categories (i.e., rebate structure, program administration, marketing & outreach, measurement & verification, and cost-effectiveness) do not apply. The following sections are limited to a description of each program.

2. Market Research

The Market Research group spearheads a variety of energy efficiency-specific research efforts that are used to inform SPS's decision-making concerning energy efficiency and load management. Market Research efforts fall into two categories: *General Research* provides overall efficiency information and *Program-Specific Research* includes individual comprehensive program evaluations, as distinguished from normal M&V. The Market Research budget will be applied to the following activities in 2008:

- \$37,500 for the 2008 Home Use Study;
- \$20,000 each for Residential and Business Program Vendor Qualitative Studies; and
- \$30,000 for an Oil Fields Characteristics Investigation.

3. Product Development

Product Development identifies, assesses, and develops new conservation and load management products and services, which enables SPS to provide promising new energy saving opportunities for its customers. The product development process begins with ideas and concepts from customers, regulators, energy professionals, and SPS staff. Developers further research, evaluate, screen and sometimes test ideas. The Product Development team also considers potential improvements to existing products, especially in the areas of operational efficiency, cost reduction, and customer satisfaction.

4. Planning & Administration

Planning & Administration manages all regulatory filings, directs and carries out cost-benefit analyses, provides tracking tools for energy conservation achievements, and analyzes and prepares cost recovery reports. The group also provides procedures for effectively addressing requirements for the regulatory process. These functions are needed to ensure a cohesive and high-quality energy efficiency portfolio that meets legal requirements as well as the expectations of SPS's customers, regulators and staff.

In addition, Planning & Administration supports the energy and demand conservation component of resource planning, conducts economic analyses of energy efficiency programs, and provides strategic evaluation planning and internal policy guidance. These functions are needed to ensure the quality of conservation impact estimates and the cost-effectiveness of the Energy Efficiency Plan, as well as to help generate ideas for future energy efficiency projects, establish programmatic consistency, and manage program-related marketing information.

5. General Advertising

SPS will use the General Advertising budget to run print and radio advertisements promoting the general nature of the conservation programs and energy efficiency. This advertising will not be specific to a particular program.

IV. Program Delivery and Administration

A. General Marketing and Outreach Plan

SPS has developed an extensive marketing and outreach plan to target residential, low-income, business, and large customers throughout the service territory. In recognition of the large Hispanic community, SPS will use targeted newspaper and radio advertisements in English and Spanish throughout the service territory. In addition, SPS intends to use booths at local community events to deliver brochures for both residential and business programs.

1. Residential & Low-Income

In general, SPS will perform the following marketing and outreach activities directed towards residential customers:

- Develop bill inserts and contractor mailings, hold contractor meetings, run newspaper and radio advertisements (in English & Spanish), and include program information on the Xcel Energy website;
- Participate in community events/shows;

- Conduct internal informational sessions to ensure that all SPS employees are aware of energy efficiency programs so they can support our efforts in the community; and
- Work with equipment distributors to coordinate discounts and seasonal incentives with program rebates, and offer package savings on energy efficient products or technologies.

2. Business & Large Customer

In general, SPS will conduct the following marketing and outreach plans for business customers:

- Visit customers in late 2007 and early 2008 to notify them of future energy efficiency opportunities and the types of equipment that may qualify;
- Conduct internal informational sessions to ensure that all New Mexico employees are aware of our new energy efficiency programs so they can support our efforts when they are in the community;
- Work with equipment distributors to coordinate discounts and seasonal incentives with program rebates, and offer package savings on energy efficient products or technologies;
- Develop program collateral including feature sheets, case studies and applications;
- Work with local and regional vendors and trade groups on programs; and
- Provide education them through personal meetings, mailings and workshops.

B. Measurement and Verification

Rule 17.7.2.7(T) NMAC defines M&V as “activities to determine or approximate with a high degree of certainty the actual demand and energy reductions from energy efficiency and load management programs.” SPS will require M&V of both its deemed savings (prescriptive programs) and calculated savings (Custom Efficiency and Large Customer programs). Measurement and verification of both types of savings will be conducted in two separate processes. First, SPS intends to perform process and impact evaluations on each of its programs to verify that equipment was installed and operated as reported, as well as to confirm that the deemed or calculated savings accurately represent the actual savings of the installed measures. This process will include confirmation that each program’s technical assumptions (i.e., free-rider/driver factor, operating hours, and coincidence factors) are correct. Second, the Rule states that “the commission will direct and control the independent evaluation of energy efficiency programs...[the Independent Evaluator] shall employ appropriate international performance measurement and verification protocols (“IPMVP”), or describe any deviation from those protocols, and the reason for that deviation and may utilize deemed savings in the measurement and verification of utility program energy and demand savings; however, deemed savings will not relieve the evaluator of the duty to verify savings with statistically significant samples” (17.7.2.13(E) NMAC).

With respect to engaging the Independent Program Evaluator, SPS will participate in the Commission’s efforts to establish evaluation committees for New Mexico utilities as part of Case No. 07-00365-UT. In its most recent Order for Solicitation and Appointment of Energy Efficiency Evaluation Committee Members, the Commission recognized its role in selecting and establishing an evaluation committee to oversee appointment of the Independent Program Evaluator. The Order itself reflects a solicitation of nominations for committee members. Because the Order does not provide a detailed timeline beyond the deadline for nominations, SPS proposes the following timeline for this process:

Table 22: Proposed Timeline for Selection of the Independent Evaluator

Responsible Party	Activity	Date
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	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	Kickoff 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

C. Consumer Education and Market Transformation Programs

At this time, SPS does not intend to offer a separate program solely for the purpose of performing Consumer Education or Market Transformation; however, the Residential LivingWise® program has some characteristics of a market transformation program because it educates young consumers on energy efficiency and is intended to have some effect on transforming the residential market. SPS is not calling this market transformation because the emphasis of this program is on the direct savings that result from the installation of energy efficiency measures.

D. Roles and Responsibilities

SPS typically uses resources from several different internal departments to administer its energy efficiency and load management programs. Specifically, the following employees contribute to the process:

- Product Developer – identifies and develops the proposed programs;
- Program Manager – manages overall program marketing and performance tracking;
- Account Manager – interacts with large business customers to promote programs;
- Technical Consultant – reviews Custom Efficiency and Self-Direct applications;

- Rebate Processor – reviews/approves applications and invoices, pays rebates; and
- Regulatory Analyst – performs cost/benefit analyses, drafts and manages program filings, and corresponds with regulators.

In addition, SPS will also work with outside groups such as equipment vendors and manufacturers, community agencies and third-party administrators as noted in the individual program descriptions.

E. Total Resource Cost Test and Avoided Costs

The TRC Test requires a variety of assumptions to be made in order to calculate the cost-effectiveness of energy efficiency and load management programs. The following sections describe the assumptions SPS has made in order to perform the cost-effectiveness, energy, and demand savings estimates.

1. Avoided Costs

In order to determine the cost-effectiveness of its programs, SPS must first calculate the avoided generation, transmission, distribution, and marginal energy costs associated with the energy efficiency savings.

- Avoided generation represents the capital investments avoided by not having to build an additional power plant. For the purposes of SPS’s Plan, it was assumed that a combustion turbine is the type of plant that would be avoided. Using estimates of cost of capital to purchase and build a plant, fixed and variable operations and maintenance (“O&M”) charges to operate the plant, and natural gas commodity prices to fuel the plant from a study performed by a third-party evaluator (Stone and Webster), SPS determined a 2008 avoided generation cost of \$67.58 per kW-year. This value is escalated at a rate of 2.5 percent per year for the lifetime of the programs.
- Avoided Transmission and Distribution refers to the costs avoided by not having to extend or improve the existing transmission and distribution system to meet increased demand. SPS used a combined value of \$30.00 per kW-year for avoided transmission and distribution, escalated at 2.36 percent. This value was provided by Xcel Energy’s Resource Planning group and is consistent with the assumptions used in our Minnesota and Colorado service territories.
- The avoided marginal energy costs were developed by Xcel Energy’s Risk Analysis group and are intended to estimate the hourly marginal energy costs from 2008-2017 expected for the SPS system given forecast market conditions and planned purchases. Years 2018-2040 are escalated by the observed marginal costs growth rate from 2014-2017 (5.24 percent). Table 23, below, provides more detail.
- In general, NEBs include incremental O&M savings (from reduced labor, maintenance, materials, water, etc.), reduced arrearages, and emissions

reductions. NEBs were not included in the program-level cost-effectiveness analyses, but will be included in the individual Custom Efficiency and Large Customer project analyses.

- The cost-effectiveness analyses included in this Plan do not include natural gas impacts because SPS does not provide natural gas to its New Mexico service territory.

Table 23: Estimated Annual Avoided Marginal Energy Costs

Year	Annual Average	Maximum Hour
2008	\$0.063/kWh	\$0.110/kWh
2009	\$0.062/kWh	\$0.103/kWh
2010	\$0.059/kWh	\$0.104/kWh
2011	\$0.055/kWh	\$0.099/kWh
2012	\$0.051/kWh	\$0.090/kWh
2013	\$0.041/kWh	\$0.078/kWh
2014	\$0.042/kWh	\$0.100/kWh
2015	\$0.044/kWh	\$0.090/kWh
2016	\$0.047/kWh	\$0.092/kWh
2017	\$0.050/kWh	\$0.092/kWh
2018	\$0.052/kWh	\$0.097/kWh
2019	\$0.055/kWh	\$0.102/kWh
2020	\$0.058/kWh	\$0.107/kWh
2021	\$0.061/kWh	\$0.113/kWh
2022	\$0.064/kWh	\$0.119/kWh
2023	\$0.068/kWh	\$0.125/kWh
2024	\$0.071/kWh	\$0.131/kWh
2025	\$0.075/kWh	\$0.138/kWh
2026	\$0.079/kWh	\$0.146/kWh
2027	\$0.083/kWh	\$0.153/kWh
2028	\$0.087/kWh	\$0.161/kWh
2029	\$0.092/kWh	\$0.170/kWh
2030	\$0.097/kWh	\$0.179/kWh
2031	\$0.102/kWh	\$0.188/kWh
2032	\$0.107/kWh	\$0.198/kWh
2033	\$0.113/kWh	\$0.208/kWh
2034	\$0.119/kWh	\$0.219/kWh
2035	\$0.125/kWh	\$0.230/kWh
2036	\$0.132/kWh	\$0.243/kWh
2037	\$0.139/kWh	\$0.255/kWh
2038	\$0.146/kWh	\$0.269/kWh
2039	\$0.153/kWh	\$0.283/kWh
2040	\$0.162/kWh	\$0.298/kWh

2. Discount Rate/Cost of Capital

The Weighted Average Cost of Capital of 8.69 percent as filed in SPS's most recent general rate case (Case No. 07-00319-UT) was used as the Discount Rate.

3. Net-to-Gross

Net-to-Gross refers to the percent of customers who purchase energy efficient equipment who would not have done so without the existence of the utility's energy efficiency and load management programs. This value is used to determine the actual amount of energy and demand saved due to SPS's energy efficiency and load management programs. While net-to-gross is difficult to quantify, SPS has developed guidelines to estimate these values. These guidelines are intended as a starting point, and SPS expects the Commission-appointed Independent Program Evaluator to validate these values during the measurement and verification process. The following guidelines helped to shape the net-to-gross proposal:

- SPS's New Mexico service territory experiences limited sales of efficient equipment, indicating that a small percentage of the population is making the decision to purchase efficient equipment absent a utility efficiency program.
- SPS's previous experience with energy efficiency programs in its New Mexico service territory indicates that the vast majority of customers are not inclined to purchase efficient equipment on their own because SPS's electricity rates are relatively low and the local natural environment is untarnished.
- Given that Public Service Company of New Mexico ("PNM") has estimated net-to-gross values for its territory, these may be the best starting point for SPS's estimates. However, because PNM has a much more urban service territory, SPS presumes that some adjustments must be made to compensate.

Therefore, as its best estimate of the appropriate net-to-gross values to use for its energy efficiency programs in rural southeastern New Mexico, SPS proposes to halve PNM's estimate of free-ridership. This method results in the following net-to-gross estimates:

Table 24: Estimated Net-to-Gross Values

Program	Net-To-Gross
Residential Home Lighting	85%
Residential Air-Source Heat Pumps	100%
Residential LivingWise® Program	100%
Low-Income Lighting Giveaway	85%
Low-Income Refrigerator Upgrade	97%
Low-Income Electric Heat Weatherization	85%
Business Cooling Efficiency	100%
Business Custom Efficiency	100%
Business Lighting Efficiency	70%

4. Transmission Loss Factors

Transmission Loss Factors refer to the energy lost in the form of heat due to resistance while electricity is being transmitted from the generator to the customer. This value becomes important because energy and demand savings are typically measured at the customer meter and must be converted into generator savings. SPS used a weighted average loss factor of 9 percent for all business programs and 11 percent for all residential programs, consistent with the factors used in SPS's recently filed general rate case (Case No. 07-00319-UT).

F. Reporting Process

With this filing, SPS proposes its first energy efficiency and load management programs for implementation under the EUEA and its associated Rule. The Rule specifies that utilities with fewer than 250,000 customers (such as SPS) shall file an annual report by August 1 of the year following program offerings. SPS will file its first annual report by August 1, 2009, reporting on its 2008 program activities. This report will include:

- Actual expenditures and achievements of the preceding calendar year;
- True-up of the tracker and calculation of new tariff rider; and
- Calculation and request for recovery of 15 percent of its disincentive mitigation costs through a shared savings mechanism (to be included in rider).

The Rule further specifies that the utility shall file for approval of any new programs within 90 days of the annual report. SPS will file its 2009 Energy Efficiency and Load Management Plan by August 1, 2008. Subsequent Plans will be filed with the annual report.

G. Cost Recovery

1. Rate Impact and Customer Bill Impact

The following table shows the estimated average monthly bill impact of proposed tariff rider:

Table 25: Estimated Bill Impact of Proposed Tariff Rider

<u>Rate Schedule</u>	<u>Avg. Monthly Usage</u>	<u>Avg. Monthly Bill* (Present)</u>	<u>Proposed Rider Percentage</u>	<u>Bill Impact</u>	<u>Proposed Total Bill</u>
Residential Lighting (Schedule 520)	500 kWh	\$44.42	0.695%	\$0.31	\$44.73
General (No-Demand) (Schedule 614)	750 kWh	\$85.52	0.695%	\$0.59	\$86.11
General Service (Demand) (Schedule 614)	50 kW, 20,000 kWh	\$1,455	0.695%	\$10.11	\$1,465.11
Large General Service (Schedule 704)	50 kW, 20,000 kWh	\$132,768	0.695%	\$922.74	\$133,690.74

*These monthly average bills exclude taxes and franchise fees.

2. Shared/Allocated Program Costs

Several sections in the Rule address program cost allocation. In general, the Rule indicates that to the extent possible, costs shared among individual programs, such as market research and planning, program design, measurement and verification and annual reporting shall be allocated to individual programs in proportion to the direct costs assigned to those programs, unless the utility demonstrates that another allocation method is more appropriate (17.7.2.9(H) NMAC). In accordance with this requirement, SPS has allocated the projected costs associated with M&V, marketing and promotion, rebates, labor, and utility administration to the individual program budgets. However, the costs of market research, product development, planning and administration, and general advertising were kept outside of the individual program budgets. It should be noted that the inclusion of indirect program costs as currently proposed results in a cost-effective Plan with a TRC Test result of 1.78.

SPS believes that this is the most appropriate treatment of costs not specific to a particular program for several reasons:

- First, such costs are often not directly related to individual programs. Therefore, to use the direct costs of those particular programs as an allocation method would not be accurate.

- Second, these types of costs are often irregular, with large expenses in some years and almost no expenditures in other years. If SPS must allocate these charges to the programs, regardless of magnitude, it may result in the program becoming non cost-effective.
- Third, given the variation in these costs from year-to-year, and the suggested method to allocate based on direct program costs, it would be very difficult for SPS to manage individual program budgets and insure their cost-effectiveness because program managers will never know how much to expect from these indirect programs.
- Finally, it would be most administratively efficient for SPS to manage the indirect costs outside of the individual programs. SPS's internal accounting system uses individual accounting codes for market research, planning, and product development, as well as for each direct-impact program offering. These costs could not be allocated directly to the programs, but would first be charged to their subject area, and then allocated to the programs, creating a two-step process instead of one.

3. Budget Categories

SPS intends to use the following five budget categories to track and report its annual Plan expenditures for each program:

- **Internal Administration** –
 - Project Delivery – Costs to deliver the program to the customer including Program Manager labor and costs.
 - Utility Administration – Costs to administer the program internally, including Process Rebating and energy efficiency Planning & Administration.
 - Other Project Administration – Internal costs not covered in any other cost category.
 - Research & Development – Internal costs to develop the programs.
- **Third-Party Delivery** – Used only when a third-party implements the program. This should include all costs that the third-party incurs, minus the cost of the energy efficient equipment, which should be counted as a rebate.
- **Total Incentives** – A calculation of the participants multiplied by the Rebate per Participant.
- **Promotion** – Internal costs to promote the programs.
- **M&V** – Internal costs to perform M&V on the programs.

The following table describes SPS's proposed program expenditures split into the proposed budget categories.

Table 26: SPS's Proposed Energy Efficiency and Load Management Program Costs

Program	Total Incentive	Internal Admin.	Third-Party Delivery	Promotion	M&V	Total Cost
Residential Home Lighting	\$60,000	\$126,500	\$0	\$90,000	\$8,144	\$284,644
Residential Air-Source Heat Pumps	\$50,430	\$23,940	\$0	\$48,500	\$8,010	\$130,880
Residential LivingWise®	\$25,562	\$4,300	\$89,876	\$0	\$14,547	\$134,285
Residential Sub-Total	\$135,992	\$154,740	\$89,876	\$138,500	\$30,700	\$549,809
Low-Income Sub-Total	\$114,400	\$13,900	\$49,500	\$0	\$19,289	\$197,089
Business Cooling Efficiency	\$45,713	\$66,084	\$0	\$11,000	\$7,537	\$130,335
Business Custom Efficiency	\$179,315	\$49,252	\$0	\$11,000	\$23,919	\$263,486
Business Lighting Efficiency	\$201,849	\$79,684	\$0	\$11,000	\$26,540	\$319,073
Business Sub-Total	\$426,878	\$195,020	\$0	\$33,000	\$57,996	\$712,893
Large Customer Sub-Total	TBD	TBD	TBD	TBD	TBD	TBD
07/08 Planning & Research	\$0	\$194,429	\$0	\$58,000	\$107,500	\$359,929
TOTAL	\$677,270	\$558,089	\$139,376	\$229,500	\$215,485	\$1,819,720

Further, the following table describes the rebate, participant, and incremental cost per unit (piece of equipment rebated) for each of SPS's proposed energy efficiency programs. In general, costs vary by program, but are most expensive for the business programs.

Table 27: Program Costs per Unit of Efficient Equipment

Program	# of Units	Rebate (\$) / Unit	Participant Cost (\$) / Unit	Incremental Cost (\$) / Unit
Residential Home Lighting	20,000	\$3.00	\$0.90	\$3.90
Residential Air-Source Heat Pumps	200	\$252.15	\$250.29	\$502.44
Residential LivingWise®	3,018	\$8.47	\$0.00	\$8.47
Residential Sub-Total	23,218	\$5.86	\$2.93	\$8.79
Low-Income Sub-Total	16,200	\$7.06	\$0.00	\$7.06
Business Cooling Efficiency	90	\$507.93	\$640.98	\$1,148.91
Business Custom Efficiency	49	\$3,659.49	\$17,681.72	\$21,341.22
Business Lighting Efficiency	73	\$2,753.92	\$6,836.03	\$9,589.95
Business Sub-Total	212	\$2,010.77	\$6,713.01	\$8,723.79
Large Customer Sub-Total	TBD	TBD	TBD	TBD
TOTAL	39,630	\$17.09	\$37.68	\$54.77

In this table, the Participant Costs equal the Incremental Costs of the Efficient Equipment minus the Rebate paid by SPS to the customer.

V. Conclusion

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

- Residential Home Lighting;
- Residential Air Source Heat Pump Rebates;
- Residential LivingWise®;
- 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 1.78.

SPS sought public input on its proposal from interested stakeholders, including large customers, environmental and low-income advocates, and modified the Plan accordingly. The 2008 proposed Plan represents the first year of SPS's commitment to meet the legislative goals of reducing retail sales by 5 percent by 2020.

SPS has provided two appendices to this Plan:

- Appendix A contains the cost-effectiveness analyses of the individual programs, the customer segments, and the portfolio as a whole; and
- Appendix B presents the detailed technical assumptions on which the cost-effectiveness analyses were calculated.