

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF SOUTHWESTERN)	
PUBLIC SERVICE COMPANY’S)	
APPLICATION REQUESTING: (1))	
ACCEPTANCE OF ITS 2014 ANNUAL ENERGY)	
EFFICENCY AND LOAD MANAGEMENT)	
(“EE/LM”) REPORT; (2) APPROVAL OF ITS)	
2016 EE/LM PLAN AND ASSOCIATED)	CASE NO. 15-00119-UT
PROGRAMS; (3) APPROVAL OF A FINANCIAL)	
INCENTIVE FOR 2016; (4) APPROVAL OF ITS)	
COST RECOVERY TARIFF RIDER; AND (5) A)	
DETERMINATION WHETHER A SEPARATE)	
PROCESS SHOULD BE ESTABLISHED TO)	
ANALYZE A SMART-METER PILOT)	
PROGRAM,)	
)	
SOUTHWESTERN PUBLIC SERVICE)	
COMPANY,)	
)	
APPLICANT)	
)	

UNCONTESTED STIPULATION

In accordance with 1.2.2.20(A) NMAC, Applicant, Southwestern Public Service Company (“SPS”), the Utility Division Staff (“Staff”) of the New Mexico Public Regulation Commission (“Commission”), and the Coalition for Clean Affordable Energy (“CCAЕ”), (collectively, “the Signatories”) have entered into this Uncontested Stipulation (“Stipulation”) as the basis for recommending the Commission approve SPS’s 2016 Energy Efficiency and Load Management Plan and the associated programs and budgets, as modified by this Stipulation (“2016 Plan” or “2016 EE/LM Plan”) to be implemented in 2016.

Recitals

The Signatories acknowledge and affirm the following matters:

A. SPS's Application, dated May 1, 2015, requests: (1) acceptance of SPS's 2014 Energy Efficiency and Load Management ("EE/LM") Annual Report;¹ (2) approval of SPS's 2016 EE/LM Plan; (3) authorization to implement the 2016 EE/LM Plan from January 1, 2016 through December 31, 2016; (4) approval of SPS's recovery of a financial incentive for 2016; (5) authorization to fund the 2016 EE/LM Plan at 3% of customer bills; (6) authorization to either apply a bill credit or surcharge in 2017 based upon the actual 2016 program year incentive earned by SPS; (7) authorization to establish separate procedural schedules for consideration of the 2016 EE/LM Plan and a smart-metering pilot program;² and (8) all other approvals, authorizations, and relief required.

B. SPS's 2016 EE/LM Plan as initially filed, proposes to continue the programs approved in SPS's 2014 Plan, with additional measures added in 2016 to its Home Energy Services ("HES"), Residential Cooling programs, and Cooling Efficiency, Computer Efficiency, and Lighting Efficiency products under its Business Comprehensive program. SPS's 2016 EE/LM Plan proposes to offer ten cost-effective EE/LM programs grouped in two customer segments: Residential and Business. The Residential Segment includes seven programs, while the Business Segment includes three programs, one of which is the Business Comprehensive Program that includes the bundling of seven products. In addition, the 2016 EE/LM Plan includes a Planning & Research Segment, which provides support functions for the direct impact programs.

C. In accordance with Section 62-17-6(A) of the Efficient Use of Energy Act (NMSA 1978, Sections 62-17-1 through 62-17-11, "EUEA"), funding for EE/LM program costs are set at 3% of customer bills (*i.e.*, billed revenue under SPS's current rates), excluding gross receipts tax, franchise, and right-of-way fees, or \$75,000 per customer per calendar year, whichever is less, but not including any approved incentives authorized for recovery. SPS

¹ See *Order Commencing Proceeding and Appointing Hearing Examiner* at ¶ 11 (The Commission found that 17.7.2 NMAC does not require any Commission approval or action on SPS's 2014 EE/LM Annual Report).

² See *Id.* at ¶ 14 (The Commission found that any potential smart-metering program should be considered in a separate docket).

proposes to recover an estimated \$11,489,101 of program costs (*i.e.*, 3% of billed revenue) through its 2016 EE Rider. In addition, in accordance with Section 62-17-6(A) of the EUEA and 17.7.2.13(B) NMAC, SPS proposes to recover its projected 2016 base incentive through the 2016 EE Rider. This incentive amount is equal to 6.8% of the funding level or \$781,259 and increases the total rider by 0.2% to 3.2%. SPS further proposes to reconcile the actual incentive earned, including any sliding scale incentive earned as discussed in Section 2(a)(ii) of this Stipulation, for 2016 versus the projection used in the EE Rider either through a bill credit or surcharge based upon reconciliation information provided in its 2017 Annual Report.

D. The Signatories have entered into the Stipulation to settle all issues related to SPS's 2016 EE/LM Plan filing.

Agreements

By this Stipulation, the Signatories agree to the following matters:

Section 1. Support for Approval of SPS's 2016 Plan and Associated Programs, as Modified by the Stipulation.

SPS's Application and supporting testimony demonstrate that the proposed programs are reasonably projected to satisfy the Utility Cost Test ("UCT") and thereby establish that the proposed programs are projected to be cost-effective. The Signatories agree not to contest SPS's UCT calculations for purposes of this Stipulation. The Signatories support Commission approval of SPS's portfolio of EE/LM programs and associated program activities proposed in SPS's 2016 EE/LM Plan, subject to the program modifications discussed in Section 1.1 below. Exhibit A, attached to the Stipulation, summarizes the impacts of the modifications on the 2016 budgets, projected participation, forecasted achievements, and UCT for each program and SPS's overall EE/LM portfolio.

1.1 2016 Plan/Program Modifications and Future Program Commitments

The Signatories support Commission approval of the modifications to SPS's 2016 EE/LM programs described below.

Modifications to Residential Programs

(a) **Energy Feedback:** SPS agrees to review the potential for incremental participation in the Energy Feedback program (minimum of 5,000 participants) for the 2017 program year. If SPS determines that additional participation is cost-effective and prudent based on other savings opportunities, SPS will propose to increase program participation in its 2017 EE/LM Plan filing.

(b) **Residential Cooling:** SPS will offer residential cooling in 2016 as a standalone program, and it will ensure that all marketing does not promote converting technologies such as conversions from evaporative to compressor-based cooling. SPS will also evaluate in 2016 whether cooling technology conversions exist in the presence of a standalone cooling program.

(c) **Home Energy Services (“HES”):** SPS will increase the HES program budget by \$30,000, for a total 2016 budget of \$2,591,997, and increase the forecasted achievements by 75,188 kWh (net generator) or 66,315 kWh (net customer) for 2016. The increases are intended to accommodate promotion of high efficiency air conditioning within the program. SPS has reallocated funds from the Residential Cooling program to support this modification.

(d) **Home Lighting & Recycling:** SPS will add an additional 65,000 compact fluorescent light bulbs (“CFL units”) to the Home Lighting & Recycling program to increase the forecasted achievement to 12.2 GWh (net generator) or 10.8 GWh (net customer). The addition of the CFL units will result in a 2016 budget impact of \$30,958, for a total 2016 budget of \$2,545,773. SPS will reallocate a portion of the funds originally budgeted to other programs to support this modification.

(e) **Refrigerator Recycling:** SPS agrees to work with retailers and its third-party implementer to develop a more comprehensive promotional partnership for 2016. SPS anticipates the cost impact to the program to be minimal, and thus will be able to incorporate the proposed modification within the 2016 budget. In addition, SPS will correct the error in the net-to-gross value used in the calculation of the UCT for the Refrigerator Recycling program, thereby increasing the UCT to 1.33 and increasing the total savings forecast to 378,222 kWh (net

generator).

(f) **Residential Saver's Switch:** SPS will reduce this program's budget by \$307,510 and reallocate the funds to support the modifications to the 2016 Plan. Marketing efforts for the Residential Saver's Switch program will be scaled back with the budget modifications.

(g) **Residential Smart Thermostat Pilot (NEW):** SPS will offer a new pilot that will install smart thermostats in participating residential customers' homes at no cost to the participant. The pilot is designed to evaluate the energy efficiency and demand response benefits of smart thermostats as a next generation technology. SPS has budgeted \$633,000 for the program and forecasts energy savings of 697,941 kWh (net generator) and 615,584 kWh (net customer). For a full description of the program, see Exhibit B. SPS further agrees to evaluate the program for consideration in its 2017 and 2018 plan filings pending M&V results in the 2016 program year and satisfactory program performance in 2016. SPS plans to offer the pilot for two years, pending Commission approval in its annual DSM filing, after which it will be evaluated for inclusion as a full program in the portfolio if it is found to be cost effective. SPS will include any proposed changes for discussion as part of SPS's Public Participation Meeting in 2016. For the proposed tariff for this pilot, see Exhibit C.

Modifications to Business Programs

(h) **Business Comprehensive:** SPS will: (1) add direct installation measures, specifically a LED lamp measure, for small business customers receiving an audit under the Business Lighting product; (2) lower the threshold for large commercial and industrial ("C&I") customer studies from 7 GWh to 4 GWh as a means for attracting additional C&I customers into the study program; and (3) consider any combined heat and power projects presented to SPS by any customer, SWEEP, or through the Department of Energy Combined Heat and Power Technical Assistance Partnership. SPS anticipates that the direct install measures for small business customers will increase the forecasted achievement by 583,437 kWh (net generator) or 538,512 kWh (net customer) at an additional cost of \$163,355.61. SPS will reallocate funding from other programs modified by the Stipulation to support the direct install lighting measures.

(i) **Business Saver's Switch:** SPS will correct and reduce the 2016 Business Saver's Switch program budget, which was over-stated due to a calculation error. Correcting this error

decreases the forecasted budget by \$324,277 to \$244,327. These funds have been reallocated to support the modifications to the Business Comprehensive and Home Lighting programs. SPS further agrees to reduce the budget by an additional \$108,500. SPS will reallocate these funds to support the modifications to its 2016 Plan. Marketing efforts for the Business Saver's Switch program will be scaled back with the budget modifications.

(j) **Interruptible Credit Option ("ICO"):** SPS will eliminate tariff number 5012.1, which is the Voluntary Load Reduction Purchase Option ("VLRPO"). This option is an offering included in the ICO program. SPS will eliminate the VLRPO beginning in 2016 due to lack of participation in the option, costs related to upgrading the information technology associated with the program, and lack of resource need. However, the ICO (tariff number 4040.2) and Summer Only ICO (tariff number (5013.1)) will remain in effect.

Modifications to Planning & Administration Programs

(k) **Planning and Administration:** SPS will reduce the Planning and Administration budget by \$58,656 and will reallocate these funds to support modifications to the 2016 Plan.

(l) **Measurement and Verification:** SPS will reduce the Measurement and Verification budget by \$16,808 and will reallocate these funds to support modifications to the 2016 Plan.

1.2. Support for Commission Approval of SPS's 2016 EE Rider

The Signatories support Commission approval of SPS's request to continue the use of SPS's EE Rider to recover the costs incurred for the approved 2016 EE/LM program, associated program activities, and Commission-approved incentives, as further discussed below:

(a) The amount collected under the 2016 EE Rider for annual program expenses will be set at 3% of customer bills (*i.e.*, billed revenue under SPS's current rates), excluding gross receipts tax, franchise, and right-of-way fees, or \$75,000 per customer per calendar year, whichever is less, but not including any approved incentives authorized for recovery. SPS's recovery of incentives (*see* Section 2. below) will be in addition to the 3% program funding level, as authorized under Section 62-17-6(A).

(b) Beginning with recovery for the 2016 Plan costs, the Signatories agree to support SPS's use of carrying charges on any over- or under-collected program revenues and on any over- or under-recovery of incentives. The carrying charges will be symmetrically applied based on the Commission's annual customer deposit rate. SPS agrees to minimize over- or under-collections to the extent reasonably possible.

(c) The Signatories support Commission approval authorizing SPS to continue its 2015 program offerings and associated tariff recovery until SPS receives Commission approval of its 2016 EE/LM Plan.

(d) Within 10 days of Commission approval of its 2016 EE/LM Plan, SPS will file an advice notice to implement the approved 2016 EE Rider and commence collections in the first full billing month after filing the advice notice, but not before January 1, 2016, provided that there is at least 10 business days for the Signatories to review the advice notice prior to collection in the first full billing month after filing the advice notice. If the Signatories do not have 10 business days to review the advice notice prior to the first full billing month after filing the advice notice, SPS will implement the proposed 2016 EE Rider in the second full billing month after filing the advice notice.

Section 2. Support for Approval of SPS's Recovery of Incentives for 2016, as authorized by Sections 62-17-5(F) and 62-17-6(A) of the EUEA.

The Signatories support Commission approval authorizing SPS to recover financial incentives for plan year 2016 as described below:

(a) SPS will be entitled to collect a maximum incentive of \$815,726, subject to certain adjustments described below.

(i) If SPS achieves a minimum cumulative energy savings threshold equal to 225 GWh (net customer) for plan year 2016, SPS will receive a base incentive of \$781,259, adjusted for Low-Income spending, as provided below. The methodology for this incentive is based on the following calculation:

$\$11,489,101^3 \times 6.80\%$ - Low-Income Adjustment ("LIA") where:

³ This amount represents SPS's 2016 portfolio budget level consistent with the 3% funding requirement.

LIA = \$0, unless SPS spends less than \$574,455 (*i.e.*, 5% minimum of estimated program spend), in which case the LIA is calculated as:

- Low-Income Spending Shortfall (“LISS”) (x) 6.8% (x) 2
where:
- LISS = \$574,455 minus actual SPS spending in 2016 directed specifically to EE/LM programs for low-income customers.

(ii) If SPS achieves greater than 31.805 GWh (net customer) for plan year 2016, SPS’s incentive will be increased by 0.1% per incremental GWh of achievement above 31.805 GWh multiplied by \$11,489,101, which will be a sliding scale extending from 6.8% up to a maximum of 7.11%.⁴ Exhibit D provides a calculation of the base and incremental incentives achievable by SPS.

(b) SPS’s 2016 EE Rider will include the estimated 2016 base incentive and the 2016 estimated program expenses collected at a 3% of bill basis. The 2016 incentive shall be recovered through the 2016 EE Rider on a constant percentage-of-bill-basis over a 12-month period beginning January 2016 as provided for in Section 1.2 above. The 2016 incentive is subject to an annual reconciliation. The base incentive (\$781,259) will increase the 2016 rider by 0.20%; therefore resulting in a total 2016 EE Rider of 3.20%.

Section 3. Support for Approval of SPS’s Application and 2016 Plan, as Modified by the Stipulated Agreements

3.1 The Signatories agree the Stipulation represents a fair, just, and reasonable resolution of all issues related to SPS’s 2016 EE/LM Plan, and with the modifications discussed herein, the Stipulation is consistent with the provisions and requirements of the EUEA and the New Mexico Public Utility Act (NMSA 1978, §§ 62-3-1 *et seq.* – “PUA”). Therefore, the Signatories agree the Stipulation satisfies the public interest requirements of the EUEA and PUA and should be approved by the Commission.

⁴ The maximum incentive allowable under 17.7.2.8(L)(4) NMAC is based on the weighted cost of capital and SPS’s weighted cost of capital is 8.26% (as stated in the Direct Testimony of Ruth M. Sakya at p. 23). The proposed arrangement is well within the maximum that SPS could receive for an incentive under the EE rule.

Section 4. SPS Compliance with Commission Directives from Prior Cases

4.1 The Signatories agree that SPS has complied with and satisfied the Commission's requirements from Case Nos. 08-00333-UT, 09-00352-UT, and 13-00286-UT, which include the following:

(a) SPS's maintenance of data on short-term, non-firm wholesale sales made during economic interruptions (Recommended Decision, Case No. 08-00333-UT, Decretal ¶L), which is addressed in the Direct Testimony of William T. Conrad at page 51;

(b) SPS's showing of its level of reliance on CFLs under its Home Lighting & Recycling Program (Final Order Adopting Recommended Decision, Case No. 08-00333-UT, Decretal ¶M and Final Order Adopting Certification of Stipulation in Case No. 09-00352-UT, Decretal Paragraph K in the), which is addressed in SPS witness Conrad's direct testimony at page 50;

(c) The availability of energy efficiency and load management programs in SPS's New Mexico service area that are similar to those offered by SPS's affiliates in Colorado and Minnesota (Recommended Decision, Case No. 08-00333-UT, Decretal ¶O), which is addressed in SPS witness Conrad's direct testimony at page 51 and Attachment WTC-3;

(d) SPS's evaluation of the best practices of the Public Service Company of Colorado pilot program for upstream commercial lighting incentives for inclusion in SPS's New Mexico portfolio (Certification of Stipulation in Case No. 13-00286-UT, Section 1.2 (h)), which is addressed in SPS witness Conrad's direct testimony at page 15;

(e) SPS's determination of any potential programs for coordination with New Mexico gas utilities for inclusion in the 2016 Plan (Certification of Stipulation in Case No. 13-00286-UT, Section 1.2 (k)), which is addressed in SPS witness Conrad direct testimony at page 52;

(f) SPS's provision of a quarterly report detailing program performance and actual energy efficiency rider recoveries for the preceding quarter to the Commission, the Signatories, and Occidental Permian Ltd. and the inclusion of a table in SPS's Annual Report detailing incentives paid to each rate class ((Certification of Stipulation in Case No. 13-00286-UT, Section 1.2 (m)); and

(g) SPS's modification of its program budget if an event increased or decreased SPS's projected retail revenue equal to or greater than 5% (Certification of Stipulation in Case No. 13-00286-UT, Section 1.4 (f)).

Section 5. Support for Granting Waivers, Variances, and other Approvals

5.1 To the extent additional waivers, variances, or approvals are required to effectuate the Stipulation as approved by the Commission, the Signatories support the Commission granting the waivers, variances, and approvals that are determined to be necessary for SPS to implement and comply with the approved Stipulation and the modifications to the 2016 EE/LM Plan.

Section 6. Support for Admission of SPS's Pre-filed Testimony and Other Filings into Record

6.1 The Signatories support the admission into the case record SPS's pre-filed direct testimony and attachments, and SPS's and the other parties' direct testimony filed in support of the Stipulation.

Section 7. Effect and Limitation of Stipulation

7.1 This Stipulation has been drafted by all the Signatories and is the result of negotiation, compromise, settlement, and accommodation among the Signatories with respect to the issues set out in this Stipulation. As described earlier, the Stipulation resolves all issues concerning SPS's Application in this case. The Signatories agree that the Stipulation is in the public interest and should be approved and accepted by the Commission.

7.2 The Signatories further agree that the terms and conditions set out in this Stipulation are interdependent and that the various provisions of this Stipulation are not severable. None of the provisions of this Stipulation shall become fully operative unless the Commission enters an order approving the entire Stipulation. If the Commission issues an order inconsistent with the terms of this Stipulation, each Signatory has the right to withdraw from this

Stipulation, to take action to protect its interest(s), and to advocate any position it deems appropriate with respect to any issue in this Stipulation.

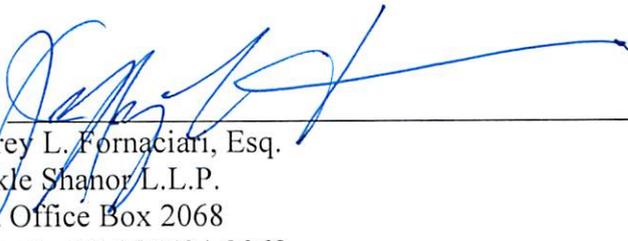
7.3 This Stipulation is binding on each of the Signatories only for the purpose of settling the issues as set forth in this Stipulation and for no other purposes, and this Stipulation shall not be binding or precedential on a Signatory outside of this proceeding. It is acknowledged that a Signatory's support of the matters contained in this Stipulation may differ from the position taken or testimony presented by it in other cases before the Commission. To the extent that there is a difference, a Signatory does not waive its position in any of those other cases. Because this is a stipulated resolution, no Signatory is under any obligation to take the same positions as set out in this Stipulation in other cases, regardless of whether other cases present the same or a different set of circumstances, except as otherwise may be explicitly provided by this Stipulation. The provisions of this Stipulation are intended to relate to only the specific matters referred to in this Stipulation. By agreeing to this Stipulation, no Signatory waives any claim it may otherwise have with respect to issues not expressly provided for in this Stipulation. In particular, notwithstanding this Stipulation, the Signatories reserve the right to contest any calculation made or value used in future applications of the UCT which, in their sole and individual discretion, is believed to not be consistent with future EE Rule requirements or is inappropriate for the intended purpose.

7.4 This Stipulation shall be binding upon and inure to the benefit of the successors and assigns of the Signatories.

Section 8. Multiple Counterparts

8.1 The Stipulation may be executed in any number of counterparts, including by telefax or PDF signature, each of which shall separately be deemed to be an original, and all of which will constitute one and the same agreement.

The following fully and duly authorized representatives of the Signatories have signed this Stipulation as of September 8, 2015.

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2016 Executive Summary as Modified by Stipulation

	As Filed						Modified By Settlement						
	Electric Participants	Electric Budget	Net Customer kW	Net Customer kWh	Net Generator kW	Net Generator kWh	Electric Participants	Electric Budget	Net Customer kW	Net Customer kWh	Net Generator kW	Net Generator kWh	Utility Cost Test Ratio
2016 Residential Segment													
Home Lighting	148,500	\$ 2,514,815	1,298	9,667,432	1,549	10,960,807	173,500	\$ 2,545,773	1,460	10,800,262	1,743	12,245,195	2.64
Refrigerator Recycling	450	\$ 89,138	18	283,214	21	321,105	450	\$ 89,138	21	333,592	25	378,222	1.33
School Education Kits	2,500	\$ 158,186	22	824,100	26	934,353	2,500	\$ 158,186	22	824,100	26	934,353	1.97
Residential Energy Feedback	16,714	\$ 184,890	379	3,151,742	453	3,573,404	16,714	\$ 184,890	379	3,151,742	453	3,573,404	1.06
Home Energy Services	1,850	\$ 2,561,997	618	5,658,676	738	6,415,732	1,850	\$ 2,591,998	618	5,658,676	738	6,415,732	1.92
Residential Cooling	192	\$ 230,448	74	231,102	88	262,020	192	\$ 200,448	74	231,102	88	262,020	1.17
Residential Savers Switch	5,352	\$ 638,260	741	7,148	884	8,104	4,580	\$ 330,750	741	7,148	884	8,104	3.15
Residential Smart Thermostats	N/A	N/A	N/A	N/A	N/A	N/A	1,500	\$ 633,000	1,255	615,584	1,498	697,941	1.04
Residential Segment Total	175,557	\$ 6,377,735	3,150	19,823,413	3,758	22,475,525	201,285	\$ 6,734,183	4,570	21,622,205	5,454	24,514,971	2.12
Business Segment													
Business Comprehensive	134	\$ 3,662,551	1,386	9,633,404	1,547	10,437,057	601	\$ 3,814,845	1,495	10,173,549	1,668	11,022,263	2.08
ICO	2	\$ 49,069	789	7,000	881	7,584	2	\$ 49,069	789	7,000	881	7,584	6.00
Business Savers Switch	561	\$ 569,104	871	7,023	973	7,609	561	\$ 135,827	314	2,529	350	2,740	3.20
Business Segment Total	697	\$ 4,280,724	3,047	9,647,427	3,400	10,452,250	1,164	\$ 3,999,741	2,598	10,183,078	2,899	11,032,587	2.17
Indirect Segment													
Consumer Education		\$ 193,146						\$ 193,146					
Market Research		\$ 42,650						\$ 42,650					
Measurement & Verification		\$ 28,808						\$ 28,808					
Planning & Administration		\$ 318,656						\$ 318,656					
Product Development		\$ 247,381						\$ 247,381					
Indirect Segment Total		\$ 830,642						\$ 830,642					
Portfolio Total	176,254	\$ 11,489,101	6,196	29,470,840	7,159	32,927,775	202,449	\$ 11,489,101	7,168	31,805,282	8,353	35,547,558	2.00

2016 Executive Summary as Modified by Stipulation

	Variance					
	Electric Participants	Electric Budget	Net Customer kW	Net Customer kWh	Net Generator kW	Net Generator kWh
2016						
Residential Segment						
Home Lighting	25,000	\$ 30,958	162	1,132,830	194	1,284,388
Refrigerator Recycling	-	\$ -	3	50,377	4	57,117
School Education Kits	-	\$ -	-	-	-	-
Residential Energy Feedback	-	\$ -	-	-	-	-
Home Energy Services	-	\$ 30,000	-	-	-	-
Residential Cooling	-	\$ (30,000)	-	-	-	-
Residential Savers Switch	(772)	\$ (307,510)	-	-	-	-
Residential Smart Thermostats	1,500	\$ 633,000	1,255	615,584	1,498	697,941
Residential Segment Total	25,728	\$ 356,447	1,421	1,798,792	1,695	2,039,446
Business Segment						
Business Comprehensive	467	\$ 152,294	109	540,145	121	585,206
ICO	-	\$ -	-	-	-	-
Business Savers Switch	-	\$ (433,277)	(558)	(4,494)	(622)	(4,869)
Business Segment Total	467	\$ (280,982)	(449)	535,650	(501)	580,336
Indirect Segment						
Consumer Education		\$ -				
Market Research		\$ -				
Measurement & Verification		\$ (16,808)				
Planning & Administration		\$ (58,656)				
Product Development		\$ -				
Indirect Segment Total		\$ (75,465)				
Portfolio Total	26,195	\$ (0)	971	2,334,442	1,194	2,619,783

Smart Thermostat Pilot Description

1. Smart Thermostat Pilot

A. Program Description

The Smart Thermostat Pilot is designed to evaluate if Wi-Fi connected communicating, “smart” thermostats (see Section B for qualifying device criteria) can save residential customers energy by installing a smart thermostat device and connecting it to the manufacturer’s cloud service. In addition to energy efficiency (“EE”) benefits, Southwestern Public Service Company (“SPS”) also plans to evaluate smart thermostats’ capabilities for delivering demand response (“DR”) capacity in the residential market. SPS will make devices available through a direct-install program model: the device and installation will be available at no cost to participating customers.

SPS plans to offer customers a smart thermostat including installation at no charge. A condition of receiving the installed device and participating in the pilot will be the release of customers’ data for the purpose of studying whether or not a smart thermostat leads to energy and demand savings. These benefits are central to the inclusion in SPS’s 2016 Plan; however, while it is assumed that these measures also provide non-energy benefits such as convenience and comfort, SPS will not seek to evaluate or quantify the non-energy benefits as part of its pilot.

Smart thermostat measures have not yet been evaluated by the third-party evaluator in any New Mexico energy efficiency portfolio. Therefore, potential EE and DR benefits will be quantified or measured by the third-party evaluator during the 2018 program year.

As part of the evaluation process, the pilot seeks to answer the following questions:

Energy Efficiency (“EE”):

- What level of energy savings are attributed to the installation and use of smart thermostats? Can a deemed savings value be determined?
- Is it possible to create a cost-effective demand-side management (“DSM”) product using resulting deemed energy-savings values?

Demand Response:

- Does providing the device free of charge encourage enrollment in the program?
- Will a pay-for-performance compensation structure encourage consistent participation in DR events?
- Evaluate the customer response to a limit of five opt outs. Is the number sufficient, insufficient, or excessive?

Energy Efficiency

The concept of realizing energy savings by programming a thermostat is straightforward: thermostats are programmed during times when home occupants are away or asleep to ensure no energy is wasted keeping a home unnecessarily cool or warm. This

process is called a temperature “setback”. The use of the programmable function of the thermostat will be an important piece of the pilot program.

The purpose of the scheduling function is to improve the EE benefits delivered by the thermostat. Smart thermostats offer customers value by improving the user experience and making it easier for customers to control their energy usage. This is accomplished through a much easier setback programming process. Smart thermostats also offer customers the convenience of remotely and temporarily adjusting their “setback” to adjust for changes in their schedule at any time. Features like these have led smart thermostat manufacturers to report that 80-90 percent of customers are running a setback program at any given time, and that figure remains fairly constant as vendors sign up new customers (as compared to less than 50 percent of programmable thermostat users running a setback program).

In addition to helping customers program their thermostat, smart thermostats provide several other features that claim to increase energy efficiency. For example, these devices can automatically optimize individual HVAC system performance and “learn” when to raise and lower temperatures to recover from setback periods without wasting additional energy. These devices can also provide data sets and operating run times to interested customers to study system performance.

Demand Response

SPS also plans to test the DR capabilities of smart thermostats. All participants will be enrolled in the DR program, but will have the option to not participate – or “opt-out” of – a limited number of DR events. These events will be utility controlled events executed through the smart thermostat. For each event a customer participates in, SPS will provide an incentive of \$2.50. SPS will study how event participation is influenced by providing financial compensation for participation, and measure the load reduction provided by cycling participants’ air conditioning.

SPS is relying upon the results of Public Service Company of Colorado’s (“PSCO”) In-Home Smart Device Pilot¹ in designing this feature. SPS reviewed the customer participation data from the PSCO pilot and adapted that pilot for implementation in New Mexico taking into account the unique climate, end-use technology, and demographics factors of SPS’s customer base. The PSCO pilot recorded event participation rates of 49% in 2012, and 42% in 2013, where customers could opt-out of events at any time, and received no incentive for participation or penalty for non-participation. The SPS pilot will differentiate itself by researching how a pay-for-performance model could influence higher participation levels for demand response events. Customers will have the choice to participate in events or to opt-out. However, customers will be limited to a maximum of five opt-outs per season. Once a customer has opted out of five events, they will no

¹ The In-Home Smart Device Pilot was included as part of PSCO’s DSM Indirect Program from 2011 through early 2014. The final pilot evaluation can be found on the Xcel Energy website, here: <http://www.xcelenergy.com/staticfiles/xcel/Regulatory/Regulatory%20PDFs/CO-DSM/CO-2014-IHSD-Pilot-Evaluation.pdf>.

longer have the option to opt out of any further events. Customers that do participate will receive financial compensation. Those that opt out will receive no compensation for the events they opt-out of.

Budget

For program year 2016, the total budget for the pilot will be \$633,000. Equipment and installations are the primary cost-driver for this pilot, because SPS will incur 100 percent of these costs for participating customers. The costs for this pilot are somewhat frontloaded because SPS is only claiming a one-year measure life for DR, while in practice, the cost to deploy those devices would be paid in year one while providing a DR resource for many more years. M&V costs were estimated by the third-party evaluator based on discussions regarding the methodology needed to evaluate energy benefits.

B. Program Administration

SPS is targeting 1,500 participants for this pilot. The pilot will target SPS's customers with central air conditioning systems. All participants will be enrolled in the DR program.

To participate in the Smart Thermostat Pilot, customers must complete a rebate application and once approved, schedule an appointment to have a smart thermostat installed. Additionally, the device manufacturer will provide verification to SPS that the device has been installed and connected to their cloud service.

SPS will contract with a leading smart thermostat manufacturer to provide one device to pilot participants, and that device must offer the following:

- Wi-Fi connectivity for customers;
- a mobile app and online portal; and
- on-board or cloud-based optimization of the HVAC system.

The participating thermostat manufacturer must sign an agreement with SPS to provide usage data for rebated devices. This will include, but is not limited to, a historical record of temperature setback schedules and selected temperature setpoints.

C. Marketing and Outreach Plan

By agreeing to participate in the pilot, eligible participants will receive a free smart thermostat installed at no charge. For the DR portion of the pilot, participants will receive an incentive of \$2.50 per event for each DR event they participate in. SPS expects to call at least 10 DR events for PY 2016 in order to collect sufficient data for M&V purposes. Pilot participants will not be penalized for opting out of events, but participants will be limited to a maximum of five events in which they can opt out. Once a participant has opted out of five DR events, they will no longer have the option to opt out of events.

SPS will work with its chosen device manufacturer to co-market the thermostat and the pilot program. This could include manufacturers providing online promotion of the pilot program and in-store materials at retail locations. However, SPS also plans to directly promote the pilot using a variety of marketing strategies to solicit customers that could include but are not limited to:

- direct mail and e-mail
- a web-page for interested customers to explain how to apply and the benefits of participating
- in-store materials at participating retail stores
- engaging contractors who install smart thermostats

Customers interested in participation will be required to agree to and sign a participation agreement as part of the rebate form. By participating, customers agree to share their thermostat usage data with SPS (in accordance with New Mexico state data privacy rules and Xcel Energy's Privacy Policy). Pilot participants will also agree to the terms of the pay-for-performance model, which states that they will receive no compensation for any event they opt-out of.

D. Measurement and Verification Plan

The third-party evaluator will perform M&V on the program in 2016. The savings for this program will be calculated by installing data-loggers and monitoring participant's AC equipment usage. This will provide the evaluator and SPS with a value for the following:

- annual kWh reduction by installing a smart thermostat
- peak load kW reduction by installing a smart thermostat
- kW reduction per participating thermostat during DR events
- kWh reduction per participating thermostat during DR events

Once the evaluator has this information, they will evaluate the filed technical assumptions and make recommendations for changes, should they be necessary. The end result of this pilot will be the determination of deemed savings for the measure and possible inclusion in a future version of the Technical Reference Manual.

E. Cost-Effectiveness Tests

See Appendix A for the 2016 Smart Thermostat Pilot program benefit-cost analyses and Appendix B for the forecast planning assumptions. The planning assumptions are based on SPS's estimates for energy savings including both efficiency and demand response benefits.

ORIGINAL RATE NO. 75

RESIDENTIAL SMART THERMOSTAT PILOT

Tariff No. 7207

AVAILABILITY: Available to Residential Service Customers with:

- (1) Company controlled central air conditioning by means of a Smart Thermostat.

Availability is restricted to customers with central air conditioning systems compatible with Company equipment and Wi-Fi capability.

CREDIT: A Credit of \$2.50 per load management interruption shall be applied to Customer's bill.

TERMS AND CONDITIONS OF SERVICE:

1. The duration and frequency of load management interruptions will be determined by Company. Customer air conditioners normally will be cycled on a schedule designed to achieve a 50 percent reduction in the building air conditioning requirements during a load management interruption. Load management interruptions may occur at any time during the year; however, normally it will occur on high demand days during summer months or when, in Company's opinion, interruption will assist in meeting peak demands and system economic dispatch requirements of Company, or the reliability of the system may be at risk. Load management interruptions normally will not occur during the observation day of the following holidays: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
2. Notice may be provided to the customer at any time. Notice will be provided through email, SMS text messaging, automated phone call, thermostat communication, or some combination thereof.
3. Customer has the right to refuse interruption five times within the year. Customer must exercise right to opt-out within the first 30 minutes of an event. Exercise of this option after the first 30 minutes of the load management interruption will not be recognized and Customer will be treated as a participant in the load management interruption and receive the load management interruption credit.

X

Advice Notice No.

REGIONAL VICE PRESIDENT RATES AND
REGULATORY AFFAIRS

ORIGINAL RATE NO. 75

RESIDENTIAL SMART THERMOSTAT PILOT

Tariff No. 7207

- 4. Customer must agree to Company load control for no less than one year.
- 5. If Company determines that its load management equipment on the Customer's premises has been rendered ineffective due to tampering by use of mechanical, electrical, or other devices or actions, then Company may discontinue the Customer's participation in the program. Company may bill the customer for all expenses involved with the removal, replacement or repair of the load management equipment and any charges resulting from the investigation of the device tampering. Company may rebill all prior load management credits received by Customer to the date the tampering appears to have first occurred or the previous twelve months, whichever is longer. A Customer removed from the program is only eligible to participate again at Company's discretion. Company will verify installation has been corrected before the Customer is permitted to participate in the program.

LIMITATION OF LIABILITY: Customers who elect to take service under the Smart Thermostat Pilot program shall agree to indemnify and hold harmless Company from all claims or losses of any sort due to death or injury to person or property resulting from interruption of electric service under the program or from the operation of the interruption signal and switching equipment.

X
Advice Notice No.
REGIONAL VICE PRESIDENT RATES AND REGULATORY AFFAIRS

SPS 2016 Program Year Incentive Mechanism		2016 Mechanism Formula
<u>Base Incentive</u>		
Commission-approved Estimated Budget	\$11,489,101	
2016 Incentive Level	6.80%	
Base Incentive		\$781,259
<u>Minimum Achievement Threshold</u>		
2016 Cumulative Savings Threshold (Net Customer GWh)	225	
Verified 2016 Cumulative Energy Savings (Net Customer GWh)	225	
Minimum Achievement Reached?		Yes
Minimum 2016 New Mexico Incentive		\$781,259
<u>Low-Income Adjustment</u>		
<u>Low-Income Spend Requirement</u>		
Approved Estimated Budget	\$11,489,101	
Statutory Low-Income Spend Level	5.00%	
Low-Income Spend Requirement	\$574,455	
<u>Low-Income Spending Shortfall</u>		
Low-Income 2016 Spend	\$574,455	
Low-Income Spending Shortfall	\$0	
<u>Low-Income Spending Shortfall Penalty</u>		
Low-Income Spending Shortfall	\$0	
Proposed 2016 Incentive Level	6.80%	
Punitive Measure	2	
Low-Income Adjustment		\$0
Adjusted Incentive		\$781,259
<u>Sliding Scale Adjustment</u>		
<u>Escalating Incentive Factor</u>		
2016 Linear Savings Requirement (Net Customer GWh)	31.805	
Verified 2016 Annual Energy Savings (Net Customer GWh)	31.805	
Escalation Minimum Reached?		Yes
Minimum Achievement Exceeded by at least 1 GWh, but less than 2 GWh?	No	
Incentive Value	6.9%	
Bonus Incentive		\$0
Minimum Achievement Exceeded by at least 2 GWh, but less than 3 GWh?	No	
Incentive Value	7.0%	
Bonus Incentive		\$0
Minimum Achievement Exceeded by at least 3 GWh?	No	
Incentive Value	7.1%	
Bonus Incentive		\$0
Total 2016 Incentive		\$781,259