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TEP
Tucson Electric Power
88 East Broadway Blvd., P.O. Box 711,
Tucson, AZ 85702

March 1, 2017

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Re: Notice of Filing – Tucson Electric Power Company's Annual Demand-Side Management ("DSM") Progress Report, Docket No. E-00000U-17-0057

The Electric Energy Efficiency Standards set forth in the Arizona Administrative Code, Section R14-2-2409.A, require Tucson Electric Power Company ("TEP") to submit an annual DSM progress report for each of its Commission-approved DSM programs by March 1st. TEP hereby files its DSM Progress Report for 2016. The Measurement, Evaluation and Research Report listed in Appendix 1 of the DSM Progress Report contains confidential information and is being provided directly to Commission Staff.

If you have any questions, please contact me at (520) 884-3680.

Sincerely,

Melissa Morales
Regulatory Services

cc: Barbara Keene, Utilities Division, ACC
Compliance Section, ACC

Tucson Electric Power

2016
Annual DSM
Progress Report

Docket No. E-00000U-17-0057

March 1, 2017

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Definitions

"AAC" means the Arizona Administrative Code.

"ADOH" means the Arizona Department of Housing

"APS" means Arizona Public Service.

"ASHRAE/IESNA" means the American Society of Heating, Refrigerating and Air-Conditioning Engineers / the Illuminating Engineering Society of North America

"Baseline" means the level of electricity demand, electricity consumption, and associated expenses estimated to occur in the absence of a specific DSM program, determined as provided in R14-2-2413

"CFL" means Compact Fluorescent Light bulb.

"CHP" means combined heat and power, which is using a primary energy source to simultaneously produce electrical energy and useful process heat.

"C&I" means Commercial and Industrial.

"Commission" means the Arizona Corporation Commission.

"Consumer Education and Outreach" means a program to provide general consumer education about energy-efficiency improvements.

"Cost-effective" means that total incremental benefits from a DSM measure or DSM program exceed total incremental costs over the life of the DSM measure, as determined under R14-2-2412.

"DOE" means the United States Department of Energy.

"Demand savings" means the load reduction, measured in kW, occurring during a relevant peak period or periods as a direct result of energy efficiency and demand response programs.

"DSM" means demand-side management, the implementation and maintenance of one or more DSM programs Energy Efficiency ("EE").

"DSM measure" means any material, device, technology, educational program, pricing option, practice, or facility alteration designed to result in reduced peak demand, increased energy efficiency, or shifting of electricity consumption to off-peak periods and includes CHP used to displace space heating, water heating, or another load.

"DSM program" means one or more DSM measures provided as part of a single offering to customers.

"EPA" means the United States Environmental Protection Agency.

"HVAC" means Heating, Ventilation and Air Conditioning.

"Incremental costs" means the additional expenses of DSM measures, relative to baseline.

"IC" means an implementation contractor, a contractor hired to implement a program.

"kW" means kilowatt.

"kWh" means kilowatt-hour.

"LED" means Light Emitting Diode light bulb.

"Load management" means actions taken or sponsored by an affected utility to reduce peak demands or improve system operating efficiency, such as direct control of customer demands through affected-utility-initiated interruption or cycling, thermal storage, or educational campaigns to encourage customers to shift loads.

"Low-income customer" means a customer with a below average level of household income, as defined in an affected utility's Commission-approved DSM program description.

"MER" means measurement, evaluation, and research. The process of identifying current baseline efficiency levels and the market potential of DSM measures; performing process and program evaluations including the verification of installed energy efficient measures and reported savings; and identifying additional energy efficiency research opportunities.

"MW" means a Megawatt, 1,000 kilowatts or 1,000,000 watts

"MWh" means a Megawatt Hour, 1,000 kilowatt hours

"NCI" means Navigant Consulting, Inc.

"Net benefits" means the incremental benefits resulting from DSM minus the incremental costs of DSM.

"Program costs" means the expenses incurred by an affected utility as a result of developing, marketing, implementing, administering, and evaluating Commission-approved DSM programs.

"Program Implementation" means the implementation of programs including administration, fiscal management of costs for labor, overhead, implementation contractors, or other direct program delivery.

"Program Marketing" means the marketing of programs and increasing DSM consumer awareness (direct program marketing as opposed to general consumer education).

"Planning and Administration" means planning, developing, and administering programs including management of program budgets, oversight of the RFP process, oversight of ICs, program development, program coordination, customer participation, and general overhead expenses.

"Program Development, Analysis, and Reporting" means the research and development of new DSM program opportunities, analysis of existing and proposed programs and measures, and the tracking and reporting of participation, savings, and benefits. Associated costs are essential to comply with the Commission reporting and rules requirements.

"Rebates & Incentives" means payments made to customers or contractors as rebates or incentives.

"RESNET" means the Residential Energy Services Network.

"RFP" means Request for Proposal, the process through which proposals are solicited from contractors or vendors.

the "Standard" means the reduction in retail energy sales, in percentage of kWh, required to be achieved through TEP's approved DSM programs as prescribed in the State of Arizona Administrative Code Article 24, Section R14-2-2404.

"Therm" means 100,000 Btus (British thermal units)

"Thermal envelope" means the collection of building surfaces, such as walls, windows, doors, floors, ceilings, and roofs, that separate interior conditioned (heated or cooled) spaces from the exterior environment.

"Training and Technical Assistance" means Energy-efficiency training and technical assistance for utility employees, contractors, or building officials.

"TEP" or "Company" means Tucson Electric Power Company.

"UNS Electric" means UNS Electric, Inc.

"UNS Gas" means UNS Gas, Inc.

All other terms and definitions associated with the DSM Annual Report are contained in A.A.C. R14-2-2401.

2016 DSM PROGRESS REPORT

1. **An analysis of the Company's progress toward meeting the annual energy efficiency standard**

a. **Progress Towards the Standard**

In accordance with the Commission's Decision No. 71819 (August 10, 2010) and Arizona Administrative Code Section R14-2-2409 (effective January 1, 2011), TEP submits this annual DSM progress report for calendar year 2016. This report includes information for all of TEP's residential, non-residential, and low-income customer programs that were in place during this reporting period.

In the Commission's Decision No. 75450 (February 11, 2016), the Commission approved TEP's 2016 EE Implementation Plan for use in 2016. Decision No. 75450 approved continuation of TEP's existing DSM programs for Program Year 2016 and provided new programs and measures. New programs included measures that were demonstrated to be cost-effective by Staff analysis. In 2017 TEP will implement the EE Programs the Commission approved for 2016, and will file its EE Plan for 2018 by June 1, 2017.

In 2016 TEP met the savings target set in the Standard. TEP's DSM savings, expenditures, societal benefits, incentives, and environmental savings are summarized in Table 1 through Table 5 as noted below.

Table 1	Cumulative Energy Savings As Compared to The Standard
Table 2	Energy Savings By Program
Table 3	Expenses By Program
Table 4	Energy Savings And Societal Benefits
Table 5	Lifetime Environmental Savings By Program

TEP's cumulative energy savings as compared to the Standard are reported in Table 1 below.

Table 1 – Cumulative Energy Savings As Compared to The Standard

Year	Retail Energy Sales (MWh)	Incremental Annual Energy Savings (MWh)	Cumulative Annual Energy Savings (MWh)	Cumulative Annual Savings as a Percent of previous year Retail Sales	Cumulative EE Standard
2010	9,291,788				
2011	9,332,107	139,539	139,539	1.50%	1.25%
2012	9,264,818	105,655	245,194	2.63%	3.00%
2013	9,278,918	177,425	422,619	4.56%	5.00%
2014	8,520,347	221,215	643,834	6.94%	7.25%
2015	8,431,556	168,600	812,434	9.54%	9.50%
2016		199,467	1,011,901	12.00%	12.00%

Freeport-McMoran Inc's DSM Surcharge Exemption

Per Decision No. 74885 (December 31, 2014) Freeport-McMoran Inc's ("FMI") Sierrita Mine has been exempted from the DSM surcharge contingent upon FMI providing TEP with "an annual count of the number and horsepower of high efficient motors installed at the Sierrita Mine and data on any energy efficiency measures/projects which are installed at the Sierrita Mine, sufficient to enable the calculation of energy savings." During this reporting period, FMI reported installing high-efficiency motors, variable speed drives and LED lighting. FMI reported a total of 4 variable speed drives (VSD), 81 high efficiency motors, and 19 LED lights. The VSDs installations support 77.5 hp, the motors 6,900 horsepower, and LED lighting 6.2 kW. Based upon the information provided by FMI, TEP estimates that FMI will save approximately 262 MWh annually for measures installed in 2016.

Annual and Lifetime Savings

The DSM portfolio annual and lifetime energy savings are reported in Table 2. Savings are separated into the following categories:

- Capacity Savings (MW)
- Annual MWh Savings
- Annual Therm Savings
- Lifetime MWh Savings
- Lifetime Therm Savings

TEP is including energy savings toward the Standard for changes in energy efficient building codes per AAC R14-2-2404(E). Energy savings from the Energy Codes and Standards program are reported in Table 2 below.

Table 2 - Energy Savings by Program[1]

Program	Capacity Savings MW	Annual MWh Savings	Annual Therm Savings	Lifetime MWh Savings	Lifetime Therm Savings
Residential Programs					
Appliance Recycling	0	0	0	0	0
Efficient Products	6.05	62,320	3,001	768,455	33,013
Existing Homes Retrofit and Audit Direct Install	6.56	7,672	29,076	139,368	560,522
Low-Income Weatherization	0.6	1,836	8,541	36,123	127,121
Multi-Family	5.66	8,190	63,399	119,202	1,267,971
Residential New Construction	1.42	1,899	87,406	56,982	2,622,174
Shade Tree Program	0.32	775	0	31,003	0
Non-Residential Programs[2]					
Bid For Efficiency (Pilot)	0.06	470	0	3,785	0
CHP Program (Pilot)	N/A	N/A	N/A	N/A	N/A
C&I Comprehensive Program	8.97	40,728	0	602,811	0
Commercial New Construction Program	2.7	5,573	0	95,067	0
Retro-Commissioning	0.34	709	0	7,091	0
Schools Energy Efficiency Program (Pilot)	0.03	361	0	4,866	0
Small Business Direct Install	0.66	8,026	0	89,351	0
Behavioral Sector					
Behavioral Comprehensive	0.64	6,987	81,133	49,705	598,604
Home Energy Reports	N/A	N/A	N/A	N/A	N/A
Support Sector					
Consumer Education & Outreach Program	N/A	N/A	N/A	N/A	N/A
Energy Codes and Standards	2.79	13,789	0	13,789	0
Utility Improvement Sector					
C&I Direct Load Control Program	27.74	20,235	0	20,235	0
Conservation Volt Reduction	N/A	N/A	N/A	N/A	N/A
Generation Improvement and Facilities Upgrade	N/A	N/A	N/A	N/A	N/A
Credits					
Pre-Rule Credit for 2016	NA	19,899	NA	19,899	NA
Portfolio Totals	**64.56**	**199,467**	**272,556**	**2,057,733**	**5,209,405**

[1] Capacity savings for C&I Direct Load Control reflect the maximum capacity available for reduction events. Annual MWh savings for Commercial & Industrial Direct Load Control reflect the credit available toward the Standard per A.A.C. R14-2-2404 (C). TEP is also including an energy savings credit toward the Standard for changes in energy efficient building codes per AAC R14-2-2404(E).

[2] In December 2016, DNV GL our Implementation Contractor for commercial EE programs, instituted upgraded reporting software. The data set provided to the Company from the upgraded software contained immaterial differences from the data DNV GL previously supplied on a monthly basis. This may have a minimal impact on the reported savings for commercial EE programs in 2016. TEP has to date not discovered any material impact but will revise this filing if discovered.

b. **DSM Annual Expenses**

The annualized expenses for each program are reported in Table 3. Expenses are separated into the following categories:

- Rebates and Incentives
- Training and Technical Assistance
- Consumer Education
- Program Implementation
- Program Marketing
- Planning and Administration
- Measurement, Evaluation, and Research

Table 3 - Expenses by Program

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Residential Programs								
Appliance Recycling	-$4,722	0	0	$3,417	-$3,007	0	$1,218	-$3,093
Efficient Products	$2,370,291	$36,810	$1,000	$1,033,404	$206,980	$4,093	$95,676	$3,748,254
Existing Homes Retrofit and Audit Direct Install	$2,254,147	$3,415	0	$1,442,104	$55,215	0	$25,186	$3,780,067
Low-Income Weatherization	$437,211	$2,351	0	$165	$5,412	$152	$512	$445,803
Multi-Family	$1,798,672	0	$2,571	$1,234,713	$1,375	$3,442	$2,593	$3,043,365
Residential New Construction	$317,600	$52,665	$496	$67,710	$26,010	$546	$2,029	$467,055
Shade Tree Program	$280,809	$423	0	$165	$13,326	$928	$2,558	$298,210
Total for Residential Programs	$7,454,008	$95,663	$4,067	$3,781,679	$305,312	$9,160	$129,773	$11,779,662
Non-Residential Programs								
Bid For Efficiency (Pilot)	$79,419	$405	$972	$49,344	$1,447	0	$1,668	$133,255
CHP Program (Pilot)	0	0	0	0	0	0	0	0
C&I Comprehensive Program	$3,028,237	$8,678	$11,529	$1,060,371	$62,518	0	$74,036	$4,245,369
Commercial New Construction Program	$304,303	$2,090	$1,940	$70,114	$5,067	0	$1,043	$384,557
Retro-Commissioning	$47,040	$355	$225	$41,503	$525	0	$253	$89,901
Schools Energy Efficiency Program (Pilot)	$120,433	$3,436	$1,650	$30,778	$4,404	$26	0	$160,727
Small Business Direct Install	$800,570	$5,195	$5,467	$584,128	$49,503	$48	$46,871	$1,491,782
Total for Non-Residential Programs	$4,380,001	$20,158	$21,783	$1,836,238	$123,465	$74	$123,872	$6,505,591
Behavioral Sector								
Behavioral Comprehensive	$433,529	$6,558	0	$177,892	$18,305	$550	$3,427	$640,261
Home Energy Reports	0	0	0	0	0	0	$2,143	$2,143
Total Behavioral Sector	$433,529	$6,558	0	$177,892	$18,305	$550	$3,427	$640,261
Support Sector								
Consumer Education & Outreach Program	0	0	$325,222	$22,601	$196,788	$697	$491	$545,799
Energy Codes and Standards	0	$42,594	0	0	0	0	$33,940	$76,534
Total for Support Programs	0	$42,594	$325,222	$22,601	$196,788	$697	$34,432	$622,333
Utility Improvement Sector								
C&I Direct Load Control Program	0	$3,908	$500	$410,773	$15,474	$237	$968	$431,860
Conservation Volt Reduction	0	0	0	0	0	0	0	0
Generation Improvement and Facilities Upgrade	0	0	0	0	0	0	0	0
Total for Utility Improvement Sector	0	$3,908	$500	$410,773	$15,474	$237	$968	$431,860
Portfolio Totals	**$12,267,538**	**$168,882**	**$351,573**	**$6,229,182**	**$659,344**	**$10,717**	**$294,615**	**$19,981,850**
							Program Costs	**$19,981,850**
							Program Development, Analysis, and Reporting	**$998,471**
							TOTAL	**$20,980,322**

c. **Societal Benefits and Performance Incentives**

The portfolio societal benefit calculation and performance incentive calculation are reported in Table 4. TEP's portfolio Societal Cost Test ratio for 2016 is 2.80 and includes all program costs and labor.

Per Commission Decision No. 73912 (June 27, 2013) TEP's performance incentive is calculated at 8 percent of DSM net economic benefits, capped at $0.0125 per kWh, whichever is less. TEP's performance incentive for calendar year 2016 caps at the annual kWh savings times $0.0125 per kWh and is $1,832,468.

Table 4 - Energy Savings And Societal Benefits

DSM Program	Annual MWh Savings	Societal Benefit	Societal Costs	Net Benefit
Residential				
Appliance Recycling	0	0	0	0
Efficient Products	62,320	$26,924,102	$6,232,189	$20,691,914
Existing Homes Retrofit and Audit Direct Install	7,672	$10,666,723	$4,953,131	$5,713,591
Low-Income Weatherization	1,836	$961,846	$499,478	$462,369
Multi-Family	8,190	$9,137,002	$3,399,936	$5,737,065
Residential New Construction	1,899	$7,903,679	$1,833,258	$6,070,421
Shade Tree Program	775	$1,109,672	$894,597	$215,076
Total for Residential	82,692	$56,703,024	$17,812,588	$38,890,435
Non-Residential				
Bid For Efficiency (Pilot)	470	$178,371	$64,311	$114,060
CHP Program (Pilot)	0	0	0	0
C&I Comprehensive Program	40,728	$28,017,282	$10,675,700	$17,341,582
Commercial New Construction Program	5,573	$4,694,479	$1,408,051	$3,286,428
Retro-Commissioning	709	$438,470	$285,978	$152,492
Schools Energy Efficiency Program (Pilot)	361	$207,897	$106,727	$47,170
Small Business Direct Install	8,026	$3,946,479	$1,828,435	$2,118,045
Total for Non-Residential	55,865	$37,482,977	$14,423,200	$23,059,776
Behavioral Sector				
Behavioral Comprehensive	6,987	$2,292,797	$531,932	$1,760,864
Home Energy Reports	0	0	0	0
Total for Behavioral Sector	6,987	$2,292,797	$531,932	$1,760,864
Support Programs				
Consumer Education & Outreach Program	0	0	0	0
Total for Support Programs	0	0	0	0
Utility Improvement Sector				
C&I Direct Load Control Program	20,235	NA	NA	NA

Total for Utility Improvement Sector	20,235	0	0	0
Portfolio Totals	165,779	$96,478,797	$32,767,721	$63,711,076
Program Development, Analysis & Reporting	0	NA	$998,471	NA
TOTAL	165,779	$96,478,797	$33,766,193	$62,712,604
Performance Incentive Calculation:				
Total kWh Savings	165,779,480			
Total Net Benefits	$62,712,604			
8% Net Benefits	$5,017,008			
% Net Benefits Cap = Total kWh savings X $0.0125	$2,072,243			
less 2015 Energy Codes Over Collection	-$239,775			
Performance Incentive for 2016[a]	**$1,832,468**			

[a]Performance Incentive Calculations do not include kWh Savings and Net Benefits of non-qualifying programs (Energy Codes and Standards, CVR, GIF) or 2016 Pre-Rule Credit.

d. **Lifetime Environmental Savings**

The lifetime savings for each program are reported in Table 5. Savings are separated into the following categories:

- sulfur oxides ("SOX"),
- nitrogen oxides ("NOX"),
- carbon dioxide ("CO2"),
- and water consumption.

Table 5 - Lifetime Environmental Savings by Program

Program	Lifetime SOX Reduction (lbs)	Lifetime NOX Reduction (lbs)	Lifetime CO2 Reduction (lbs)	Lifetime Water Reduction (gallons)
Residential Programs				
Appliance Recycling	0	0	0	0
Efficient Products	1,654,637	1,996,445	1,471,444,697	353,489,151
Existing Homes Retrofit and Audit Direct Install	300,087	362,078	266,862,958	64,109,212
Low-Income Weatherization	77,781	93,848	69,169,120	16,616,685
Multi-Family	256,666	309,688	228,249,712	54,833,048
Residential New Construction	122,693	148,039	109,109,455	26,211,660
Shade Tree Program	66,756	80,547	59,365,510	14,261,537
Non-Residential Programs				
Bid For Efficiency (Pilot)	8,151	9,834	7,248,156	1,741,244
CHP Program (Pilot)	0	0	0	0
C&I Comprehensive Program	1,297,973	1,566,103	1,154,268,668	277,293,093
Commercial New Construction Program	204,698	246,984	182,035,393	43,730,856
Retro-Commissioning	15,269	18,423	13,578,625	3,262,030
Schools Energy Efficiency Program (Pilot)	10,478	12,643	9,318,291	2,238,558
Small Business Direct Install	192,390	232,133	171,089,703	41,101,343
Behavioral Sector				
Behavioral Comprehensive	107,024	129,133	95,175,283	22,864,216
Home Energy Reports	0	0	0	0
Support Sector				
Consumer Education & Outreach Program	0	0	0	0
Energy Codes and Standards	29,690	35,823	26,403,064	6,342,880
Utility Improvement Sector				
C&I Direct Load Control Program	0	0	0	0
Conservation Volt Reduction	0	0	0	0
Generation Improvement and Facilities Upgrade	0	0	0	
Portfolio Totals	**4,344,294**	**5,241,722**	**3,863,318,638**	**928,095,515**

2. **A list of the 21 current Commission-approved DSM programs and DSM measures, organized by customer segment**

Commission Approved DSM Programs	
Residential Sector	
4.1	Appliance Recycling
4.2	Efficient Products
4.3	Existing Homes Retrofit and Audit Direct Install
4.4	Low-Income Weatherization
4.5	Multi-Family Homes
4.6	Residential New Construction
4.7	Shade Tree
Non-Residential Sector	
4.8	Bid for Efficiency (Pilot)
4.9	Combined Heat & Power ("CHP") Pilot Program
4.10	Commercial & Industrial ("C&I") Comprehensive Program
4.11	Commercial New Construction Program
4.12	Retro-Commissioning
4.13	Schools Energy Efficiency Pilot
4.14	Small Business Direct Install and Schools Facilities
Behavioral Sector	
4.15	Behavioral Comprehensive
4.16	Home Energy Reports
Support Sector	
4.17	Consumer Education and Outreach
4.18	Energy Codes and Standards Program
Utility Improvement Sector	
4.19	Commercial and Industrial Direct Load Control Program
4.20	Conservation Voltage Reduction
4.21	Generation Improvement and Facilities Upgrade

A list of Commission approved DSM programs and measures is attached in **Appendix 1.**

3. **A description of the findings from any research projects completed during the previous year**
TEP's DSM and Customer Solutions staff reviews various EE technologies on an ongoing basis during

- program administration,
- solicitation for bids for services,
- when conducting research on measures for inclusion in future DSM implementation plans,
- when attending conferences, and
- exchanging best practices with peer utilities.

The findings associated with research projects TEP, in conjunction with UNS Electric, completed in 2016 include:

- Behavioral Comprehensive K-12 EE Implementation: TEP and UNS Electric held a planning session with Navigant to hear national developments in various K-12 energy efficiency education programs and apply relevant outreach approaches to the respective markets. Both companies have been exploring methods to focus on behavior based programs that go beyond the traditional kit-based program and focus on changing energy usage patterns. Special attention is being paid to programs using technology in innovative ways by engaging students in hands-on science, technology, engineering, and math (STEM) learning, fostering competition between schools, and providing mentorship by experts in the field.

- Lighting Workshop: In May, 2016, Navigant led a lighting workshop that covered i) changing lighting standards, ii) eliminating CFL incentives, and iii) expected market price point changes. As lighting standards continue to change i) TEP and UNS Electric will incentivize more lower-lifetime rated LED bulbs (Energy Star Specification 2.0 - 15,000 hour rated minimum as opposed to 25,000 hour minimum), ii) TEP and UNS Electric's elimination of CFL measures and focusing on LED equivalent measures, iii) as the newer specification LEDs enter the market TEP and UNS Electric expect the market to respond with a representative lower price point and the companies to provide a related lower incentive.

- Energy Load Management: Continuing research from previous years, TEP and UNS Electric are developing methods to launch connected products in existing homes and small businesses that will give customers an interface to managing their energy demand and consumption. Partnerships with residential new home developers and builders to introduce key, and connected, products at or near the point of purchase will contribute to lower consumer costs, reduced demand and consumption, and provide consumers with load management capability from their date of occupancy.

- LIW Design Review by Navigant: The purpose of Navigant's analysis was to assess whether estimation of actual savings values for program homes using REM/Design file information could provide superior estimates of savings to the deemed approach currently used. Previous energy savings were based on a deemed estimate provided annually by the Arizona Department of Housing ("ADOH"), whose inputs and assumptions are unknown. Analysis of actual REM/Design files yielded slightly higher electric savings and significantly higher gas savings values, compared with the ADOH deemed values.

4. Information on the DSM programs

Residential Sector

4.1 Appliance Recycling

a. **Description**

The Appliance Recycling Program is designed to remove and recycle inefficient refrigerators and freezers. As national studies indicate that approximately 20 percent of customers have at least one secondary inefficient refrigerator or freezer in their home there is a significant potential for energy savings for this Program. This Program permanently removes inefficient appliances that may otherwise remain in service either at the customer's home or be donated or re-sold. In addition to providing the customer with an incentive the Program removes the usual barriers of taking these appliances offline by eliminating the cost and/or inconvenience associated with disposing of the appliance.

b. **Program Goals, Objectives, and Savings Targets**

The objectives of the Program are to:

- Remove old and inefficient refrigerators and freezers from customer's homes;
- Permanently remove the inefficient refrigerators and freezers from the grid, and
- Recycle the refrigerators and freezers in an environmentally responsible way.

The 2016 energy savings goal was 2,789 MWhs.

c. **Levels of Participation**

Due the unforeseen ceasing of operations by the implementation contractor, JACO Environmental, Inc. on November 20th, 2015, the Appliance Recycling Program was temporarily suspended. In 2016, TEP, in conjunction with UNS Electric, released an RFP to restart the program but did not receive a proposal that met all requirements of the program. In 2017, the companies are planning to release an updated RFP and to restart the program.

d. **Costs Incurred**

Costs or credits reported in 2016 and shown in the table below are carried over from when the program was temporarily suspended:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Appliance Recycling	-$4,722	0	0	$3,417	-$3,007	0	$1,218	-$3,093

e. **Evaluation and Monitoring Activities and Results**

There was no third-party MER activity during this reporting period. Associated MER costs listed above were incurred during the RFP process.

f. **kW, kWh, and Therm Savings**

There were no savings during this reporting period.

g. **Environmental Benefits realized**

There were no environmental benefits realized during this reporting period.

h. **Incremental benefits and net benefits**

There were no incremental benefits and net benefits realized during this reporting period.

i. **Performance-incentive calculations for the previous year**

There is no performance incentive for this program for this reporting period.

j. **Problems Encountered and Proposed Solutions**

Due the unforeseen ceasing of operations by the implementation contractor, JACO Environmental, Inc. on November 20th, 2015, the Appliance Recycling Program was temporarily suspended. In 2016 TEP released an RFP to restart the program but did not receive a proposal that met all requirements of the program. In 2017, TEP, in conjunction with UNS Electric, is planning to release an updated RFP and to restart the program utilizing an in-house administered web portal.

k. **Program Modifications**
No modifications were made to this program during the reporting period.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program or any Program measures in 2017. No measures were terminated during this reporting period.

4.2 Efficient Products

a. **Description**
The Efficient Products program promotes the purchase of energy efficient retail products through in-store buy-downs and product promotions, and the promotion of EE products in general. This program has been in existence since 2008, and was most recently approved by the Commission in Decision No. 75450.

In the 2016 program year the TEP Efficient Products program included the CFL Buy-down Program (Decision No. 75450), Residential LEDs, variable speed pool pumps, and Energy Star appliances. The Efficient Products program promotes the installation of energy efficient products by residential customers in the TEP service territory. TEP provides funds to manufacturers of ENERGY STAR® approved CFLs and LEDs to reduce the up-front product cost and partners with local retailers to pass these savings, and savings for ENERGY STAR® appliances, on to the consumer. Pool pump incentives are paid to an installing contractor with the customer receiving a lower installed cost instead of a direct rebate.

b. **Program Goals, Objectives, and Savings Targets**
The program offers customers opportunities to reduce their energy consumption by purchasing energy efficient retail products, and furthers the transformation of the market through retail partnerships, training retail staff, and increased retail stocking and selection of efficient products.

The objectives of the program are to:

- Reduce peak demand and overall energy consumption in homes and small businesses;
- Increase the purchase of ENERGY STAR® products;
- Increase the availability of ENERGY STAR® lighting products in the marketplace; and
- Increase the awareness and knowledge of retailers and TEP customers on the benefits of ENERGY STAR® lighting products.

The 2016 energy savings goal was 52,984 MWhs.

c. **Levels of Participation**
A total of 856,764 new CFLs, 542,874 LEDs, 1,386 variable speed pool pumps, and 2,467 appliances were sold during this reporting period. An "in storage adder" has also been included in the 2016 total to account for light bulbs taken out of storage and installed in 2016. Additional detail is provided in "Program Modifications" section below.

d. **Costs Incurred**

Costs incurred for this Program during the reporting period are listed below.

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Efficient Products	$2,370,291	$36,810	$1,000	$1,033,404	$206,980	$4,093	$95,676	$3,748,254

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

Many of the program bulbs are sold in multipacks. While some of these bulbs are installed immediately, some are placed into storage to be installed as needed. As bulbs come out of storage, the savings are realized, but they are delayed. The bulbs placed into storage are accounted for with a 5% LED and 18% CFL In-Storage Rate (ISR).[3] According to the Uniform Methods Protocol, 97% of these in-storage bulbs are brought out of storage over a period of four years, while the remaining bulbs are never installed. Navigant follows current Uniform Methods Protocol in calculating the CFL and LED In-storage Adder shown in **Error! Reference source not found.**.[4] Because LEDs were new to the program in 2015, 2016 is the first year TEP is claiming the LED In-storage Adder.[5]

f. **kW, kWh, and Therm Savings**

Measure Category	No. of Measures Installed	kW Savings	kWh Savings
Appliances	2,467	57	422,167
Lighting	1,399,640	5,414	59,119,873
Pool Pumps	1,386	583	2,777,809
Totals	**1,403,493**	**6,054**	**62,319,849**

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

Performance-incentive calculations are reflected in Table 4 above.

[3] The ISR is the proportion of program bulbs each year assumed put into storage rather than installed immediately in sockets. These ISRs are research-based and are higher for CFLs because more CLFs are sold in larger multi-packs, and as more expensive products, LEDs are less likely to be put into storage.

[4] http://energy.gov/sites/prod/files/2015/02/f19/UMPChapter21-residential-lighting-evaluation-protocol.pdf Page 21

[5] TEP 2016 DSM Annual Report, Appendix 3 – Navigant Consulting, Inc. Measurement, Evaluation, and Research Report

j. **Problems Encountered and Proposed Solutions**
There were no problems encountered during this reporting period.

k. **Program Modifications**
Due to the Energy Star 2.0 lighting release taking affect 1/1/17 the ENERGY STAR® Lighting measures transformed to a LED only technology late in the 4th quarter of 2016. The lighting measures are now based on the ENERGY STAR® 15,000 hour to 25,000 hour LED standard specifications. ENERGY STAR® appliance measures were added to the program in 2016 per Decision No. 75450.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program in 2017. Per Commission Decision No. 75450 TEP has discontinued CFL measures and focused on equivalent LED measures.

4.3 Existing Homes Retrofit Program

a. **Description**
The TEP Existing Homes Retrofit Program is designed to encourage homeowners to increase the energy efficiency of their homes. The Program provides incentives for high-efficiency HVAC equipment and tune-ups, as well as home performance services such as sealing leaky duct work and installing smart thermostats. The Program provides rebates to customers and direct incentives to participating contractors with the requirement that the incentives be passed on to utility customers as a line item credit toward approved measures a customer utilizes. In order for customers to participate, TEP requires customers to utilize specific participating contractors who complete Program administrative training including field mentoring.

The Existing Home Retrofit Program was originally approved in Commission Decision No. 72028 (December 10, 2010), continued most recently in Decision No. 75450 (February 11, 2016), and is marketed as the "Efficient Home Program."

b. **Program Goals, Objectives, and Savings Targets**
The objectives of the Existing Homes Retrofit component of the Program are as follows:

- To properly size and provide quality installation of high efficiency HVAC equipment, tune-up existing equipment, seal leaky ductwork, and install smart thermostats;
- Cultivate customer demand, and a qualified contractor base, for comprehensive energy efficiency retrofits in alignment with the "Home Performance with Energy Star" program.

The 2016 energy savings goal was 9,560 MWhs.

c. **Levels of Participation**

A total of 3,861 customers participated in the program during this reporting period.

d. **Costs Incurred**

Costs incurred for this Program during the reporting period are listed below.

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Existing Homes Retrofit and Audit Direct Install	$2,254,147	$3,415	0	$1,442,104	$55,215	0	$25,186	$3,780,067

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

f. **kW, kWh, and Therm Saving**

Measure Category	No. of Measures Installed	kW Savings	kWh Savings
HVAC	3,984	6,218	7,256,531
Tune Up	774	344	415,918
Totals	**4,758**	**6,561**	**7,672,450**

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**

There were no problems encountered during this reporting period.

k. **Program Modifications**

There were no program modifications during this reporting period.

l. **Programs or Measures Terminated**

TEP does not plan to terminate this Program or any measures in 2017. No measures were terminated during this reporting period.

4.4 Low-Income Weatherization Program ("LIW")

a. **Description**

The TEP LIW Program is designed to improve the energy efficiency of homes for customers whose income falls within the defined federal poverty guidelines. The weatherization measures

installed under the LIW Program will reduce electric bills for eligible customers and improve their comfort and quality of life. Energy savings realized from the LIW Program will allow low-income customers to better utilize their limited income for other items such as rent, food, or medical expenses.

b. Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Increase the number of homes weatherized each year;
- Reduce participating low income customer's average household utility bills by utilizing energy conservation measures as defined in the Weatherization Assistance Program Rules; and
- Improve the quality of life for customers by providing them with a safer and healthier home.

The 2016 energy savings goal was 428 MWhs.

c. Levels of Participation

A total of 75 homes received weatherization assistance during this reporting period. 1,800 Smart Thermostats and 20,464 LED bulbs were installed in qualifying low-income residences.

d. Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Low-Income Weatherization[a]	$437,211	$2,351	0	$165	$5,412	$152	$512	$445,803

Includes $14,397.42 for health and safety related repairs and $15,279.53 for Weatherization Agencies' administrative expenses.

e. Evaluation and Monitoring Activities and Results

Navigant, with billing data from TEP, UNS Electric, and UNS Gas, analyzed energy use in weatherized homes in the three companies. The average savings per home reviewed was 2,304 kWh and 117 therms of natural gas.

f. kW, kWh, and Therm Savings[6]

The savings for this reporting period are listed below:

No. of Participants	kW savings	kWh savings	Therm savings
75	601	1,835,795	8,541

Savings are adjusted for line losses of 12.76 percent for both demand and energy (excluding therms).

[6] No. of Participants only includes the number of homes weatherized. Savings include weatherization, smart thermostats, and LED bulbs.

g. **Environmental Benefits realized**
Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefit**
Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**
Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**
TEP, along with other major utilities in Arizona, continues to experience low participation from some low income agencies. Several meetings held in 2016 with all of the state's Weatherization agencies, Arizona Community Action Association ("ACAA") and the ADOH have included discussions on this issue. Some agencies are having difficulty adjusting to the loss of ARRA funding, requiring them to operate on reduced budgets and less staff. The ADOH continues to advise the agencies on best practices to maximize funds. One of the challenges faced by TEP, UNS Electric, and UNS Gas, is the funding limit per LIW household is relatively low compared to other utilities. In TEP's 2018 Implementation Plan, to foster participation, the Company will request an increase in the LIW funding.

k. **Program Modifications**
In 2017, TEP will market the LIW program as the "Energy Ease Program." The Energy Ease program encompasses measures that include traditional weatherization, Smart Thermostats, Low Income Multifamily Direct Install, and Low Income Outreach.

TEP, in conjunction with the Tucson Urban League, implemented an "Energy Ease Plus" pilot offered at no cost to customers, and plans to continue the pilot as a subprogram of Energy Ease in 2017. TEP and Tucson Urban League identified a prescriptive weatherization model that was applied to each home and allows TEP to reach more customers at a lower cost. The Energy Ease Plus effort will not affect the current LIW program's funding.

In August 2016, per Commission Decision No. 75450, TEP filed to use the Existing Homes Smart Thermostat measure reciprocally in the LIW program. TEP implemented the Smart Thermostat measure in the LIW program after the 45-day waiting period after the filing passed without comment.

TEP also included outreach LED bulbs in 2016. Through partnerships with the Community Food Bank, Community Home Repair Program of Arizona, Sonoran Environmental Research Institute, and other low income organizations and events, TEP was able to distribute 20,464 LED bulbs directly to Low Income customers. In addition, TEP included weatherization and Low Income program information with the complimentary bulbs. The bulbs were expensed through the LIW Program, thus allowing TEP to record additional savings for the bulbs within the LIW Program.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program or any measures in 2017. No measures were terminated during this reporting period.

4.5 Multi-Family Homes

a. Description

The Multi-Family program is an existing program approved by the Commission in Decision No. 74885 with additional measures added in Decision No. 75450. The program targets multi-family properties with 5 dwelling units or more to install efficient lighting (CFLs or LEDs), low-flow faucet aerators, low-flow showerheads, HVAC tune-up components including advanced tune-up, Western Cooling Controls (WCC), and duct testing and repair. Additionally, multi-family facility managers are encouraged to participate in the C&I Facilities program, which promotes measure installations in common areas.

b. Program Goals, Objectives, and Savings Targets

The EE potential in the multi-family housing market remains largely underutilized and has a significant potential to increase participation in the Company's portfolio. Various market barriers, such as split incentives, capital constraints, and lack of awareness, create a gap in addressing EE improvements as such improvements typically place low on a typical multi-family housing unit's priority list. Through the direct installation and renovation/rehabilitation implementation framework, this program fills the gap and provides substantial energy savings.

The objectives of the program are to:

- Reduce peak demand and overall energy consumption in the multi-family housing market;
- Promote EE retrofits for both dwelling units and common areas; and
- Increase overall awareness about the importance and benefits of EE improvements to the landlord and property ownership community.

The 2016 energy savings goal was 2,151 MWhs.

c. Levels of Participation

A total of 8,595 customers participated in the program during this reporting period.

TEP, per Decision 75450 (February 11, 2016), launched new Commission-approved measures in March 2016. In addition to the HVAC and Tune-Up measures installed by participating contractors, TEP performed 9,577 direct installs, totaling 5,602 individual units. Of these units, 470 units were all-electric and eligible for all measures. Measures installed and inspected in 2016 were 26,432 CFLs, 1,640 kitchen faucet aerators, 2,232 bathroom faucet aerators and 2,137 Low-Flow showerheads.

d. Costs Incurred

Costs incurred are reported in 2016 and shown in the table below.

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Multi-Family	$1,798,672	0	$2,571	$1,234,713	$1,375	$3,442	$2,593	$3,043,365

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

f. **kW, kWh, and Therm Savings**

Measure Category	Measures Installed	kW Savings	kWh Savings
Aerator	3,872	15	223,709
HVAC	4,263	3,855	4,616,401
Showerhead	2,137	31	455,002
Tune Up	5,314	1,677	2,013,267
Lighting	26,432	85	881,326
Totals	**42,018**	**5,664**	**8,189,705**

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**

During implementation of the Advanced Tune-Up measures, opportunities to address customer participation via additional measures such as the Existing Homes Program "Early Retirement" and "HVAC QI Replace On Burn-Out" arose, but these measures have not been approved for use in the Multi-Family Program. TEP plans on filing for additional Multi-Family measures in its next EE IP filing.

k. **Program Modifications**

In August 2016, per Commission Decision No. 75450, TEP filed to use the Existing Homes "Smart Thermostat" measure reciprocally in the Multi-Family program without increasing the overall DSM budget. TEP implemented the Smart Thermostat measure in the Multi-Family program after the 45-day waiting period after the filing passed without comment.

l. **Programs or Measures Terminated**

TEP does not plan to terminate this Program or any measures in 2017. Per Commission Decision No. 75450 TEP has discontinued CFL measures and focused on equivalent LED measures.

4.6 Residential New Construction

a. **Description**

The Residential New Construction Program for TEP is marketed as the Energy Smart Homes ("ESH") Program. The ESH Program emphasizes the whole-house approach to improving health, safety, comfort, durability, and energy efficiency. The Program promotes homes that meet the Environmental Protection Agency ("EPA")/Department Of Energy ("DOE") Energy Star® Home performance requirements. To encourage participation, the Program provides incentives to homebuilders for each qualifying home. On-site inspections and field testing of

a random sample of homes is required to ensure that homes meet the Energy Star® Home performance requirements; on-site inspections are conducted by third-party Residential Energy Services Network ("RESNET") certified energy raters selected by each builder. Components of the ESH Program include development of branding, builder training curriculum, and marketing material.

b. Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Reduce peak demand and overall energy consumption in new homes;
- Stimulate construction of new homes that are inspected and tested to assure energy performance;
- Stimulate energy efficiency standards that are higher than EPA/DOE, Energy Star® performance standards;
- Stimulate the installation of high efficiency heating and cooling systems, envelope, lighting, and fixed appliances (Energy Star® products);
- Cultivate customer demand, and a qualified contractor base, for comprehensive energy efficiency retrofits in alignment with the "Home Performance with Energy Star" program:

  http://www.ENERGY STAR®.gov/index.cfm?fuseaction=hpwes_profiles.showsplash
- Work with local builders to construct energy-efficient homes;
- Educate consumers on the benefits of Energy Star® Homes;
- Transform the market by improving construction practices in the TEP service territory;
- Assist sales agents with promoting and selling of energy efficient homes;
- Train builder construction staff and sub-contractors in advanced building-science concepts to reach energy efficiency goals through improved design and installation practices; and
- Increase homebuyer awareness and understanding of energy-efficient building practices and the benefits of purchasing an energy-efficient home.
- Encourage participation in the ESH Program by providing incentives to homebuilders for each qualifying home.

The 2016 energy savings goal was 1,158 MWhs.

c. Levels of Participation

A total of 1,010 homes were constructed by participating builders during this reporting period.

d. **Costs Incurred**

Costs incurred during this reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Residential New Construction	$317,600	$52,665	$496	$67,710	$26,010	$546	$2,029	$467,055

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2**.

f. **kW, kWh, and Therm Savings**

No. of Homes	kW savings	kWh savings	Therm savings
1,010	1,425	1,899,396	87,406

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**

There were no problems encountered during this reporting period.

k. **Program Modifications**

There were no program design changes during this reporting period.

l. **Programs or Measures Terminated**

TEP does not plan to terminate this Program or any measures in 2017. No measures were terminated during this reporting period.

4.7 Shade Tree Program

a. **Description**

The TEP Shade Tree Program has been in operation since December 1992. Desert-adapted trees are provided to individual residences, residential neighborhoods, low-income families, as well as to community areas, and schools. Residents are allowed three, 5-gallon trees per year, which must be planted on the south, west, or east side of the home. Residents complete an online application and pay for the tree(s) via TEP's website, which includes the type of tree

requested and the location where it will be planted, a nominal fee of $5.00 per tree, and pick up the tree at a partnered nursery of their choice.

b. **Program Goals, Objectives, and Savings Targets**

The objective of the Program is to promote energy conservation and the environmental benefits associated with planting low water usage trees. Along with the energy savings trees provide to the homes, trees also provide habitat for wildlife, absorb air and water pollutants, control storm water runoff and soil erosion, and provide an aesthetic beauty to neighborhoods and the community.

The 2016 energy savings goal was 477 MWhs.

c. **Levels of Participation**

A total of 4,187 customers participated in the program during this reporting period.

For this reporting period, TEP exceeded the program goal of 7,000 trees and distributed a total of 11,768 trees (11,733 five gallon trees and 35 fifteen gallon trees) to approximately 4,187 customers.

d. **Costs Incurred**

Costs incurred during this reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Shade Tree Program	$280,809	$423	0	$165	$13,326	$928	$2,558	$298,210

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

f. **kW, kWh, and Therm Savings**

Number of Trees Distributed	kW savings	kWh savings
11,768	323	775,084

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**
There were no problems encountered during this reporting period.

k. **Program Modifications**
After a lengthy RFP and review process, the shade tree program administration and implementation were modified in 2016 to internal TEP program administration with the continued use of an implementation contractor. This new model decreases the cost per tree which increases program cost effectiveness and allows more customers to participate in the program.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program or any measures in 2017. No measures were terminated during this reporting period.

Non-Residential Sector

4.8 Bid for Efficiency ("BFE") Pilot

a. **Description**
The BFE program is an existing program most recently approved by the Commission in Decision No. 75450. The program is designed to take an innovative approach to EE by using elements of competition and the potential for high rewards to enhance customer interest. BFE involves a pool of funds that are bid on through unique proposals, including costs, savings and incentives, which are unique to that project. TEP selects winning bids based on specified criteria. BFE participants and project sponsors include commercial customers, Energy Service Companies or other aggregators who organize proposals that involve multiple sites.

b. **Program Goals, Objectives, and Savings Targets**
The Program encourages customers and project sponsors to think creatively and to develop projects designed to optimize system energy use as a whole, rather than considering the energy usage of each individual piece of equipment. The program fosters customer-driven project activity (e.g., customers select appropriate measures and professionals to implement measures), and encourages the implementation of comprehensive, multi-measure projects. Program goals include:

- Ensure projects are submitted, approved, implemented, and verified in a timely manner;
- Allow projects to be customer-driven; the customer or project sponsor will select appropriate trade and professional allies to design and implement projects;
- Encourage implementation of multiple measures; and
- Encourage applications that aggregate measures at multiple sites.

The 2016 energy savings goal was 1,752 MWhs.

c. **Levels of Participation**

A total of 16 customers participated in the program during this reporting period.

d. **Costs Incurred**

Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Bid For Efficiency (Pilot)	$79,419	$405	$972	$49,344	$1,447	0	$1,668	$133,255

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2**.

f. **kW, kWh, and Therm Savings**

Measure Category	No. of Projects	kW savings	kWh savings
BFE	18	59	469,553

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**

In an effort to provide energy saving services to a typically under-represented segment of customers, TEP targeted small, locally owned markets serving lower-income neighborhoods to participate in this Program. As locally owned markets typically lack access to funds to improve their facilities, the most cost-effective projects were selected for participation, with a goal of helping these markets continue to provide service in the neighborhoods where they are located.

k. **Program Modifications**

No modifications were made to this program during the reporting period.

l. **Programs or Measures Terminated**

TEP does not plan to terminate this Program or any measures in 2017. No measures were terminated during this reporting period.

4.9 Combined Heat & Power ("CHP") Pilot Program

a. **Description**
The CHP Program is an existing program approved by the Commission in Decision No. 74885. CHP, also defined as "cogeneration", means a system that generates electricity and useful thermal energy in a single integrated system.

b. **Program Goals, Objectives, and Savings Targets**
CHP is an affordable, clean and reliable source of generation and should be considered a key component to a cost-effective EE plan. The market potential for CHP is limited because only certain commercial customers have a need for thermal energy. TEP will assist customers interested in CHP with engineering and interconnection services. Qualifying CHP customers save on utility bills by not having to utilize a Partial Requirement Service rate.

The 2016 energy savings goal was 504 MWhs.

c. **Levels of Participation**
There were no new CHP installations during this reporting period.

d. **Costs Incurred**
There were no costs reported during this reporting period.

e. **Evaluation and Monitoring Activities and Results**
There were no savings during this reporting period to evaluate.

f. **kW, kWh, and Therm Savings**
There was no increase in incremental energy savings in existing CHP systems and no new participation in 2016.

g. **Environmental Benefits realized**
Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**
Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**
Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**
No problems were encountered during this reporting period.

k. **Program Modifications**
No modifications were made to this program during this reporting period.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program or any measures in 2017. No measures were terminated during this reporting period.

4.10 Commercial & Industrial ("C&I") Comprehensive Program

a. Description

The TEP C&I Comprehensive Program, marketed as the "EasySave Plus" program, is a multi-faceted program that provides incentives to TEP's large commercial customers for the installation of energy-efficiency measures including lighting equipment and controls, HVAC equipment and controls, HVAC system test and repair motors and motor drives, plug load equipment, and refrigeration. The Program also provides customers with the opportunity to propose innovative energy efficiency solutions through custom energy efficiency measures.

b. Program Goals, Objectives, and Savings Targets

The primary goal of the Program is to encourage TEP's non-residential customers to install energy efficiency measures in existing facilities. More specifically, the Program is designed to:

- Provide incentives to facility operators for the installation of high-efficiency lighting equipment and controls, HVAC equipment and controls, HVAC system test and repair, premium efficiency motors and motor controls, plug load equipment, and energy-efficient refrigeration system retrofits;
- Overcome market barriers, such as:
  - Lack of awareness and knowledge about the benefits and cost of energy efficiency improvements;
  - Performance uncertainty associated with energy efficiency projects; and
  - High first costs for energy efficiency measures.
- Create a clear, easy to understand and simple participation process; and
- Increase the awareness and knowledge of facility operators, managers, and decision-makers on the benefits of high-efficiency equipment and systems.

The 2016 energy savings goal was 29,301 MWhs.

c. Levels of Participation

A total of 209 customers participated in the program during this reporting period.

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
C&I Comprehensive Program	$3,028,237	$8,678	$11,529	$1,060,371	$62,518	0	$74,036	$4,245,369

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

f. **kW, kWh, and Therm Savings**

Measure Category	No. Measures Installed	kW savings	kWh savings
Custom	266	1,720	11,833,666
HVAC	511	5,438	11,378,290
Lighting	63,995	906	11,617,204
Motor	59	833	5,379,349
Refrigeration	734	78	490,383
Thermostats	4	0	28,677
Totals	**65,569**	**8,974**	**40,727,568**

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

k. **Program Modifications**

No Program modifications were made during this reporting period.

l. **Programs or Measures Terminated**

TEP does not plan to terminate this Program or any measures in 2017. Per Commission Decision No. 75450 TEP has discontinued CFL measures and focused on equivalent LED measures.

4.11 Commercial New Construction Program

a. **Description**

The Commercial New Construction Program is geared towards the building owner/developer and is designed to promote improved building energy efficiency in new commercial construction, compared to standard building practices.

The Program includes incentives based on energy improvements over ASHRAE/IESNA Standard 90.1-2010 and energy design information resources for the building owner and developer, provides consumer education and promotional pieces designed to assist building owners/developers in understanding various energy efficiency options, and encourages them to explore energy efficiency options.

b. **Program Goals, Objectives, and Savings Targets**

The primary goal of the Program is to encourage energy efficient new building design and construction for new commercial projects in TEP's service area. More specifically, the Program is designed to:

- Provide incentives to building owners/developers to design and build more energy-efficient buildings;
- Overcome market barriers for more efficient new construction buildings;
- Create a clear and easy to understand participation process that does not unduly burden the design and construction time schedule or budget process;
- Increase the awareness and knowledge of building owners/developers, architects, engineers, and decision-makers on the benefits of high efficiency buildings design; and
- Encourage building owners/developers and the design community to consider energy efficiency options as early in the design process as possible.

The 2016 energy savings goal was 3,735 MWhs.

c. **Levels of Participation**

There were 21 participants in the program during this reporting period.

d. **Costs Incurred**

Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Commercial New Construction Program	$304,303	$2,090	$1,940	$70,114	$5,067	0	$1,043	$384,557

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

f. **kW, kWh, and Therm Savings**

Measure Category	Number of Projects	kW savings	kWh savings
Commercial New Construction	24	2,704	5,572,618

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**
Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**
No problems were encountered during this reporting period.

k. **Program Modifications**
No Program modifications were made during this reporting period.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program or any measures in 2017. No measures were terminated during this reporting period.

4.12 Retro-Commissioning (Pilot)

a. **Description**
The Retro-Commissioning ("RCx") program is an existing program most recently approved by the Commission in Decision No.75450. The program assists customers (owners) identify building equipment and processes that are not achieving optimal efficiency in existing facilities. Eligible program applicants receive subsidized screening energy audits. Participants also receive training to ensure proper operating and maintenance practices over time.

b. **Program Goals, Objectives, and Savings Targets**
The primary goal of the RCx program is to generate significant energy savings by retro-commissioning existing C&I facilities. The program delivers customer benefits by lowering energy bills and energy usage, and improving building performance and occupant comfort while reducing maintenance calls. The program helps TEP develop an RCx contractor pool, and helps TEP to build relationships with C&I customers, thus leading to other areas of participation in TEP's portfolio of EE programs. RCx programs in other utility service territories have delivered average energy savings in the range of 5 percent to 15 percent per facility, and measures implemented as a result of the program's activity typically pay for themselves in less than two years.

The 2016 energy savings goal was 1,314 MWhs.

c. **Levels of Participation**
There was one participant in the program during this reporting period.

d. **Costs Incurred**
Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Retro-Commissioning	$47,040	$355	$225	$41,503	$525	0	$253	$89,901

e. **Evaluation and Monitoring Activities and Results**
NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

f. **kW, kWh, and Therm Savings**

Measure Category	No. of Projects	kW savings	kWh savings
Refrigeration	18	344	709,137

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**
Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**
Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**
Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**
No problems were encountered during this reporting period.

k. **Program Modifications**
No modifications were made to this program during the reporting period.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program in 2017.

4.13 Schools Energy Efficiency Program (Pilot)

a. **Description**
The TEP Schools Energy Efficiency Program (Pilot) is an existing program approved by the Commission in Decision No. 75450. The purpose of the program is to assist schools with limited resources and the inability to raise capital to improve the energy efficiency of their facilities.

b. **Program Goals, Objectives, and Savings Targets**
The primary objective of the Program is to encourage K-12 schools in TEP's service area to install energy efficiency measures in existing facilities. More specifically, per Decision No. 75450, the Program incentivizes 100% of a participating schools cost of qualifying energy efficiency upgrades. There are no specific measures associated with this program as participating schools may use any prescriptive measure or custom application available in the C&I Comprehensive or Small Business programs.

The 2016 energy savings goal was 2,000 MWhs.

c. **Levels of Participation**

A total of nine customers participated in the program during this reporting period.

TEP notified all public and charter schools (K-12) located in TEP's service territory with invitations to participate in the program. Applications to participate were received from nine school districts representing 196 schools and 28 charter school organizations representing 35 schools. Schools that have not participated in any other TEP EE program during the previous three years were given priority over schools that have participated in other TEP EE programs. Schools were ranked by their energy use intensity and follow-up on-site energy assessments were then performed on the top 31 schools ranked to identify the greatest opportunities for energy savings in relation to a school's ability to raise the necessary capital. A total of 12 public schools and 14 charter schools were selected to participate in the program. Construction began in October 2016 and is expected to be completed in 2017. Of the schools selected for participation nine schools participated in 2016 and TEP expects the energy efficiency projects for the remaining schools to be completed in 2017.

d. **Costs Incurred**

Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Schools Energy Efficiency Program (Pilot)	$120,433	$3,436	$1,650	$30,778	$4,404	$26	0	$160,727

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

f. **kW, kWh, and Therm Savings**

Measure Category	No. Measures Installed	kW savings	kWh savings
Lighting	71	29	360,512

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

k. **Program Modifications**
No Program modifications were made during this reporting period

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program in 2017.

4.14 Small Business Direct Install Program

a. **Description**
The TEP Small Business Direct Install Program, marketed as the "EasySave" program, is designed to minimize barriers related to the implementation of energy efficiency improvements in the small business market, such as lack of capital, information search costs, transaction costs, performance uncertainty, and the so-called "hassle factor." The purpose of the program is to assist small firms, whose main focus is generally their core businesses, with analyzing their energy use and improve their energy efficiency.

The Program is an upstream market program providing incentives directly to contractors for the installation of selected high efficiency lighting, plug loads, motors, HVAC, and refrigeration measures. In order to reduce overhead expenses, the Program has employed internet-based measure analysis and contractor proposal processing which has made the process easier for both contractors and customers. The Program includes customer and trade ally education to assist them with understanding the technologies being promoted, what incentives are offered, and how the Program functions.

b. **Program Goals, Objectives, and Savings Targets**
The primary objective of the Program is to encourage TEP's small business customers to install energy efficiency measures in existing facilities. Specifically, the Program is designed to:

- Encourage small business customers to install high-efficiency lighting equipment and controls, HVAC equipment, and energy-efficient refrigeration system retrofits in their facilities
- Encourage contractors to promote the Program and provide turn-key installation services to small business customers;
- Overcome the unique market barriers of the small business market including:
  - First costs and lack of access to capital for energy efficiency improvements;
  - Lack of awareness and knowledge about the benefits and cost of energy efficiency improvements;
  - Product research, contractor selection, and transactions costs; (the "hassle factor") and
  - Performance uncertainty associated with energy efficiency projects.
- Assure that the participation process is clear, easy to understand and simple; and
- Increase the awareness and knowledge of business owners, building owners and managers, and other decision-makers on the benefits of high-efficiency equipment and systems.

The 2016 energy savings goal was 6,609 MWhs.

c. **Levels of Participation**
There were 165 participants in the program during this reporting period.

d. **Costs Incurred**

Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Small Business Direct Install	$800,570	$5,195	$5,467	$584,128	$49,503	$48	$46,871	$1,491,782

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

f. **kW, kWh, and Therm Savings**

Measure Category	No. Measures Installed	kW savings	kWh savings
HVAC	24	7	13,883
Refrigeration	127	8	60,178
Lighting	17,604	585	7,118,357
Custom	138	56	833,260
Totals	**17,893**	**655**	**8,025,677**

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

k. **Program Modifications**

Pursuant to Decision No. 74885 (December 31, 2014), after providing the Commission notice, TEP adjusted the measure incentive payment cap from 90% (as previously set forth in Decision No. 70457, August 6, 2008), to 75% of the incremental cost of a measure due to increased program participation. Reducing the incentive payment cap allows incentives for more customers that wish to participate in the program.

l. **Programs or Measures Terminated**

TEP does not plan to terminate this Program or any measures in 2017. Per Commission Decision No. 75450 (February 11, 2016) TEP has discontinued CFL measures and focused on equivalent LED measures.

Behavioral Sector

4.15 Behavioral Comprehensive

a. Description

TEP currently offers educational programs for both residential and commercial customers, including a K-12 Education program for use in scholastic settings.

The Behavioral Comprehensive Program consists of four subprograms. The focus of the Programs are to educate current and future energy users on how changes in behavior, including purchasing decisions, can improve energy efficiency and help lower energy bills for the consumer. The subprograms include low-cost measures, such as CFLs or LEDs, faucet aerators, LED nightlights and refrigerator thermometers, in addition to educational components.

The four subprograms consist of:

- Direct Canvassing
  The direct canvassing initiative is designed to reach homeowners and provide them with program collateral in relation to TEP's DSM program offerings. In addition, homeowners receive 2 CFL bulbs to direct install in their homes.
- K-12 Education
  The K-12 education program is a three part energy education program for middle school students that include a pre-visit lesson, an on-site classroom presentation, and a post visit activity; all aligned with the Arizona Department of Education middle school science standards. Students are instructed on how to save energy in their homes and are provided with a take home energy efficiency kit which includes items such as CFLs or LEDs, LED nightlights, bathroom faucet aerators, low flow showerheads, and thermometers for both refrigerators & freezers. The kit allows the students to gain practical experience, by installing the items with their parents, which correlates with the curriculum presented at school.
- Community Education
  The community education program is designed to engage with community groups and work with public entities to offer energy efficiency workshops. Customers who attend the workshop are educated on the benefits of energy efficiency emphasizing on behavioral changes that lead to energy savings. Participants are provided with an energy savings kit with a wide variety of sample of materials such as weather-stripping, low flow showerheads, caulk, and CFLs or LEDs to direct install in their homes.
- Community Outreach
  The Community Outreach program provides complimentary CFLs through the participation of community events and through collaborations with community organizations. The program complements the presence of TEP at community events and its overall education and outreach efforts and energy efficiency messaging.

b. Program Goals, Objectives, and Savings Targets

The Program objectives are to influence energy related behaviors including the following:

- Habitual behaviors
  - Adjust thermostat setting
  - Turn off unnecessary lights

- Small purchasing and maintenance behaviors
  - Purchase and install faucet aerators and low flow shower heads
  - Purchase and install compact fluorescent or LED light bulbs
  - HVAC maintenance
- Larger purchasing decisions
  - Purchase an ENERGY STAR® appliance
  - Purchase higher energy efficient heating and cooling equipment

The 2016 energy savings goal was 6,010 MWhs.

c. Levels of Participation

- 5,000 kits were distributed through direct canvassing.
- The K-12 Education Program conducted 263 classroom presentations and distributed 7,143 Energy Saving Kits.
- 1,665 Community Energy Saving Kits were distributed.
- 163,457 CFLs were distributed to TEP customers throughout a variety events within the service territory. Methods of delivery included Home Shows, community events, service organizations, and fairs.

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below.

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Behavioral Comprehensive	$433,529	$6,558	0	$177,892	$18,305	$550	$3,427	$640,261

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2.**

f. kW, kWh, and Therm Savings

Measure Category	No of Measures	kW savings	kWh savings
Lighting Outreach	163,457	449	4,613,529
Community Education	1,665	31	397,437
Direct Canvassing	4,803	26	271,127
K-12 Education	7,143	134	1,705,042
Totals	**177,068**	**641**	**6,987,135**

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms). 81,133 total therm savings were verified for this program.

g. **Environmental Benefits realized**
Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**
Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**
Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**
No problems were encountered during this reporting period.

k. **Program Modifications**
DIRECT CANVASSING
In 2015 several approaches that were taken to distribute the direct canvassing bags to customers were not continued in 2016. Although TEP did keep the door to door approach that was initially designed for the implementation, the Company also distributed direct canvassing bags through events geared towards homeowners. Going forward, TEP plans to continue to diversify the methods in which the direct canvassing bags are distributed to customers.

K-12 EDUCATION
Product purchases are placed in the prior calendar year and done via bulk orders in order to lower program costs and to ensure a timely delivery. In 2016 TEP implemented a new annual Teacher Recognition Award to show our appreciation for those educators who are exceptional participants.

COMMUNITY EDUCATION
Product purchases are placed in the prior calendar year and done via bulk orders in order to lower program costs and to ensure timely product delivery.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program or any measures in 2017. Per Commission Decision No. 75450 TEP has discontinued CFL measures and focused on equivalent LED measures.

4.16 Home Energy Reports

a. **Description**
The Home Energy Reports Program, approved by the Commission in Decision No. 75450, is designed to promote behaviors that conserve energy, such as turning off lights or appliances, adjusting thermostat setpoints, and performing regular equipment maintenance. The program encourages behavioral changes through targeted and comparative education and awareness of customer's energy consumption through regular energy consumption and tips on how a customer's behavior and light or appliance use modifies the customer's energy consumption.

b. **Program Goals, Objectives, and Savings Targets**
The Program objectives are to influence energy related behaviors by providing customers by i) providing regular energy consumption reports and tips on how to conserve energy, ii) engaging customers about their behavior and their installed products to enhance the accuracy of the energy reports, and iii) participants will receive an HER starter kit that includes behavior based

energy conservation tips and four LED light bulbs. Additionally, the program will encourage customers to take advantage of other DSM related programs, promote efficient home operations, and lower customer's energy bills.

The 2016 energy savings goal was 3,399 MWhs.

c. **Levels of Participation**

After the HER program was approved in February 2016 by the Commission in Decision 75450, TEP released an RFP to select an implementation contractor for the program. Due to a lengthy RFP process, an implementation contractor was not selected until late in 2016 with program implementation set for first quarter 2017.

d. **Costs Incurred**

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Home Energy Reports	0	0	0	0	0	0	$2,143	$2,143

e. **Evaluation and Monitoring Activities and Results**

There was no third-party MER activity during this reporting period. Associated MER costs listed above were incurred during the RFP process.

f. **kW, kWh, and Therm Savings**

There were no savings realized during this reporting period.

g. **Environmental Benefits realized**

There were no environmental benefits realized during this reporting period.

h. **Incremental benefits and net benefits**

There were no incremental benefits and net benefits realized during this reporting period.

i. **Performance-incentive calculations for the previous year**

There is no performance incentive for this program for this reporting period.

j. **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

k. **Program Modifications**

After a lengthy RFP review process an implementation contractor was selected to implement the program for both TEP and UNS Electric in 2017.

l. **Programs or Measures Terminated**

TEP does not plan to terminate this Program or any measures in 2017.

Support Sector

4.17 Consumer Education and Outreach Program

a. Description

The Consumer Education and Outreach Program is responsible for the marketing of the TEP portfolio as a whole, as well as general consumer education. The focuses of activities are as follows:

- Develop brochures and communications materials that showcase all available EE programs;
- Develop and maintain communication material related to general energy savings information;
- Provide labor and materials to staff trade shows and community events;
- Develop and maintain web content to educate consumers on energy use and TOU rate choices; and
- Provide cross communication of EE Programs and general energy savings information.

ACADEMIC SUPPORT THROUGH CONSUMER EDUCATION & OUTREACH

The ***Insulation Station*** (a program for 4th graders) was approved by the Commission in March 1993. The Insulation Station is a hands-on learning kit containing ready-to-assemble model houses and the necessary supplies to conduct science and math activities on insulation and home energy efficiency. Materials provided are model home kits and student workbooks containing charts, graphs, activities, and a home energy audit. TEP requires 4th grade teachers to attend a training session prior to receiving materials. Completing the exercises included will satisfy the current state standards for math and science.

The ***Electri-City Exhibit*** at the Tucson Children's Museum is designed to teach very young children (K-3) about saving energy, as well as electrical safety. TEP also underwrites tours for schools in low-income areas, provides age-appropriate materials to students, and trains docents to augment the presentation, which includes hands-on activities illustrating the energy saving lessons. The physical exhibit is continually upgraded and improved as TEP funding allows. In addition to a focus on energy conservation the exhibit includes information on renewable energy and electrical safety. The addition of a seasoned teacher as the Education Director at the Children's Museum has greatly enhanced the curriculum for tours, with pre- and post-information for follow-up. Further, TEP has provided new energy efficiency booklets for children to take home and share with their parents.

b. Program Goals, Objectives, and Savings Targets

The Program is designed to educate commercial and residential customers on ways to save energy through conservation measures, energy-efficiency measures, academic education, or utilizing Time-of-Use ("TOU") rates.

c. Levels of Participation

PowerShift™ TOU Customer Participation
7084 on Rate 80
565 on Rate 201B

ACADEMIC EDUCATION THROUGH CONSUMER EDUCATION & OUTREACH

The table below includes participation for 2016. TEP offers teacher trainings and distributes classroom materials.

Program	Number of Schools	Number of Students
Insulation Station[1]	7 schools/ 10 teachers trained	326
Energy Conservation/Environmental classroom materials	132 schools 798 teachers	39,972
Children's Museum Exhibit	10 schools	890
TOTAL	**149 schools 808 teachers**	**41,188**

1. Numbers refer to teachers trained and kits ordered for students. Lower than expected Insulation Station participation is due to confusion about/resistance to AZ's Common Core requirements. The more flexible schools with innovative teachers love the program and claim their students benefit from participation; while others find it challenging.
2. Student numbers are those from "low-income" Title 1 schools, for whom TEP paid the entrance fee and bus transportation costs for guided tours of the Electri-City Exhibit. They do not reflect total museum visitors to the site.
3. Children's Museum Tucson tours during summer months and are ordinarily small scout troops and summer programs (6-8 children) representing schools.

COMMUNITY EVENTS

TEP participated in 101 community events featuring information on energy conservation. Listed below are examples of events attended:

- Tucson Festival of Books
- Earth Day Festival
- Pima Council on Aging "Ages 'N Stages"
- SAHBA Home Show
- Downtown Second Saturdays
- University of Arizona Football Games
- Celebracion Independencia de Mexico Festival
- Sahuarita Pecan Festival
- Reid Park Zoo Tucson Family Festival
- JCC Wellness Festival
- Edible Shade Tree Event
- Oro Valley Music Festival
- Festival De Dar Gracias
- 4th Avenue Winter Street Fair
- 2016 TEP BrightEE Awards - Presented TEP BrightEE (pronounced "brighty") Awards to customers and contractors who used the company's cost-effective energy efficiency (EE) programs to achieve significant energy savings and environmental benefits. The TEP BrightEE Awards highlight the benefits of EE programs that have helped TEP customers save more than 842,000 megawatt-hours (MWh) — enough energy to power nearly 84,000 homes for a year.

d. **Costs Incurred**

Costs incurred during this reporting period are listed below.

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Consumer Education & Outreach Program	0	0	$325,222	$22,601	$196,788	$697	$491	$545,799

e. **Evaluation and Monitoring Activities and Results**

ALL EDUCATION & OUTREACH PROGRAMS

There were no claimed savings during this reporting period to evaluate and there is no third-party evaluation for this program.

f. **kW, kWh, and Therm Savings**

ALL EDUCATION & OUTREACH PROGRAMS

There are no claimed energy savings to report for this program.

g. **Environmental Benefits realized**

There are no realized environmental benefits for this program.

h. **Incremental benefits and net benefits**

There are no incremental benefits and net benefits for this program.

i. **Performance-incentive calculations for the previous year**

There are no performance-incentive calculations for this program.

j. **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

k. **Program Modifications**

The Insulation Station Program and the Energy Conservation/ Environmental classroom materials programs were discontinued in 2016.

In lieu of the Insulation Station Program TEP's DSM and Government Relations departments developed a "Safety and Basic EE Program" targeting 2nd and 3rd grade levels. This outreach effort includes distributing an educational kit with safety and EE information, 2 LEDs and an LED nightlight.

l. **Programs or Measures Terminated**

TEP does not plan to terminate this Program in 2017.

4.18 Energy Codes and Standards Enhancement Program

a. **Description**

The Energy Codes and Standards Enhancement Program is an existing program most recently approved by the Commission in Decision No. 75450. The Program maximizes energy savings

through promoting adherence to local building energy codes, the adoption of current nationally or internationally recognized building codes, and through enhanced energy efficient appliance standards. The program uses a variety of methods to i) improve levels of compliance with existing building energy codes and appliance standards; and ii) support adoption of newer energy codes and appliance standards as warranted by market conditions. Specific program activities target needs of local building officials. The program includes, but is not limited to, the following:

- Educating local code officials, building professionals, and contractors on current standards and development;
- Providing documentation of the specific local benefits of code enforcement and the promotion of newer energy code adoptions over time;
- Ensuring utility incentive programs align with local energy codes and appliance standards; and
- Collaborating with relevant stakeholders to build a more robust community while advancing the adoption and implementation of strong, effective building energy codes and appliance standards across the local jurisdictions within TEP's service territory.

b. Program Goals, Objectives, and Savings Targets

The program is designed to increase energy savings in the residential and commercial sectors by improving levels of building code compliance, supporting periodic energy code updates/adoptions as warranted by market conditions, and advocating for higher efficiency electric appliances.

The 2016 energy savings goal was 13,789 MWhs.

c. Levels of Participation

Program activities were selected based on previously effective approaches used in other jurisdictions, feedback from local code officials, and contacts with municipal leaders in locations that currently lack building codes. Program staff maintains a consistent level of activity and engagement with relevant stakeholders. Activities include: participation in energy code adoption committees, technical support (calculations, research, information) for code adoption committees, public testimony in support of code adoption before city councils, participation in organizations that promote increased appliance standards for EE (such as the Consortium for Energy Efficiency and National Energy Codes Conference), ensuring that ongoing DSM programs align with energy code requirements and appliance standards, and funding for local agencies to enforce and improve energy codes and appliance standards over time.

Outreach strategies include website promotion, direct outreach to local code officials and networks of municipal leaders who are members of committees conducting activities related to building code enhancement, and communications with other TEP EE program implementation staff.

d. **Costs Incurred**

Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
Energy Codes and Standards	0	$42,594	0	0	0	0	$33,940	$76,534

e. **Evaluation and Monitoring Activities and Results**

TEP staff attend, support and participate in meetings and organizations that encourage the understanding, adoption and enforcement of building codes, receive feedback from participants on staff interaction with the meeting attendees, and then review and evaluate the feedback.

f. **kW, kWh, and Therm Savings**

No. of Events	kW savings	kWh savings
15	2,790	13,788,868

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

i. **Performance-incentive calculations for the previous year**

There are no performance-incentive calculations for this program.

j. **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

k. **Program Modifications**

No modifications were made to this program during this reporting period.

l. **Programs or Measures Terminated**

TEP does not plan to terminate this Program or any measures in 2017. No measures were terminated during this reporting period.

Utility Improvement Sector

4.19 Commercial and Industrial Demand Response Program

a. **Description**

The C&I Demand Response program, marketed as the "TEP C&I DLC" program, is designed to manage peak demand and mitigate system emergencies through a C&I load curtailment program. The Program is delivered on a turn-key basis by an IC that negotiates load reduction

agreements with multiple customers and "aggregates" those customers to provide TEP a confirmed and guaranteed load reduction capacity available upon request. The Program will provide up to 40 MW of summer peak demand reduction, available for up to 80 hours per year, with a typical load control event lasting 3 to 4 hours.

b. **Program Goals, Objectives, and Savings Targets**

The primary goal of the Program is to provide up to 40 MW of summer peak demand reduction, available for up to 80 hours per year, in order to mitigate system emergencies.

The 2016 goal was 20,235 equivalent MWhs of load reduction.

c. **Levels of Participation**

The IC enrolled 80 participating customers and TEP's program managers enrolled 145 participating water utility pumping sites.

d. **Costs Incurred**[7]

Costs incurred during this reporting period are listed below.

DSM Program	Rebates and Incentives	Training and Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning and Admin	Measurement, Evaluation, and Research	Program Total Cost
C&I Direct Load Control Program	0	$3,908	$500	$410,773	$15,474	$237	$968	$431,860

e. **Evaluation and Monitoring Activities and Results**

NCI performed quarterly reconciliations for the program to verify coincident demand and energy savings. The NCI MER report is attached in **Appendix 2**.

f. **kW, kWh, and Therm Savings**

The Standard allows a credit for demand response and load management programs per AAC R14-2-2404 (C). Peak reduction capability may be converted to an annual energy savings equivalent based on an assumed 50 percent load factor. The credit shall not exceed 10 percent of the annual standard. The following table shows the allowable credit for this Program based on the available capacity reduction and the 10 percent cap.

Participants	Number of Events	MWh savings credit	Maximum MW Commitment
225	7	20,235	27.74

Savings are adjusted for line losses of 12.76 percent for both demand and energy savings (excluding therms).

g. **Environmental Benefits realized**

Realized environmental benefits are reflected in Table 5 above.

h. **Incremental benefits and net benefits**

Incremental benefits and net benefits are reflected in Table 4 above.

[7] Program implementation costs include $199,145 paid to participating customers

i. **Performance-incentive calculations for the previous year**
Performance-incentive calculations are reflected in Table 4 above.

j. **Problems Encountered and Proposed Solutions**
Program growth continued to be challenging in 2016. TEP continued a program variation to allow customers to choose between the Standard program offering and an Emergency program offering. Customers with back-up generation that did not qualify to participate in the Standard offering, due to NESHAP (National Emission Standards for Hazardous Pollutants) compliance can qualify to participate in the Emergency offering.

An event under the parameters of the Emergency offering can only be triggered in case of a NERC Energy Emergency Alert (EEA) Level 2 (as defined by the NERC Reliability Standard EOP-002-3) or as a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. Customers with non-NESHAP compliant generators are restricted to 15 hours of operation per year, so these customers receive a smaller incentive than customers participating in the Standard offering. The Emergency offering also requires participants to curtail load within 10 minutes, versus 30 minutes for the Standard offering. The result is more customer participation in the case of an EEA Level 2 event, at less cost per participant. TEP continues the Emergency Program offering introduced in September 2015.

k. **Program Modifications**
In order to expand the potential load reduction for emergency or reliability purposes TEP has partnered with municipal water utilities to initiate load control events on their pumping systems. Participating municipal water pumping customers have existing switching equipment and onsite back-up power generation. For these customers TEP has devised a delivery mechanism that uses TEP owned communications equipment to remotely control the customer's switching equipment via access to the customer's networked control system. The remote access delivery method is done at a lower cost than alternatives and increases the cost-effectiveness of the program.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program or any measures in 2017. No measures were terminated during this reporting period.

4.20 Conservation Voltage Reduction

a. **Description**
The Conservation Voltage Reduction ("CVR") program is an existing program most recently approved by the Commission in Decision No. 75450. The program achieves load reductions through changes in voltage regulation parameters at the substation/feeder level.[8] This change involves a physical adjustment in transformer settings governing voltage at the substation. By adjusting substation voltage, the program impacts energy flows and capacity, including demand coincident with the system peak period(s).

b. **Program Goals, Objectives, and Savings Targets**
Changes in voltage translate into demand and energy savings through the basic physical relationships governing power: Watts = Volts X Amps. For this program, reducing the voltage reduces demand and reduces consumption. The change in voltage targeted by this program is

[8] Schneider, et al. "Evaluation of Conservation Voltage Reduction (CVR) on a National Level." Pacific Northwest National Laboratory. July 2010

approximately 2 percent which will fall within the tolerance bandwidth required to ensure power quality and equipment performance by end-use customers. In most instances, customers will not notice, nor experience, any negative changes in equipment performance (e.g., air-conditioning, lighting and motor performance and use), resulting from the change in voltage.

The 2016 energy savings goal was 504 MWhs.

c. **Levels of Participation**
The yearlong pilot program was initiated by TEP Engineering in November 2014 and completed in November 2015. TEP continued to evaluate the results of the 2015 pilot in 2016, but did not perform any additional field studies.

d. **Costs Incurred**
Per Commission Decisions No. 74885 and No. 75450 expenses incurred by this program may not be recovered through the DSM surcharge.

e. **Evaluation and Monitoring Activities and Results**
There was no third-party MER activity for energy savings during this reporting period.

f. **kW, kWh, and Therm Savings**
There are no reported savings for this program during this reporting period.

g. **Environmental Benefits realized**
There are no reported environmental benefits for this program during this reporting period.

h. **Incremental benefits and net benefits**
There are no reported incremental or net benefits for this program during this reporting period.

i. **Performance-incentive calculations for the previous year**
There are no performance-incentive calculations for this program.

j. **Problems Encountered and Proposed Solutions**
There were no problems encountered during this reporting period.

k. **Program Modifications**
No modifications were made to this program during the reporting period.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program in 2017.

4.21 Generation Improvement and Facilities Upgrade

a. **Description**
The Facilities Upgrade Program would include installation of high efficiency motors and variable speed drives, along with projects to reduce a power plant's auxiliary power or increase capacity.

b. **Program Goals, Objectives, and Savings Targets**
There were no planned generation or facility upgrade projects during this reporting period.

c. **Levels of Participation**
No energy saving upgrades were installed during the reporting period.

d. **Costs Incurred**
Per Commission Decisions No. 74885 and No. 75450 expenses incurred by this program may not be recovered through the DSM surcharge.

e. **Evaluation and Monitoring Activities and Results**
There are no reported activities for this program during the reporting period.

f. **kW, kWh, and Therm Savings**
There are no reported savings for this program during this reporting period.

g. **Environmental Benefits realized**
There are no reported environmental benefits for this program during this reporting period.

h. **Incremental benefits and net benefits**
There are no reported incremental or net benefits for this program during this reporting period.

i. **Performance-incentive calculations for the previous year**
There are no performance-incentive calculations for this program.

j. **Problems Encountered and Proposed Solutions**
There were no problems encountered during this reporting period.

k. **Program Modifications**
No modifications were made to this program during the reporting period.

l. **Programs or Measures Terminated**
TEP does not plan to terminate this Program in 2017.

Appendix 1 – Commission Approved DSM Programs and Measures for 2016

DSM Program	Approved Measures
Residential Sector	
Appliance Recycling	Refrigerator Recycling
	Freezer Recycling
Efficient Products	Advanced Power Strips-Load Sensor
	Energy Star Central AC
	Energy Star CFL
	Energy Star Clothes Washer
	Energy Star Freezer
	Energy Star Refrigerator
	Energy Star Room AC
	Residential LED Light
	Variable Speed Pool Pumps
Existing Homes	Duct Test & Repair (DTR) Tier 1 & Tier 2
	Early Retirement HVAC Quality Install
	Early Retirement HVAC Quality Install DTR Tier 1 & Tier 2
	HVAC Quality Install
	HVAC Quality Install DTR Tier 1 & Tier 2
	Smart Thermostats
	Advanced Tune-up
	Western Cooling Control™
Low Income Weatherization	Low Income Weatherization
Multi-Family	Advanced Tune-up
	Aerator
	Duct Test & Repair Tier 1 & Tier 2
	ES Integral CFL
	Low Flow Showerheads-Electric WH
	Residential LED
	Smart Thermostat
	Western Cooling Control™
Residential New Construction	Energy Efficient New Homes
Shade Trees	Shade Trees
Non-ResidentialSector	
Bid for Efficiency	Bid for Efficiency
Combined Heat & Power ("CHP")	CHP Custom
C&I Comprehensive	15 SEER Packaged and Split AC's
	15 SEER Packaged and Split HPs

DSM Program	Approved Measures
	16 SEER Packaged and Split AC's
	16 SEER Packaged and Split HPs
	17 SEER Packaged and Split AC's
C&I Comprehensive	17 SEER Packaged and Split HPs
	18 SEER Packaged and Split AC's
	18 SEER Packaged and Split HPs
	Advanced Power Strips-Load Sensor
	Advanced Power Strips-Occupancy Sensors
	Advanced Power Strips-Timer Plug Strip
	Air-Cooled Chillers < 150 tons
	Air-Cooled Chillers >= 150 tons
	Anti-Sweat Heater Controls
	Beverage Controls ("Vending Miser")
	CO Sensors
	CO2 Sensors
	Computer Power Monitoring System
	Daylighting Controls
	Delamping
	Economizers
	EER Rated Packaged AC <5.4 Tons
	EER Rated Packaged AC >=20 Tons < 63.3 Tons
	EER Rated Packaged AC >=63.3 Tons
	EER Rated Packaged AC 11.25 - 20 tons
	EER Rated Packaged AC 5.4 - 11.25 tons
	EER Rated Packaged HP <5.4 Tons
	EER Rated Packaged HP >= 20 Tons
	EER Rated Packaged HP 11.25 - 20 tons
	EER Rated Packaged HP 5.4 - 11.25 tons
	Efficient Compressors
	Efficient Condenser
	EMS HVAC Delivery
	Energy Efficient Exit Sign
	Energy Efficient ODP Motors
	Energy Efficient TEFC Motors
	Evaporative Fan Controls
	Floating Head Pressure Controls
	Green Motor Rewind
	Hard Wired CFL
	Heat Pump Water Heaters
	HIDs to T8/T5-Exterior
	HIDs to T8/T5-Interior
	High Efficiency Evaporator Fan Motors (EC)

DSM Program	Approved Measures
	High Efficiency Evaporator Fan Motors (PSC)
	High Efficiency Reach-In Refrigerators and Freezers
C&I Comprehensive	Hotel Room HVAC Control
	HVAC System Test and Repair
	Induction Lighting
	Induction Lighting Outdoor
	Integral Screw In CFL
	LED Indoor Lights
	LED Outdoor Lighting
	LED Traffic Lights
	LED Tubes Indoor
	LED Tubes Outdoor
	Occupancy Sensors
	Outdoor CFL
	Premium T8 Lighting
	Programmable Thermostat
	PTAC
	PTHP
	Pulse Start Metal Halide Exterior
	Pulse Start Metal Halide Interior
	Reach-In Cooler Controls ("Vending Miser")
	Refrigerated Display Automatic Door Closers
	Refrigerated LED Strip Lighting
	Screw in Cold Cathode CFL
	Shade Screen
	Snack Controls ("Vending Miser")
	Strip Curtain
	Variable Refrigerant Flow
	Variable Speed Drives
	Water-Cooled Chillers-Centrifugal < 150 Tons
	Water-Cooled Chillers-Centrifugal > 300 Tons
	Water-Cooled Chillers-Centrifugal 150-300 Tons
	Water-Cooled Chillers-Reciprocating All Sizes
	Water-Cooled Chillers-Screw <150 Tons
	Water-Cooled Chillers-Screw > 300 Tons
	Water-Cooled Chillers-Screw 150-300 Tons
	Window Films
CNC	Commercial New Construction
Retro Commissioning	Retro Commissioning
Schools Energy Efficiency ("EE") Pilot	Schools Energy Efficiency

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DSM Program	Approved Measures
Small Business Direct Install and School Facilities	15 SEER Packaged and Split ACs
	15 SEER Packaged and Split HPs
	16 SEER Packaged and Split ACs
Small Business Direct Install and School Facilities	16 SEER Packaged and Split HPs
	Advanced Power Strips-Load Sensor
	Advanced Power Strips-Occupancy Sensors
	Advanced Power Strips-Timer Plug Strip
	Anti-Sweat Heater Controls
	Beverage Controls ("Vending Miser")
	Daylighting Controls
	Delamping
	Economizers
	EMS HVAC Delivery
	Energy Efficient Exit Signs
	Hard Wire CFL
	HIDs to T8/T5-Exterior
	HIDs to T8/T5-Interior
	High Efficiency Evaporator Fan Motors (ECM)
	High Efficiency Evaporator Fan Motors (PSC)
	High Efficiency SEER Packaged and Split HPs
	HVAC System Test and Repair
	Induction Lighting Indoor
	Induction Lighting Outdoor
	Integral Screw in CFL
	LED Indoor Lights
	LED Outdoor Lighting
	LED Tubes Replaceing Fluorescent Indoor
	LED Tubes Replacing fluorescent Outdoor
	Occupancy Sensors
	Outdoor CFL
	Premium T8 Lighting
	Programmable Thermostat
	PTAC
	PTHP
	Reach-In Cooler Controls ("Vending Miser")
	Refrigerated Display Auto Door Closers
	Shade Screen
	Snack Controls ("Vending Miser")
	Strip Curtain
	Variable Refrigerant Flow
	Variable Speed Drives

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DSM Program	Approved Measures
Behavioral Sector	
Behavioral Comprehensive	Lighting Outreach Promotion
	Community Education Kit
	Direct Canvassing Kit
	K-12 Education it
Home Energy Reports[a]	Home Energy Reports
Support Sector	
Consumer Education and Outreach	Education & Outreach
Energy Codes and Standards	Energy Codes and Standards
Utility Improvement Sector	
Conservation Voltage Reduction	Conservation Voltage Reduction (CVR)
Generation and Facilities Upgrades	Generation and Facilities Upgrades
C & I Demand Response	Demand Response/Direct Load Control

[a]This program was approved in 2016 but will not be fully implemented until 2017.

Appendix 2 – Navigant Consulting, Inc. 2016 Measurement, Evaluation, And Research Report

The Navigant Consulting, Inc. report is provided directly to Commission Staff.