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

March 3, 2014

ORIGINAL

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 Progress Report, Docket No. E- 00000U-14-0049

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. The Measurement, Evaluation and Research Report and the TEP Power Partners Project Report listed in Appendix 1 of the DSM Progress Report are being filed directly with Commission Staff. TEP hereby files its DSM Progress Report for 2013.

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

Sincerely,

Jessica Bryne
Regulatory Services

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

TUCSON ELECTRIC POWER COMPANY

ANNUAL DSM PROGRESS REPORT

January – December 2013

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Tucson Electric Power Company ("TEP" or "Company"), in accordance with Arizona Corporation Commission ("Commission") Decision No. 71819 (August 10, 2010), and Arizona Administrative Code R14-2-2409 (effective January 1, 2011), submits the following Demand-Side Management ("DSM") progress report. This report includes the following information for all DSM programs that were in place during this reporting period, including programs for residential, non-residential, and low-income customers:

- An analysis of the Company's progress toward meeting the annual energy efficiency standard;
- A list of Commission approved DSM programs and measures, organized by customer segment;
- A description of the findings from any research projects completed;
- A brief description of the programs;
- Program goals, objectives, and savings targets;
- Levels of customer participation in the programs;
- Costs incurred during the reporting period;
- Description of evaluation and monitoring activities and results;
- Savings realized in kW, kWh, and therms;
- Environmental benefits from the programs;
- Incremental and net benefits, in dollars, of the programs;
- Problems encountered and proposed solutions;
- Proposed program modifications; and
- Termination of programs or measures.

A summary list of tables includes:

Commission approved DSM programs and measures are attached in Appendix 2.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Table of Contents

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

DEFINITIONS

Rebates & Incentives – costs for customer rebates, incentives, and payments made to agencies for installation of low-income weatherization ("LIW") measures.

Training and Technical Assistance – costs for energy efficiency training and technical assistance; for either utility employees or contractors.

Consumer Education – costs to support general consumer education about energy efficiency improvements.

Program Implementation – costs associated with implementing programs, including implementation contractor ("IC") labor and overhead costs, as well as other direct program delivery costs.

Program Marketing – costs related to marketing programs and increasing DSM consumer awareness (direct program marketing costs as opposed to general consumer education).

Planning and Administration – costs to plan, develop, and administer programs including management of program budgets, oversight of the request for proposal ("RFP") process, oversight of ICs, program development, program coordination, and general overhead expenses.

Measurement, Evaluation, and Research ("MER") – identification of current baseline efficiency levels and the market potential of DSM measures; process evaluations; verification of installed energy efficient measures; tracking of savings; and identification of additional energy efficiency research.

Program Development, Analysis, and Reporting – costs to research and develop new DSM program opportunities, provide analysis of new programs and measures, and administer a database to track and report participation, savings, and benefits. These costs are essential to comply with reporting and rules requirements.

Performance Incentive – For January through June of 2013 TEP's performance incentive will be calculated as a share (%) of DSM net economic benefits, capped at either 10% of net benefits or 10% of expenditures, whichever is less. This performance incentive was approved in Commission Decision No. 70628 (December 1, 2008). For July through December TEP's performance incentive will be calculated as a share (8%) of net benefits but capped at $0.0125/kWh saved. This new performance incentive was approved in Commission Decision No. 73912 (June 27, 2013).

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Table 1

DSM PROGRAM EXPENSES: JANUARY - DECEMBER 2013

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential Programs								
Low-Income Weatherization	$224,631	$365	$1,865	$9,034	$5,579	$6,077	$17,813	$265,364
Residential New Construction	$192,300	$6,597	$9,824	$56,445	$712	$8,138	$36,085	$310,102
Shade Tree Program	$122,970	$130	$137	$10,078	$2,478	$3,410	$9,700	$148,903
ENERGY STAR® Lighting (CFL)	$1,871,577	$3,229	$21,077	$757,182	$150,399	$68,167	$84,069	$2,955,699
Existing Home Program	$431,974	$5,310	$69,280	$179,809	$48,986	$18,016	$27,566	$780,942
Residential & Small Business Direct Load Control	$401	$26	$0	$33,327	$6,136	$921	($593)	$40,219
Total for Residential Programs	**$2,843,854**	**$15,657**	**$102,183**	**$1,045,876**	**$214,290**	**$104,729**	**$174,641**	**$4,501,230**
Commercial Programs								
C&I Comprehensive	$3,857,989	$6,178	$0	$793,555	$1,838	$111,686	$98,034	$4,869,281
Small Business Direct Install	$492,123	$1,892	$567	$332,353	$8,882	$20,067	$20,384	$876,268
Commercial New Construction	$262,776	$227	$0	$72,828	$0	$7,916	$1,910	$345,657
C&I Demand Response - Direct Load Control	$0	$4,050	$0	$498,780	$0	$12,013	$9,726	$524,570
Total for Commercial Programs	**$4,612,888**	**$12,347**	**$567**	**$1,697,517**	**$10,720**	**$151,682**	**$130,054**	**$6,615,775**
Support Programs								
Home Energy Reports (Pilot)	$0	$342	$0	$291,708	$250	$6,984	$5,668	$304,952
Consumer Education & Outreach Program	$0	$293	$430,089	$6,285	$0	$10,242	$337	$447,248
Total for Support Programs	**$0**	**$636**	**$430,089**	**$297,993**	**$250**	**$17,226**	**$6,006**	**$752,200**
Portfolio Totals	**$7,456,742**	**$28,640**	**$532,839**	**$3,041,385**	**$225,261**	**$273,638**	**$310,701**	**$11,869,205**

Program Costs	$11,869,205
Program Development, Analysis, & Reporting	$227,646
TOTAL	$12,096,850

Table 2

DSM ENERGY SAVINGS: JANUARY – DECEMBER 2013[1]

Program	Capacity Savings MW	Annual MWh Savings	Annual Therm Savings	Lifetime MWh Savings	Lifetime Therm Savings
Low-Income Weatherization	0.01	231	3,906	4,036	68,355
Residential New Construction	2.51	3,619	86,207	108,569	2,586,197
Shade Tree Program	0.27	657	0	19,705	0
ENERGY STAR® Lighting (CFL)	3.12	77,160	0	540,118	0
Existing Home Program	0.84	1,199	0	20,135	0
Home Energy Reports (Pilot)	1.50	9,334	0	9,334	0
Consumer Education and Outreach	0.06	1,469	119,921	13,331	1,154,538
C&I Comprehensive	6.47	51,095	0	1,521,403	0
Small Business Direct Install	0.31	4,113	0	57,348	0
Commercial New Construction	1.52	3,127	0	42,182	0
C&I Direct Load Control	10.58	18,328	0	NA	NA
EE Building Codes	1.99	7,094	NA	NA	NA
Portfolio Totals	**29.18**	**177,425**	**210,034**	**2,336,163**	**3,809,090**

[1] Capacity savings for Commercial & Industrial 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 A.A.C. R14-2-2404 (E).

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Table 3

CUMULATIVE DSM SAVINGS: JANUARY – DECEMBER 2013[2]

Year	Retail Energy Sales (MWh)	Incremental Annual Energy Savings (MWh)	Cumulative Annual Energy Savings (MWh)	Cumulative Annual Savings as a % 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		177,425	422,619	4.56%	5.00%

[2] TEP was not able to meet the cumulative Standard for 2013 due to reasons beyond the Company's control. See the *Miscellaneous DSM Information* section for further information.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Table 4

DSM Societal Benefits & Performance Incentive: January – June 2013[3]

DSM Program	Program Cost	Societal Benefits	Societal Costs	Net Benefits
Residential				
Low-Income Weatherization	$141,050	$70,948	$65,585	$5,363
Residential New Construction	($108,757)	$0	$66,143	($66,143)
Shade Tree Program	$70,360	$241,401	$123,288	$118,113
ENERGY STAR® Lighting (CFL)	$837,958	$6,622,095	$833,637	$5,788,458
Existing Home Program	$127,058	$183,855	$194,644	($10,789)
Total for Residential	**$1,067,670**	**$7,118,298**	**$1,283,296**	**$5,835,002**
Non-Residential				
C&I Comprehensive	$1,022,000	$5,983,377	$2,473,819	$3,509,557
Small Business Direct Install	$308,792	$561,544	$300,048	$261,497
Commercial New Construction	$9,164	$0	$9,164	($9,164)
Total for Non-Residential	**$1,339,957**	**$6,544,921**	**$2,783,031**	**$3,761,890**
Support Programs				
Home Energy Reports (Pilot)	$260,842	$213,356	$260,842	($47,486)
Consumer Education & Outreach	$227,070	$303,296	$284,711	$18,585
Total for Support Programs	**$487,912**	**$516,652**	**$545,554**	**($28,902)**
Portfolio Totals	**$2,895,538**	**$14,179,872**	**$4,611,881**	**$9,567,991**
Program Development, Analysis & Reporting	$193,755	$0	$193,755	($193,755)
TOTAL	**$3,089,294**	**$14,179,872**	**$4,805,636**	**$9,374,235**

Performance Incentive Calculation:	
Total Spending (Jan-Jun)	$2,687,402
Total Net Benefits (Jan-Jun)	$9,350,288
10% Net Benefits	$935,029
10% of Spending	$268,740
Performance Incentive for 2013 (Jan-Jun)	$268,740

[3] Total spending and net benefits for the performance incentive calculation does not include Low-income Weatherization, Education & Outreach, or Demand Response/Direct Load Control Programs per Commission Decision No. 70628 (December 1, 2008). The performance incentive is capped at 10% of net benefits or 10% of total spending, whichever is less.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Table 5

DSM Societal Benefits & Performance Incentive: January – December 2013[4]

DSM Program	Societal Benefits	Societal Costs	Net Benefits
Residential			
Low-Income Weatherization	$221,047	$244,101	($23,054)
Residential New Construction	$8,617,676	$2,810,583	$5,807,093
Shade Tree Program	$1,128,425	$489,980	$638,445
ENERGY STAR® Lighting (CFL)	$24,659,115	$2,957,736	$21,701,379
Existing Home Program	$1,618,495	$1,057,296	$561,199
Total for Residential	**$36,244,757**	**$7,559,696**	**$28,685,061**
Non-Residential			
C&I Comprehensive	$62,430,233	$42,560,168	$19,870,064
Small Business Direct Install	$2,564,356	$1,118,153	$1,446,203
Commercial New Construction	$2,741,008	$1,754,096	$986,912
Total for Non-Residential	**$67,735,597**	**$45,432,418**	**$22,303,179**
Support Programs			
Home Energy Reports (Pilot)	$476,609	$304,952	$171,657
Consumer Education & Outreach	$692,405	$565,287	$127,118
Total for Support Programs	**$1,169,014**	**$870,240**	**$298,775**
Portfolio Totals	**$105,149,369**	**$53,862,354**	**$51,287,015**
Program Development, Analysis & Reporting	$0	$227,646	($227,646)
TOTAL	**$105,149,369**	**$54,090,000**	**$51,059,369**

Performance Incentive Calculation:	
Total kWh Savings (Jul-Dec)	135,252,095
Total Net Benefits (Jul-Dec)	$41,685,134
8% Net Benefits	$3,334,811
Total kWh savings * $0.0125	$1,690,651
Performance Incentive for 2013 (Jul-Dec)	$1,690,651

TEP's total performance incentive for calendar year 2013 is $1,959,391

[4] The performance incentive calculation shown is for kWh savings from July through December only. Total kWh savings include ½ of annual credit for Demand Response / Direct Load Control programs and ½ of annual credit for energy efficiency building codes, as allowed per A.A.C. R14-2-2404. The performance incentive is 8% of net benefits but capped at $0.0125/kWh saved as approved in Commission Decision No. 73912 (June 27, 2013).

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Table 6

DSM LIFETIME ENVIRONMENTAL SAVINGS: JANUARY – DECEMBER 2013

Program	Lifetime SO_X Reduction (lbs)	Lifetime NO_X Reduction (lbs)	Lifetime CO_2 Reduction (lbs)	Lifetime Water Reduction (gallons)
Low-Income Weatherization	8,691	10,487	8,535,690	1,856,783
Residential New Construction	233,772	282,063	238,407,035	49,941,957
Shade Tree Program	42,429	51,194	37,731,659	9,064,379
ENERGY STAR® Lighting (CFL)	1,162,983	1,403,228	1,034,224,211	248,454,487
Existing Home Program	43,355	52,311	38,555,237	9,262,229
Home Energy Reports (Pilot)	20,098	24,249	17,872,653	4,293,596
Consumer Education & Outreach	28,703	34,633	39,148,935	6,132,031
Non-Residential Existing Facilities	3,275,886	3,952,606	2,913,198,635	699,845,610
Small Business	123,483	148,991	109,811,283	26,380,262
Efficient Commercial Building Design	90,826	109,589	80,770,598	19,403,740
Portfolio Totals	**5,030,227**	**6,069,352**	**4,518,255,936**	**1,074,635,075**

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

LOW-INCOME WEATHERIZATION PROGRAM

Description

The TEP Low-Income Weatherization ("LIW") Program is designed to improve the energy efficiency of homes for customers whose income falls within the defined federal poverty guidelines. The steps taken in 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.

Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Increase the number of homes weatherized each year;
- Reduce average participating household utility bills by utilizing energy conservation measures as defined in the Weatherization Assistance Program rules; and
- Improve the quality of life for the customers by providing them with a safe and healthy home.

The 2013 goal was to weatherize 145 homes.

Levels of Participation

A total of 93 households received weatherization assistance during this reporting period.

Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates & Incentives [a]	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Low Income Weatherization	$224,631	$365	$1,865	$9,034	$5,579	$6,077	$17,813	$265,364

a. Includes $32,461 for health and safety related repairs and $21,015 for Weatherization Agencies administrative expenses.

Evaluation and Monitoring Activities and Results

The Governor's Office of Energy Policy ("GOEP"), with billing data from TEP and other Arizona gas and electric utilities, is analyzing and tracking energy use in weatherized homes statewide. As its database grows, a more accurate analysis of the impact of weatherization activities will emerge. TEP will report energy savings from weatherization activities based upon the most recent GOEP report. The GOEP does not report any kW demand savings. Their most recent report is attached in **Appendix 1**.

The January 2014 GOEP report is summarized below:

Utility Bill Analysis

- An analysis of 208 homes was completed on homes utilizing Arizona Public Service Company ("APS"), TEP, UNS Gas, Inc., UNS Electric, Inc., and Southwest Gas Corporation utility data. This analysis is ongoing, and new data will be updated to these values on a quarterly basis.
- Savings to Investment Ratios ("SIR") are provided for total investment from all funding spent (diagnostics, energy measures, health and safety measures) and for energy related measures only (diagnostics and energy measures).

- Present value is based on 17.5 years measure life, discount rate of 3% and a utility cost escalation rate of 3%.
- The combined SIR of all jobs reviewed to date for funds spent on diagnostics, energy measures and health and safety measures was 1.04. Health and saving represented 17% of expenditures.
- The combined SIR of all jobs reviewed to date for funds spent on energy measures and diagnostics was 1.26.
- The average saving per home reviewed was 2,265 kWh and 42 therms of natural gas (gas therms average includes all electric homes).

kW, kWh, and Therm Savings

The savings for this reporting period are listed below:

No. of Homes	kW savings	kWh savings	Therm savings
93	8	230,656	3,906

Savings are adjusted for line losses of 9.5% for both demand and energy (excluding therms).

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 2013 with all of the state's Weatherization agencies, Arizona Community Action Association ("ACAA") and the GOEP 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 GOEP continues to advise the agencies on best practices to maximize funds. A new President and CEO joining Tucson Urban League mid-year has provided much needed leadership and direction.

In 2013 TEP saw a significant increase in the average per home funding request. The local housing stock available for weatherization services is shifting towards homes with air conditioning instead of evaporative cooling, which provides greater opportunities for energy efficient measures to be implemented, but is also more costly to weatherize. TEP anticipates this trend will continue.

Program Modifications

There were no Program modifications during this reporting period.

Programs or Measures Terminated

No measures were terminated during this reporting period. TEP does not plan to terminate this Program or any Program measures in 2014.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

RESIDENTIAL NEW CONSTRUCTION

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; these will be 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.

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 the installation of high efficiency heating and cooling systems, envelope, lighting, and fixed appliances (Energy Star® products);
- 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 the benefits they receive from living in energy efficient homes.

Program goals for 2013:

No. of Homes Completed	600
Peak Demand Savings (MW)	0.79
Energy Savings (MWh)	970

Levels of Participation

In 2013 925 homes were completed.

Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential New Construction	$192,300	$6,597	$9,824	$56,445	$712	$8,138	$36,085	$310,102

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 99% for coincident demand savings, 100% for electrical energy savings, and 100% for therm savings. This report is attached in **Appendix 1**.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

kW, kWh, and Therm Savings

No. of Homes	kW savings	kWh savings	Therm savings
925	2,514	3,618,982	86,207

Savings are adjusted for line losses of 9.5% for both demand and energy (excluding therms).

Problems Encountered and Proposed Solutions

Jurisdictions in Pima County adopted the International Energy Conservation Code ("IECC") 2012 building code starting in 2013. IECC 2012 compliant homes achieve a Home Energy Rating System ("HERS") score of ~72. In response homes were required to achieve a HERS score equal to or less than 65 in order to qualify for the EHS Program incentive.

Program Modifications

Because of the adoption of IECC 2012, TEP's previous use of tiered incentive levels was no longer cost-effective or compliant with the increased energy code baseline. Therefore TEP discontinued the use of tiered levels and has structured the program to require new homes to achieve a HERS score of 65 or better in order to receive an incentive. This allows the program to remain cost-effective while continuing to achieve significant energy savings.

Programs or Measures Terminated

No measures were terminated during this reporting period. TEP does not plan to terminate this Program or any Program measures in 2014.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

SHADE TREE PROGRAM

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 through TEP's partnership with Tucson Clean and Beautiful ("TCB"). Residents are allowed two, 5-gallon trees per year (four trees are allotted to homes built before 1980), which must be planted on the south, west, or east side of the home. Residents complete an application provided by TCB either online or by mail which includes the type of tree requested and the location where it will be planted. The resident pays a nominal fee of $8.00 per tree, and the tree will be delivered to their home by TCB.

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 use trees. Along with the energy savings trees provide to the homes, trees also provide habitat for wildlife, absorb air and water pollutants, and control storm water runoff and soil erosion, in addition to the aesthetic beauty they provide to neighborhoods and the community.

Program goals for 2013:

No. Trees Planted	4,444
Energy Savings (MWh)	861

Levels of Participation

For this reporting period, TCB delivered a total of 3,389 trees as follows:

- 3,248 five-gallon trees were distributed to approximately 1,473 residential customers;
- 58 fifteen gallon trees and 3 five-gallon trees to fourteen schools; and
- 63 five-gallon trees and 17 fifteen-gallon trees were delivered to nine community projects.

Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Shade Tree Program	$122,970	$130	$137	$10,078	$2,478	$3,410	$9,700	$148,903

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 100% for coincident demand and energy savings. This report is attached in **Appendix 1**.

kW, kWh, and Therm Savings

No. of Trees	kW savings	kWh savings	Therm savings
3,389	274	656,839	0

Savings are adjusted for line losses of 9.5% for both demand and energy.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Problems Encountered and Proposed Solutions

TEP met its original goal for 2013, but increased its goal after the Commission approved additional funding in June. The Company expects to meet its annual goal based upon the increased Commission approved budget in 2014.

Program Modifications

TCB's 2013 budget for the purchase and delivery of trees was increased in July per Commission Decision No. 73912.

Programs or Measures Terminated

No measures were terminated during this reporting period. TEP does not plan to terminate this Program or any Program measures in 2014.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

ENERGY STAR® LIGHTING PROGRAM

Description

The TEP ENERGY STAR® Compact Fluorescent Lamp ("CFL") Buy-down Program promotes the installation of energy efficient ENERGY STAR® approved lighting products by residential and small commercial customers in the TEP service territory. TEP provides funds to manufacturers of ENERGY STAR® approved CFL products to reduce the cost of CFLs. TEP then partners with local retailers to pass on these savings to the consumer.

Program Goals, Objectives, and Savings Targets

The objectives of the program are to:

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

Program goals for 2013:

CFL sales	1,200,000
Peak Demand Savings (MW)	2,97
Energy Savings (MWh)	62,919

Levels of Participation

A total of 1,471,017 CFLs were sold during this reporting period.

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
ENERGY STAR® Lighting (CFL)	$1,871,577	$3,229	$21,077	$757,182	$150,399	$68,167	$84,069	$2,955,699

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 100% for coincident demand and energy savings. This report is attached in **Appendix 1**.

kW, kWh, and Therm Savings

No. of Lamps	kW savings	kWh savings	Therm savings
1,471,017	3,116	77,159,779	0

Savings are adjusted for line losses of 9.5% for both demand and energy.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

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

Program Modifications
There were no Program modifications during this reporting period.

Programs or Measures Terminated
No measures were terminated during this reporting period. TEP does not plan to terminate this Program or any Program measures in 2014.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

EXISTING HOMES RETROFIT AND RESIDENTIAL ENERGY ASSESSMENT PROGRAM

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 heating, ventilation and air conditioning ("HVAC") equipment; as well as home performance services such as sealing leaky duct work, installing insulation, air sealing, and other thermal envelope improvements in existing homes. The Program provides direct incentives to participating contractors with the requirement that the incentives be passed on to utility customers as a line item credit toward approved Program measures. To access incentives, TEP requires customers to utilize specific Program participating contractors who are required to be Building Performance Institute ("BPI") certified and complete Program administrative training including field mentoring.

The Residential Energy Assessment Program ("REAP") is an integral component of the Existing Homes Retrofit Program. The major components of the REAP include a home energy assessment (or "audit"); a general appliance assessment; installation of up to ten CFLs and one Advanced Power Strip per home. Education regarding behavioral changes, as well as other TEP efficiency programs, rate options, and contact information to assist with questions are provided during the assessment. The assessment will also provide the homeowner with information regarding possible energy savings by participating in the components of the Existing Homes Retrofit Program, as described above.

The Existing Home Retrofit Program was approved in Commission Decision No. 72028 (December 10, 2010), and the REAP was approved in Commission Decision No. 70263 (January 6, 2011). While contained in separate decisions, the programs are designed to complement each other and are administered and reported as a single program. This Program is marketed as the Efficient Home Program.

Program Goals, Objectives, and Savings Targets

The objectives of the Existing Homes Retrofit component of the Program are as follows:

- The proper sizing and quality installation of high efficiency HVAC equipment, sealing leaky ductwork, and installation of thermal envelope measures;
- Advance the building science skills of participating contractors leading to BPI certification; and
- Cultivate customer demand for and a contractor base to deliver comprehensive energy efficiency retrofits in alignment with the Home Performance with Energy Star model.

The objectives of the Energy Assessment component of the Program are as follows:

- Assess how much energy a home is using and what measures can be taken to improve efficiency;
- Install up to ten (10) CFL's and one energy saving power strip; and
- Educate homeowners about applicable TEP rebates and simple behavioral modifications to increase energy efficiency.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

The 2013 program goals were:

Retrofit Measure	Goal
HVAC Replacements	500
Duct Sealing	210
Air Sealing	160
Air Sealing and Attic Insulation	40
Solar Shade Screens/Window Film	180

Peak Demand Savings (MW)	1.28
Energy Savings (MWh)	1,513

Levels of Participation

Participation levels during this reporting period	
HVAC Replacements	360
Duct Sealing	17
Air Sealing	90
Solar Shade Screens/Window Film	60
Audits (participants in *Energizer Workshops*)	645

Participation during this reporting period was heavily impacted by the suspension of the program in March 2012 due to suspension of funding while the Implementation Plan docket was delayed and awaiting Commission approval. TEP re-started the program in March 2013 but contractors were reluctant to participate until the Commission formally restored funding in June of 2013.

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Existing Home Program	$431,974	$5,310	$69,280	$179,809	$48,986	$18,016	$27,566	$780,942

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 100% for coincident demand and energy savings. This report is attached in **Appendix 1.**

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

kW, kWh, and Therm Saving

Measure	Units	kW Savings	kWh Savings
Air Sealing	90	65	81,669
Duct Test & Repair	94	48	61,250
HVAC - Early Retirement	312	639	778,683
HVAC - Replace on Burnout	48	34	42,709
Shade Screens	60	49	64,978
Audit (participants in *Energizer Workshops*)	645	6	170,111
Totals	**1,249**	**841**	**1,199,400**

Savings are adjusted for line losses of 9.5% for both demand and energy.

Problems Encountered and Proposed Solutions

The Program was suspended in March 2012 when the available incentive funds were exhausted. When the program resumed operation in March 2013 many of the previously participating contractors were reluctant to fully participate. By mid-summer 2013 participation rates were well below the pace achieved prior to program suspension. Conversations with participating contractors made it clear that the prior suspension of incentives reduced contractor confidence that the Program was worth investing in as a business strategy. In addition, the complexity of the Program was daunting to many contractors.

Proposed solutions for the slow 2013 re-start of the Program are centered on reducing the complexity of the program, without sacrificing quality. In response, TEP will issue a Request for Proposal ("RFP") for Program implementation services for the 2014 calendar year. The RFP will focus on the quality installation of the core HVAC and duct sealing measures, administrative simplicity, and demonstrated success in operating an existing utility HVAC program. TEP plans to implement this less complex and more cost-effective version of the Program in the 2nd quarter of 2014.

Program Modifications

In-home Program audits by HVAC contractors were discontinued in 2013 due to low cost-effectiveness. To maximize cost-effectiveness, TEP has designed the new *Energizer Workshop*. Instead of visiting customers at their homes, TEP can more effectively deliver the educational component through a tutorial workshop attended by participants. Participants learn how to use an available web portal that delivers a similar home energy assessment as the in-home audit, and they receive information on other EE programs and rebates available from TEP. Participants also receive a direct install energy kit including six CFLs, and learn how to identify and complete simple do-it-yourself energy saving projects and make behavioral changes to save energy. This method of delivering the energy saving education and direct install measures (CFLs) to participants has lowered the program cost per participant from $100 to $52. TEP still collects the same verified energy savings that it would through in-home energy audits, but at a lower cost, thereby increasing the cost-effectiveness.

Programs or Measures Terminated

The in-home audit component of this program was discontinued in 2013 due to low cost-effectiveness.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

RESIDENTIAL AND SMALL BUSINESS DIRECT LOAD CONTROL PILOT PROGRAM

Description

The TEP Residential and Small Business Direct Load Control ("DLC") Pilot Program ("Pilot Program") was designed to determine if TEP can better manage peak demand and mitigate system emergencies through direct load control of residential and small commercial central air-conditioners ("AC"). The pilot program tested the use of two-way communication that sends load control signals to equipment at the home or business and also provides interval consumption data back to TEP Participants received either: 1) a thermostat that can be programmed manually and/or reset remotely via the internet; or 2) a load control device placed on their outdoor air conditioning unit. In exchange, customers permitted TEP to cycle AC units or raise thermostat temperature settings for a limited number of hours or events per year. The Pilot Program was completed in 2012 (see TEP's 2012 DSM Progress Report).

During 2012, an opportunity developed to leverage the investment already made in the Pilot Program by securing matching funding from a Smart Grid Data Access Grant administered by the U.S. Department of Energy ("DOE"). TEP partnered with the State of Arizona and Tendril to research the potential energy savings from customer interaction with a web portal relaying customer energy usage in near real time. The web portal provided similar information to an in-home energy display, but with greater capacity for customer interaction. The home area network and meter reading technology used for the Pilot Program was used for this research project and the existing Pilot Program participants were recruited to participate.

Program Goals, Objectives, and Savings Targets

The primary objective of the Pilot Program was to confirm the feasibility and effectiveness of DLC of residential and small commercial air conditioners. The goal of the joint project with the State of Arizona and Tendril was to research the energy savings potential available from customer interaction with a web portal relaying customer energy usage in near real time.

Levels of Participation

A total of 1,390 households participated in the Smart Grid Data Access research program, including 724 of the original DLC participants.

Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential & Small Business DLC	$401	$26	$0	$33,327	$6,136	$921	($593)	$40,219

Evaluation and Monitoring Activities and Results

Findings from the DOE funded research phase of the Pilot Program were documented in a report filed with DOE by the State of Arizona in collaboration with TEP, Tendril, Opinion Dynamics and Next Phase Energy. The report documents an average participant energy savings of 2.3% over the duration of the test period with participants self-reporting elevated engagement and efficiency measure installation activity. This report is attached in **Appendix 1.**

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

kW, kWh, and Therm Savings
Total energy savings were not quantified for the Pilot Program. However, savings derived from engagement through the web based energy portal were analyzed as a component of the DOE funded research.

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

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

Programs or Measures Terminated
All phases of the DLC pilot program and research project were completed in 2013. TEP does not plan to pursue any residential DLC program or any further research regarding two-way communication using home area networks in 2014.

CONSUMER EDUCATION AND OUTREACH PROGRAM

TEP currently offers educational programs for both residential and commercial customers. TEP also offers an Academic Education Program for use in scholastic settings.

RESIDENTIAL AND COMMERCIAL EDUCATION

Description

TEP's residential and commercial education program is designed to educate customers on energy use and assist them with energy savings suggestions. TEP markets existing customer and academic education programs using:

- Bill inserts and messages;
- Brochures;
- In-house advertising on tep.com;
- Tradeshows/Community events and premium giveaways; and
- Call Center training.

Program Goals, Objectives, and Savings Targets

The Program is designed to educate commercial and residential customers on ways to save energy through conservation measures or utilizing time of use ("TOU") rates.

Levels of Participation

PowerShift™ TOU Customer Participation
7,903 on Rate 80
676 on Rate 201AN

Other Residential TOU Customer Participation
150 on various frozen TOU rates

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

Program Modifications

In January 2012 the online Energy Advisor was discontinued. Due to the Program budget decrease approved by the Commission in Decision No. 73912, a less robust web portal providing customer energy assessment is being funded through the marketing budget of the Existing Homes Retrofit and Residential Energy Assessment Program as part of the strategy to replace in-home energy audits (see the Program Modifications section of the Existing Homes Retrofit and Residential Energy Assessment Program).

ACADEMIC EDUCATION

Description

TEP offers school education programs that cover a variety of topics related to energy, natural resource conservation, and environmental awareness. These programs are offered to students in kindergarten through 8th grade. TEP provides age-appropriate curriculum with accompanying teachers' guides about

electricity, energy efficiency, conservation and renewable energy. TEP's Academic Education Program features four programs of note, including: the Insulation Station (for use in 4th grade); Energy Patrol (for use in any elementary school); Bright Students: The Conservation Generation (for use in middle school); and the Electri-City Exhibit (for use in kindergarten through 3rd grade).

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 ***Energy Patrol*** is a GOEP-sponsored program for elementary school teachers and students approved by the Commission in March 1993. Students monitor classrooms to ensure that lights, computers, and water faucets are turned off when rooms are vacant. The program is designed to help schools reduce energy costs and to teach students and their families how to conserve energy.

Bright Students: The Conservation Generation 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. During the classroom presentations, TEP's energy conservation bike is used to help students compare the amount of energy needed to light incandescent, CFL, and LED bulbs. 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, LED nightlights, and refrigerator thermometers. The kit allows the students to gain practical experience, by installing the items with their parents, which correlates with the curriculum presented at school.

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.

Program Goals, Objectives, and Savings Targets

These programs are all designed to educate students and their families on ways to save energy and to provide hands-on experiences by encouraging students to test the energy saving options provided to them in their own home. The Bright Students program is the only one of these which has reportable savings.

Levels of Participation

The table below includes participation for 2013. TEP offers teacher trainings and distributes classroom materials.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Program	Number of Schools	Number of Students
Insulation Station[1]	**25 schools/** 52 teachers trained	1,514
Energy Patrol	**9 schools**	5,600 est.
Energy Conservation/ Environmental classroom materials	**95 schools/** 265 teachers	20,584
Energy Efficiency Exhibit (TEP's Electri-City at the Children's Museum Tucson)[2]	**47 schools** 456 Adults	1,786[3]
Bright Students: The Conservation Generation	**43 schools** 212 Presentations	5,301[4]
TOTAL	**219 schools**	**34,785**

1. Numbers refer to teachers trained and kits ordered for students.

2. Student numbers are those from "low-income" 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 are ordinarily small scout troops & summer programs (6-8 children) representing schools.

4. Represents the number of students who received take-home energy efficiency kits.

TEP participated in 84 community events featuring information on energy conservation. Listed below are examples of events attended:

- Tucson Festival of Books
- 19th Annual Earth Day Festival
- 2nd Annual Sustainability Fair
- U of A Wildcat Welcome
- SAHBA Home Show
- DMAFB Energy Day Event
- Oro Valley State of the Town Address
- Earth Day Celebration at the Tucson Job Corps
- Oro Valley Arbor Day Celebration
- Catalina State Park 30th Anniversary
- U of A Skin Cancer Institute "Living with the Sun" Fair
- Family Resource Fair

Program Modifications
There were no Program modifications during this reporting period.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

ALL EDUCATION & OUTREACH PROGRAMS

Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Consumer Education & Outreach	$0	$293	$430,089	$6,285	$0	$10,242	$337	$447,248

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of the take-home energy kits for 2013. The evaluation resulted in a realization rate of 100% for coincident demand, electrical energy savings, and therm savings. This report is attached in **Appendix 1**.

kW, kWh, and Therm Savings

Savings attributable to the take-home efficiency kits are as follows:

No. of Kits	kW savings	kWh savings	Therm savings
9,452	59	1,469,032	119,921

Savings are adjusted for line losses of 9.5% for both demand and energy.

Programs or Measures Terminated

No measures were terminated during this reporting period. TEP does not plan to terminate this Program or any Program measures in 2014.

HOME ENERGY REPORTS PILOT PROGRAM

Description

The TEP Home Energy Reports Pilot Program utilizes reports designed to inspire behavioral changes in customers' energy consumption. The Program works by: 1) making customers aware of their energy consumption; 2) allowing them to compare that usage to similarly situated homes; and 3) providing tailored energy savings tips in each report. The concept is simple: once customers are able to compare their usage to similarly situated homes, sociological instincts take over and customers are induced to use less energy.

Program Goals, Objectives, and Savings Targets

The Program is designed to affect: 1) habitual behaviors like turning off the lights or adjusting the thermostat; 2) purchasing behaviors such as buying efficient light bulbs and appliances; and 3) the behavior of participating in utility DSM programs by preparing reports that compare a customer's energy use to that of neighbors.

The major objectives from this Program are to:

- Generate significant savings for DSM portfolio objectives;
- Educate and empower customers to take advantage of other DSM programs;
- Develop a positive utility image;
- Promote efficient building operations; and
- Lower energy bills for consumers.

The energy savings goal for 2013:

Peak Demand Savings (MW)	7.43
Energy Savings (MWh)	29,461

Levels of Participation

On average, 36,169 TEP customers were enrolled in the Home Energy Reports Pilot Program during this reporting period.

Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Home Energy Reports (Pilot)	$0	$342	$0	$291,708	$250	$6,984	$5,668	$304,952

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 100% for energy savings. This report is attached in **Appendix 1**.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

kW, kWh, and Therm Savings

No. of Participants	kW savings	kWh savings	Therm savings
36,169	1,502	9,333,904	0

Savings are adjusted for line losses of 9.5% for both demand and energy.

Energy savings achieved in 2013 averaged 1.6% for customers also enrolled in 2012, and 1.1% for new customers enrolled in June 2013.

Problems Encountered and Proposed Solutions

TEP has received a number of complaints from enrollees in this program, generally concerning the report being delivered "unsolicited," on an opt-out basis, rather than an opt-in, as well as questioning the accuracy of the report.

Although cost-effective for TEP, it is not cost-effective for UNS Electric, and the program was not approved for UNS Gas customers. Because the program cannot utilize economies of scale, as well the customer complaints, TEP has decided not to renew the contract with the vendor of this program for 2014. TEP did negotiate an agreement with this vendor to maintain the web based home energy report and savings plan tools at a greatly reduced fee that will be funded as a component of the Existing Home Program marketing budget.

In 2014 TEP plans to issue a Request for Information ("RFI") for interested vendors to submit information on a single, cost-effective solution providing customer friendly home energy information in either paper or electronic format, or both. The intent is to increase the cost-effectiveness of the program, continue to deliver energy savings, and increase customer satisfaction. TEP may then issue an RFP to those vendors that submit information on services that meet TEP's criteria.

Program Modifications

There were no Program modifications during this reporting period.

Programs or Measures Terminated

No measures were terminated during this reporting period. TEP does not plan to terminate this Program in 2014, but plans to restructure the Program based upon results of the RFI.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

C&I Comprehensive Program

Description

The TEP C&I Comprehensive 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, motors and motor drives, compressed air, and refrigeration. Incentives are offered for measures in each of these categories. The Program also provides customers with the opportunity to propose innovative energy efficiency solutions through custom energy efficiency measures.

Program Goals, Objectives, and Savings Targets

The primary goal of the Program is to encourage TEP's large commercial 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, premium efficiency motors and motor controls, energy efficient compressed air and leak-repair measures, 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 savings goal for 2013:

Peak Demand Savings (MW)	7.43
Energy Savings (MWh)	29,461

Levels of Participation

191 businesses participated during this reporting period.

Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
C&I Comprehensive	$3,857,989	$6,178	$0	$793,555	$1,838	$111,686	$98,034	$4,869,281

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 107% for coincident demand savings and 105% for energy savings. This report is attached in **Appendix 1**.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings
Chillers	7	258	530,723
HVAC	68	71	238,429
Refrigeration	106	10	72,704
Motors	182	1,111	7,175,787
Lighting	41,190	609	5,968,505
Custom	200	4,409	37,108,533
Totals	**41,753**	**6,467**	**51,094,680**

Savings are adjusted for line losses of 9.5% for both demand and energy.

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

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

Programs or Measures Terminated
No measures were terminated during this reporting period. TEP does not plan to terminate this Program or any Program measures in 2014.

SMALL BUSINESS DIRECT INSTALL PROGRAM

Description

The TEP Small Business Direct Install 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 to improve efficiency.

The Program is an upstream market program providing incentives directly to contractors for the installation of selected high efficiency lighting, motors, HVAC, and refrigeration measures. The incentives are set at a higher level for this market in order to encourage contractors to market and deliver the Program, thus offsetting the need for TEP marketing and overhead expenses. In order to further reduce overhead expenses, the Program has employed internet-based measure analysis and customer proposal processing which has made the process easier for both contractors and customers.

The Program includes customer and trade ally education to help them with understanding the technologies being promoted, what incentives are offered, and how the Program functions.

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. More 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;
  - Hassle and transactions costs; 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 savings goal for 2013:

Peak Demand Savings (MW)	1.65
Energy Savings (MWh)	13,295

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Levels of Participation

100 businesses participated during this reporting period.

Costs Incurred

Costs incurred during the reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Small Business Direct Install	$492,123	$1,892	$567	$332,353	$8,882	$20,067	$20,384	$876,268

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 82% for coincident demand savings and 85% for energy savings. This report is attached in **Appendix 1**.

kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings
HVAC	511	8	1,059,516
Refrigeration	1,375	94	664,890
Lighting	4,958	182	2,110,262
Custom	2,273	25	277,979
Totals	**9,117**	**309**	**4,112,647**

Savings are adjusted for line losses of 9.5% for both demand and energy.

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

Program Modifications

No Program modifications were made during this reporting period.

Programs or Measures Terminated

No measures were terminated during this reporting period. TEP does not plan to terminate this Program or any Program measures in 2014.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

COMMERCIAL NEW CONSTRUCTION PROGRAM

Description

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

The Program is a performance-based program that includes design assistance for the design team, performance-based incentives for the building owner and developer, and energy design information resources. Design assistance involves efforts to integrate energy efficiency into a customer's design process as early as possible. The Program provides incentives to offset the additional design cost of alternative, energy-efficient designs.

In addition to the design incentives and performance-based incentives for the building owner/developer, this Program provides technical support services to the design community. The Program provides consumer education and promotional pieces designed to assist building owners/developers in understanding various energy efficiency options and encourage them to explore energy efficiency options.

Program Goals, Objectives, and Savings Targets

The primary goal of the Program is to encourage energy-efficient new building design for new, non-residential 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;
- Provide assistance to design teams to offset the additional cost and time of investigating more energy-efficient design;
- Overcome certain market barriers;
- 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 savings goal for 2013:

Peak Demand Savings (MW)	0.10
Energy Savings (MWh)	171

Levels of Participation

There were seven total participants during 2013. Seven buildings were completed, three also receiving a design assistance incentive during 2013, and one receiving a design assistance incentive in a prior year.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Costs Incurred

Costs incurred during the reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Commercial New Construction	$ 262,776	$ 227	$ -	$ 72,828	$ -	$ 7,916	$ 1,910	$ 345,657

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 100% for coincident demand and energy savings. This report is attached in **Appendix 1.**

kW, kWh, and Therm Savings

Measure	Participants	kW savings	kWh savings
Design Assistance	3	NA	NA
Building Performance	7	1,518	3,127,070
Totals	**10**	**1,518**	**3,127,070**

Savings are adjusted for line losses of 9.5% for both demand and energy.

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

Program Modifications

No Program modifications were made during this reporting period.

Programs or Measures Terminated

No measures were terminated during this reporting period. TEP does not plan to terminate this Program or any Program measures in 2014.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

COMMERCIAL AND INDUSTRIAL DIRECT LOAD CONTROL PROGRAM

Description

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 a third-party Implementation Contractor ("IC"), who 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 3-4 hours.

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.

Levels of Participation

48 participants were enrolled as of December 31, 2013, with a total commitment of 10.58 MW of load reduction under contract. Five load control events were initiated during this reporting period. The MW reduction per event as reported by the IC is:

Date of Event	Duration of Event	MW Reduction
4/29/2013	4 hours	4.95
5/13/2013	1 hour	2.98
6/19/2013	4 hours	10.49
8/12/2013	2 hours	4.71
8/16/2013	3 hours	2.23

It is important to note that event participation on August 16 was voluntary for the entire time period. Events that occurred on June 19 and August 12 contained partial voluntary time periods.

Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
C&I Demand Response - Direct Load Control	$0	$4,050	$0	$498,780	$0	$12,013	$9,726	$524,570

Program implementation expenses include participant incentives, however, the specific incentives provided to participants is confidential.

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation confirmed that TEP's calculation of the demand response energy credit allowed per the Standard is correct. The report is attached in **Appendix 1**.

kW, kWh, and Therm Savings

The Standard allows a credit for demand response and load management programs per A.A.C. R14-2-2404 (C). Peak reduction capability may be converted to an annual energy savings equivalent based on an assumed 50% load factor. The credit shall not exceed 10% of the annual standard. The following

table shows the allowable credit for this Program based on the available capacity reduction and the 10% cap.

Participants	Maximum MW Commitment	MWh savings credit
48	10.6	18,328

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

Program Modifications
There have been no Program modifications during this reporting period.

Programs or Measures Terminated
No measures were terminated during this reporting period. TEP does not plan to terminate this Program or any Program measures in 2014.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

MISCELLANEOUS DSM INFORMATION

The TEP 2011-2012 EE Plan was filed on January 31, 2011, in accordance with Section R14-2-2405 of the Arizona Administrative Code. In June 2013 Commission Decision No. 73912 approved an increased budget for TEP's existing DSM programs, but did not approve any of the new programs or EE measures contained in the 2011-2012 EE Plan, and Docket No. E01933A-11-0055 (the docket for the 2011-2012 EE Plan) was closed. The two and one-half year delay hindered TEP's ability to meet the Standard for 2013. Without Commission approval of new EE measures or programs in subsequent years it will be difficult for TEP to meet the Standard. As a consequence of the closing of Docket No. E01933A-11-0055 this DSM Progress report and all future reports will include the information required by the Standard and listed at the beginning of this report.

On June 1, 2013, TEP filed its 2014 EE Plan. As of December 31, 2013 this plan was still pending Commission approval.

TEP implemented a comprehensive tracking and reporting software solution for its EE Programs in 2013. The software solution will continue to be built out for 2014 programs, with the goal of full transition by the end of 2014. During 2014 a backup database of Excel files will be maintained.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

APPENDIX 1 – MEASUREMENT, EVALUATION, AND RESEARCH REPORTS

- GOEP Training, Monitoring, and Evaluation Report – January 2014
- Navigant Consulting - TEP PY2013 Year-end Measurement, Evaluation, and Research Report [5]
- TEP Power Partners Project Final Report (DOE Smart Grid Data Access Project) [5]

[5] These reports are being provided directly to Commission Staff.

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

APPENDIX 2 – COMMISSION APPROVED DSM PROGRAMS AND MEASURES FOR 2013

DSM Program	Approved Measures
Residential Programs	
Low-Income Weatherization	Whole House Low Income Weatherization
Residential New Construction	Energy Efficient New Homes
Shade Tree Program	Shade Trees
ENERGY STAR® Lighting (CFL)	Integral CFL
Existing Home Program	Air Sealing
	Air Sealing & Attic Insulation
	Duct Sealing (Performance)
	Duct Sealing (Prescriptive)
	Early Retirement HVAC with QI and Duct Sealing (Performance)
	Early Retirement HVAC with QI and Duct Sealing (Prescriptive)
	ROB HVAC with QI and Duct Sealing (Performance)
	ROB HVAC with QI and Duct Sealing (Prescriptive)
	Shade Screens
	Home Energy Audits
Residential & Small Comm. Direct Load Control	Direct Load Control
Commercial Programs	
Non-Residential Existing Facilities	Custom Measures
	14 SEER Packaged and Split AC's
	14 SEER Packaged and Split HP's
	15 SEER Packaged and Split AC's
	15 SEER Packaged and Split HP's
	16 SEER Packaged and Split AC's
	16 SEER Packaged and Split HP's
	17 SEER Packaged and Split AC's
	17 SEER Packaged and Split HP's
	18 SEER Packaged and Split AC's
	18 SEER Packaged and Split HP's
	Air Cooled Chillers < 150 tons
	Air Cooled Chillers > 150 tons
	EER Rated Packaged AC (> 20tons ,10.9 EER)
	EER Rated Packaged AC (11.5 - 20 tons ,11.24 EER)
	EER Rated Packaged AC (5.4 - 11.25 tons ,11.36 EER)

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

	EER Rated Packaged HP (> 20 tons ,11.11 EER)
	EER Rated Packaged HP (11.25 - 20 tons ,11.02 EER)
	EER Rated Packaged HP (5.4 - 11.25 tons ,11.31 EER)
	Programmable Thermostats
	Variable Speed Screw Compressor
	Water Cooled Chillers < 200 tons
	Water Cooled Chillers > 400 tons
	Water Cooled Chillers 201 - 400 tons
	Daylighting controls
	Delamping
	Energy efficient exit signs
	HIDs to T8/T5
	Integral Screw In CFL
	Occupancy sensors
	Screw in cold cathode CFL
	Standard T8 Lighting
	Energy efficient ODP motors
	Energy Efficient TEFC Motors
	Variable Speed Drives
	Anti-sweat heater controls
	High Efficiency Evaporator Fan Motors
	High Efficiency Ice Makers
	High Efficiency Reach-in Refrigerators and Freezers
	Strip Curtains and Night Covers
Small Business	Programmable Thermostats
	14 SEER Packaged and Split AC's
	14 SEER Packaged and Split HP's
	15 SEER Packaged and Split AC's
	15 SEER Packaged and Split HP's
	16 SEER Packaged and Split AC's
	16 SEER Packaged and Split HP's
	Daylighting controls
	Delamping
	Energy efficient exit signs
	Hard Wire CFL
	HIDs to T8/T5
	Integral Screw In CFL
	Occupancy sensors

Tucson Electric Power Company

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

	Screw in cold cathode CFL
	Standard T8 Lighting
	Variable Speed Drives
	Anti-sweat heater controls
	Strip Curtains and Night Covers
Efficient Commercial Building Design	New Commercial Construction
	Design Assistance
C & I Demand Response	Demand Response/Direct Load Control
Support Programs	
Home Energy Reports	Home Energy Reports

ARIZONA GOVERNOR'S OFFICE of ENERGY POLICY
TRAINING, MONITORING AND EVALUATION REPORT
FISCAL YEAR 2013 ANNUAL REPORT
January 2014
UNS ENERGY CORPORATION

Re: Governor's Office of Energy Policy Contract

Training and Monitoring for Weatherization

Southwest Building Science Training Center

The Southwest Building Science Training Center (Training Center), operated by the Foundation for Senior Living Home Improvement (FSL) and which was funded through the Governor's Office of Energy Policy (OEP) and local utilities during 2012, provides Arizona low-income weatherization technicians with the knowledge and skills needed to successfully perform diagnostics and repairs on Arizona's housing stock. As of January 2013 the training center is no longer being funded though OEP or local Utilities.

The Training Center has completed an expansion of the training center by developing a multistory training lab that will be used to provide real world hands on training to the new green workforce. Funding was committed utilizing American Recovery and Reinvestment Act of 2009 (ARRA) funds for the construction of an expanded diagnostic lab. The training center is also developing new curriculum that will better prepare the workforce. The curriculum will provide certifications for Installers, Crew Leaders and Auditors.

Training Center Courses
http://www.swbstc.org/trainings/

The Center, in partnership with the Building Performance Institute, Inc. (BPI), provides nationally recognized building science certifications to Arizona's weatherization agencies. All agencies have BPI Certified staff members or contractors that are BPI certified.

Details on BPI
http://www.bpi.org/

The Training Center continues to provide a Weatherization Assistance Program (WAP) boot camp. The Boot Camp is a five-day training that covers the basics of building science, pressure diagnostics, health and safety and residential energy auditing.

The Training Center also provides a Lead Renovator Repair and Painting certification class. On April 22, 2010 the new EPA Regulations went into effect regarding lead safe work practices. All contractors working on houses Pre-1978 are now required to be registered with the EPA as a lead renovator firm. Any contractors performing work on houses must now have at least one person on their crew that is "Lead Renovator" certified. This certification requires an eight-hour training which involves both a Power Point slide presentation and a "Hands On" section to teach lead safe practices when working on a home with a potential for Lead based paint. Certification requires the participant to pass both a written and field skills test.

The Training Center also has implemented an OSHA 30-hour and 10-hour certification course.

The OSHA 30-Hour Construction Industry Outreach Training course is a comprehensive safety program designed for anyone involved in the construction industry. Specifically devised for safety directors, foremen, and field supervisors, the program provides complete information on OSHA compliance issues. OSHA recommends Outreach Training Programs as an orientation to occupational safety and health for workers covered by OSHA 29 CFR 1926.

The OSHA 10-Hour Construction Industry Outreach Training Program is intended to provide an entry level construction worker's general awareness on recognizing and preventing hazards on a construction site. OSHA recommends Outreach Training Program courses as an orientation to occupational safety and health for workers covered by OSHA 29 CFR 1926.

The Training Center through a two-year grant has developed a course for quality control for the weatherization program. The course focuses on critical details of the work being performed and teaches the steps necessary to complete the work, correctly every time. The training material and detail sheets that are taught in the class are available online to the students once they have completed the course. This course will become a requirement for weatherization crews in fiscal year 2014.

Peer-to-Peer Fiscal and Technical Procedures

The Arizona WAP has formed peer-to-peer working groups that allow the fiscal and technical staff from the agencies and the OEP to meet and discuss issues that arise in the program. Agencies are able to share solutions to common problems and other information. These peer-to-peer meetings occur every two months and have been a great arena to discuss any changes or improvement to the program.

Agency Personnel Performance Reviews

A review and monitoring process to evaluate the competency of agency personnel performing the various requirements of the weatherization program was developed for the statewide weatherization assistance program. Based on this process, additional one-on-one training and technical assistance is provided on an as-needed basis.

Inspections

The Arizona WAP has implemented a monitoring program that focuses on determining areas that need improvement and utilizes the monitoring process to implement needed changes. The areas covered include: auditing, diagnostics, testing and measures completed and program operations. This process begins with the review of 100% of the technical reports for auditing, diagnostics, testing and work completed each month. These reports can highlight instances where opportunities were missed or program requirements were not followed. When there are concerns with some element of the report, a site visit is conducted to address the concerns. At the job site, the diagnostic, testing and work are reviewed to determine if any improvements can be made. A minimum of 20% of the job sites will be visited with visits taking place approximately twice a month. Based on the site visit results, follow-up training and technical assistance is provided to the local agency. For agencies where the technical reports do not show concerns, the site visit consists of monitoring a number of randomly selected

homes and reviewing the diagnostics, testing and work completed. These efforts, combined with the training and competence programs, have a goal of ensuring that the program is providing the clients with a high return on the utilities' investment, while maintaining or improving the customers' health and safety.

Utility Bill Analysis

This report includes an analysis of 208 homes utilizing APS, TEP, Unisource Gas and Electric, and Southwest Gas utility data. This analysis is ongoing, new data will be updated to these values on a quarterly basis.

Provided are Savings to Investment Ratios (SIR) for total investment from all funding spent (diagnostics, energy measures and health and safety measures) and for energy related measure only (diagnostics and energy measures).

Assumptions

Present value is based on 17.5 years measured life, discount rate of 3% and utility cost escalation rate of 3%.

Results Summary

The combined SIR of all jobs reviewed to date for funds (LIHEAP, DOE, Utilities, CDBG, URRD, SERC) spent on diagnostics, energy measures and health and safety measures was 1.04. Health and safety represented 17% of expenditures on the homes.

The combined SIR of all jobs reviewed to date for funds spent on energy measures and diagnostics was 1.26.

The average saving per home reviewed was 2265 kWh and 42 therms of natural gas (gas therms average includes all electric homes).