

**ORIGINAL**



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# ***Tucson Electric Power Company***

One South Church, Post Office Box 711  
Tucson, Arizona 85702

September 1, 2009

Mr. Steven Olea  
Director, Utilities Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

Re: Docket Nos. E-01933A-07-0402 and E-01933A-05-0650, Decision No. 70628

Mr. Olea,

Pursuant to Decision No. 70628 (December 1, 2008) and Section 9.6 of the Tucson Electric Power Company Proposed Rate Settlement Agreement, dated May 29, 2008, Tucson Electric Power Company ("TEP") is required to submit semi-annual Demand-Side Management ("DSM") program progress reports on March 1<sup>st</sup> and September 1<sup>st</sup> of each year in accordance with Commission Staff's recommendations. Enclosed please find TEP's Semi-Annual DSM Program Progress Report for the reporting period of January 1, 2009 through June 30, 2009. The marketing materials for the reported DSM programs are being filed directly with Commission Staff on the attached CD.

Also enclosed is an additional copy that the Company requests you date-stamp and return in the self-addressed, stamped envelope for our files.

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

Sincerely,

Jessica Bryne  
Regulatory Services

Enclosures: Report and CD

cc: Docket Control, ACC (w/o CD)  
Barbara Keene, ACC (with CD)  
Compliance, ACC (w/o CD)  
Shannon Kanlan, ACC (w/o CD)

Arizona Corporation Commission  
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# Tucson Electric Power Company

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## Semi-Annual Demand-Side Management Programs Progress Report

January through June 2009

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

This progress report includes the following information for all TEP Demand Side Management (“DSM”) programs in place from January through June 2009, including programs for residential, non-residential, and low-income customers:

- A brief description of the program;
- Program modifications;
- Program goals, objectives, and savings targets;
- Programs terminated;
- The levels of participation;
- A description of evaluation and monitoring activities and results;
- kW, kWh, and therm savings;
- Problems encountered and proposed solutions;
- Costs incurred during the reporting period disaggregated by type of cost, such as administrative costs, rebates, and monitoring;
- Findings from all research projects; and
- Other significant information.

A summary detailing DSM program expenses for January through June 2009 is provided in Table 1. Program savings benefits are provided in Table 2. Lifetime Environmental benefits are provided in Table 3. Program savings and costs since program inceptions are provided in Table 4.

# Tucson Electric Power Company

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD:  
January through June 2009

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# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

**Table 1**

### DSM PROGRAM EXPENSES: JANUARY - JUNE 2009

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Program Total Cost
<b>Residential Programs</b>							
Low-Income Weatherization	\$ 38,398	\$ 10,498	\$ -	\$ 5,874	\$ 503	\$ 6,747	\$ 62,020
Guarantee Homes	\$ 54,800	\$ 7,983	\$ 3,483	\$ 273,855	\$ 79,046	\$ 10,432	\$ 429,599
Shade Trees	\$ 80,970	\$ -	\$ 500	\$ 2,347	\$ -	\$ 6,592	\$ 90,408
ENERGY STAR® Lighting (CFL)	\$ 442,740	\$ 2,383	\$ 3,020	\$ 128,964	\$ 5,967	\$ 6,965	\$ 590,039
Efficient Home Cooling	\$ 127,250	\$ -	\$ 500	\$ 32,231	\$ 32,864	\$ 6,903	\$ 199,748
<b>Total for Residential Programs</b>	<b>\$ 744,158</b>	<b>\$ 20,864</b>	<b>\$ 7,503</b>	<b>\$ 443,270</b>	<b>\$ 118,379</b>	<b>\$ 37,640</b>	<b>\$ 1,371,814</b>
<b>Support Programs</b>							
Education & Outreach Programs	\$ -	\$ -	\$ 122,751	\$ 6,080	\$ -	\$ 6,592	\$ 135,423
<b>Total for Support Programs</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 122,751</b>	<b>\$ 6,080</b>	<b>\$ -</b>	<b>\$ 6,592</b>	<b>\$ 135,423</b>
<b>Commercial Programs</b>							
Non-Residential Existing Facilities	\$ 23,992	\$ 1,481	\$ -	\$ 86,051	\$ 860	\$ 7,053	\$ 119,438
Small Business	\$ 434,733	\$ 1,803	\$ 72	\$ 188,328	\$ 1,273	\$ 6,903	\$ 633,113
Efficient Commercial Building Design	\$ 10,000	\$ -	\$ -	\$ 36,819	\$ 108	\$ 6,592	\$ 53,519
<b>Total for Commercial Programs</b>	<b>\$ 468,725</b>	<b>\$ 3,285</b>	<b>\$ 72</b>	<b>\$ 311,199</b>	<b>\$ 2,241</b>	<b>\$ 20,548</b>	<b>\$ 806,070</b>
<b>Segment Totals</b>	<b>\$ 1,212,883</b>	<b>\$ 24,149</b>	<b>\$ 130,327</b>	<b>\$ 760,549</b>	<b>\$ 120,620</b>	<b>\$ 64,780</b>	<b>\$ 2,313,307</b>
<b>Program Costs</b>							<b>\$ 2,313,307</b>
<b>Measurement, Evaluation &amp; Research (MER)</b>							<b>\$ 202,183</b>
<b>TOTAL</b>							<b>\$ 2,515,490</b>

#### **Definitions**

**Rebates & Incentives** – Includes dollars that go toward customer rebates and incentives as well as payments made to agencies for installation of low-income weatherization measures.

**Training and Technical Assistance** – Includes all dollars that are used for energy efficiency training and technical assistance.

**Consumer Education** – Includes dollars that are used to support general consumer education about energy efficiency improvements.

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

**Program Marketing** – Includes all expenses 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 RFP process and implementation contractor, program development, program coordination, and general overhead expenses.

**Measurement, Evaluation, and Research (MER)** – These activities identify current baseline efficiency levels and the market potential of DSM measures, perform process evaluations, verify that energy efficient measures are installed, track savings, and identify additional energy efficiency research. Costs include the development of a database to track participation and savings.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

**Table 2**

### DSM SAVINGS BENEFITS: JANUARY – JUNE 2009

DSM Program	Capacity Savings kW	Lifetime MWh Savings	Lifetime Therm Savings	Program Cost (less incentives)	Societal Benefits	Societal Costs	Net Benefits*
<b>Residential</b>							
Low-Income Weatherization	0	122	38,000	\$ 23,622	\$ 62,020	\$ 62,020	\$ -
Guarantee Home Program	544	14,962	467	\$ 374,799	\$ 1,091,252	\$ 762,328	\$ 328,925
Shade Tree Program	0	10,503	0	\$ 9,438	\$ 801,998	\$ 102,899	\$ 699,099
ENERGY STAR® Lighting (CFL)	19,162	198,225	0	\$ 147,298	\$ 4,316,440	\$ 1,213,018	\$ 3,103,422
Efficient Home Cooling	236	8,255	0	\$ 72,498	\$ 468,097	\$ 300,916	\$ 167,181
<b>Total for Residential</b>	<b>19,942</b>	<b>232,068</b>	<b>38,467</b>	<b>\$ 627,656</b>	<b>\$ 6,739,808</b>	<b>\$ 2,441,181</b>	<b>\$ 4,298,627</b>
<b>Non-Residential</b>							
Non-Residential Existing Facilities	92	6,861	0	\$ 95,446	\$ 249,347	\$ 179,425	\$ 69,921
Small Business	790	54,005	0	\$ 198,380	\$ 2,658,881	\$ 889,316	\$ 1,769,565
Efficient Commercial Building Design	0	0	0	\$ 43,519	\$ -	\$ 43,519	\$ (43,519)
<b>Total for Non-Residential</b>	<b>881</b>	<b>60,866</b>	<b>0</b>	<b>\$ 337,345</b>	<b>\$ 2,908,228</b>	<b>\$ 1,112,260</b>	<b>\$ 1,795,968</b>
<b>Segment Totals</b>	<b>20,824</b>	<b>292,934</b>	<b>38,467</b>	<b>\$ 965,000</b>	<b>\$ 9,648,036</b>	<b>\$ 3,553,441</b>	<b>\$ 6,094,595</b>

*\*Consistent with ACC Staff's analysis in Decision No. 70456, the societal benefits for low-income weatherization are equal to or greater than the societal costs when taking the environmental benefits into account.*

**Table 3**

### DSM ENVIRONMENTAL SAVINGS: JANUARY – JUNE 2009

Program	Lifetime SO <sub>x</sub> Reduction (lbs)	Lifetime NO <sub>x</sub> Reduction (lbs)	Lifetime CO <sub>2</sub> Reduction (lbs)	Lifetime Water Reduction (gallons)
Low-Income Weatherization	292	484	681,420	61,000
Guarantee Home	35,760	59,400	28,583,512	7,481,151
Shade Tree Program	25,103	41,698	20,061,074	5,251,590
ENERGY STAR® Lighting (CFL)	473,759	786,955	378,610,685	99,112,745
Efficient Home Cooling	19,731	32,774	15,767,894	4,127,721
Non-Residential Existing Facilities	16,399	27,240	13,105,190	3,430,678
Small Business	129,071	214,398	103,148,878	27,002,324
Efficient Commercial Building Design	0	0	0	0
<b>Program Totals</b>	<b>700,113</b>	<b>1,162,950</b>	<b>559,958,653</b>	<b>146,467,209</b>

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

Table 4

### DSM SAVINGS & COSTS SINCE PROGRAM INCEPTION: JANUARY 1992 – JUNE 2009<sup>1</sup>

PROGRAM	Start Date	Program Participants/Units		Program Expenses		MW Savings		MWh Savings		Therm Savings		
		Jan - Jun	Program Inception to Date	Jan - Jun	Program Inception to Date	Jan - Jun	Total Annual <sup>a</sup>	Jan - Jun	Total Annual <sup>a</sup>	Jan - Jun	Total Annual <sup>a</sup>	
<b>Commercial</b>												
Lighting	1992	0	1,118	\$ -	\$ 5,619,523	0.00	7.09	0	31,177	1,111,684	N/A	N/A
Motors	1993	0	228	\$ -	\$ 168,275	0.00	0.05	0	417	12,252	N/A	N/A
HVAC	1994	0	625	\$ -	\$ 917,246	0.00	0.95	0	1,578	53,204	N/A	N/A
Energy Services	1995	0	11	\$ -	\$ 854,603	0.00	2.00	0	5,616	71,529	N/A	N/A
Non-Residential Existing Facilities	2008	5	6	\$ 119,438	\$ 221,519	0.09	0.11	1337	1,494	1531	N/A	N/A
Small Business	2008	61	61	\$ 633,113	\$ 724,222	0.79	0.79	3215	3,215	3,215	N/A	N/A
Efficient Commercial Building Design	2008	0	0	\$ 53,519	\$ 87,474	0.00	0.00	0	0	0	N/A	N/A
<b>Residential</b>												
Good Cents	1994	0	1,462	\$ -	\$ 2,511,042	0.00	1.57	0	2,287	26,751	N/A	N/A
Eff. Allowance	1993	0	2,917	\$ -	\$ 3,825,566	0.00	3.32	0	3,421	86,879	N/A	N/A
Guarantee Home Program	1999	441	10,023	\$ 429,599	\$ 16,123,666	0.54	21.92	831	25,377	153,599	492	1,111,064
Shade Tree Program*	1992	2,967	64,644	\$ 90,408	\$ 2,015,959	0.00	0.00	525	6,840	28,651	N/A	N/A
ENERGY STAR® Lighting (CFL)	2008	390,181	785,672	\$ 590,039	\$ 934,325	19.16	39.34	21,197	6,840	61,739	N/A	N/A
Efficient Home Cooling	2008	548	719	\$ 199,748	\$ 261,454	0.24	0.24	550	731	912	N/A	N/A
<b>*No energy savings reported prior to 2005</b>												
<b>Support Programs</b>												
Education & Outreach	1993	11,182	405,116	\$ 135,423	\$ 7,925,764	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Low-Income Weatherization**	1993	20	1,870	\$ 62,020	\$ 2,919,613	N/A	N/A	4	35	88	1900	39,092
<b>**No energy savings reported prior to 2007.</b>												
Measurement, Evaluation & Research (MER) - all programs	NA	NA	NA	\$ 202,183	\$ 539,961	NA	NA	NA	NA	NA	NA	NA
<b>TOTAL</b>		<b>405,405</b>	<b>1,274,472</b>	<b>\$ 2,313,307</b>	<b>\$ 45,110,161</b>	<b>20.82</b>	<b>77.39</b>	<b>27,660</b>	<b>86,968</b>	<b>1,592,034</b>	<b>2,392</b>	<b>1,126,721</b>
												<b>5,315,799</b>

a. Accumulated savings for one year for all energy efficiency measures installed since program inception.

b. Accumulated savings for all years for all energy efficiency measures installed since program inception.

<sup>1</sup> Historical DSM Program annual savings will decrease as the measure lifetimes expire. Programs with fully expired lifetimes will no longer be reported. Historical programs include Lighting, Motors, HVAC, and Energy Services for commercial participants, and Good Cents and Eff. Allowance for residential participants.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### TEP LOW-INCOME WEATHERIZATION PROGRAM

#### Description

The Tucson Electric Power Company ("TEP") Low-Income Weatherization Program is designed to improve the energy efficiency of homes for customers whose income falls within the defined federal poverty guidelines. Steps taken in this program will reduce gas and electric bills for eligible customers, improve comfort, and improve their quality of life. Energy savings realized from this program will allow low-income customers to utilize the limited income they receive for other necessary items such as rent, food, or medical expenses.

#### Program Modifications

There have been no program modifications since TEP's last reporting period.

#### Program Goals, Objectives, and Savings Targets

The objectives of the program are to:

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

#### Levels of Participation

A total of 20 households received weatherization assistance during this reporting period.

#### Evaluation and Monitoring Activities and Results

No evaluation or monitoring is available for this reporting period. At this time, the Arizona Energy Office ("AEO") does not have sufficient historical energy usage on TEP customers participating in the Program. AEO requires a minimum of two years billing data with a preference of four years data for each customer. The AEO is currently receiving billing data from TEP for the homes weatherized and is working on evaluation for future reports.

#### kW, kWh, and Therm Savings

The *estimated* savings for this reporting period are listed below:<sup>2</sup>

No. of Homes	kW savings	kWh savings	Therm savings
20	0.0	4,200	1,900

#### Problems Encountered and Proposed Solutions

Pima County Community Services ("PCCS") and Tucson Urban League ("TUL") have been ramping up their workforce in anticipation of receiving stimulus funds, but not at the same pace as other agencies in Arizona. In addition, TUL is still struggling with internal policy and personnel issues. Their CEO has resigned and they are searching for a replacement. The weatherization director has also been ill and has been absent for extended time periods. These issues have hindered their efforts in ramping up staff and work crews, and in increasing the number of homes weatherized.

<sup>2</sup> Savings are estimated for TEP customers by using the Savings to Investment Ratio provided in the July 2009 AEO report. Once sufficient local records are available the AEO will provide analysis on actual energy savings for TEP customers. The AEO estimates little to no kW savings for TEP Low-Income Weatherization participants.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

The AEO now has a representative dedicated to working directly with TUL to assist in whatever areas are needed, and to assess their ability to remain a weatherization agency. TEP has offered the AEO whatever assistance they may need from us, but the AEO is ultimately the primary decision maker regarding TUL's future.

### Costs Incurred

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

DSM Program	Rebates & Incentives*	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Program Total Cost
Low-Income Weatherization	\$ 38,398	\$ 10,498	\$ -	\$ 5,874	\$ 503	\$ 6,747	\$ 62,020

\*Includes \$8,226 for health and safety related repairs

### Findings from All Research Projects

No research projects were performed during this reporting period.

### Other Significant Information

TEP increased funding by 3% for all agencies in 2009. Arizona was one of the first states to apply for and receive stimulus funds and those funds are now being distributed to all state agencies. While the Tucson based agencies have ramped up their workforce, TEP has not seen the same type of proportionate increase in workforce as in the agencies serving UNS Gas, Inc. and UNS Electric, Inc. territories. This is partly due to the internal policies of these two agencies. PCCS uses an RFP system requiring several layers of review and approvals to add other outside contractors or to change agreements with existing contractors. TUL prefers to hire and train internal employees to increase the number of weatherization crews. These policies delay the hiring of additional crews. Both TEP and the AEO have expressed their desire for PCCS and TUL to speed up their processes of hiring and training in order to fully utilize additional funds from TEP and the State of Arizona.

With the AEO's guidance, TUL is moving towards a hybrid operation – utilizing outside contractors along with their internal crews for weatherization. They have recently contracted with Tofel Construction to provide weatherization services. Habitat for Humanity has also approached TUL to offer their assistance. TEP and the AEO strongly favor these partnerships and are encouraging TUL to continue soliciting partners. The AEO is also working with TUL to update their internal processes to become more efficient in meeting the demand of potential weatherization clients and fully utilizing the new TEP and State of Arizona funding. TUL has been informed by the AEO that they are in jeopardy of losing their weatherization funding unless substantive internal changes are made.

Based on the number of homes weatherized during this reporting period, the size of TUL's budget and the internal policy and personnel issues, TEP does not believe TUL will spend their 2009 annual budget allocation. PCCS has a smaller budget and it is possible they may come closer to spending their 2009 allocation than TUL. TEP and the AEO are encouraging PCCS to increase their efforts to weatherize more homes than in previous years and to maximize utilization of their funding.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### TEP GUARANTEE HOME PROGRAM

#### Description

The Residential New Construction Program for TEP is marketed under the name Guarantee Home Program. It is a utility sponsored, energy efficient new home construction program based on a foundation of integrated building science. The Guarantee Home Program emphasizes the whole-house approach to improving health, safety, comfort, durability, and energy efficiency. The Program includes on-site inspections and field testing of homes to verify that homes actually perform the way they were designed. Program standards are designed to focus solely on best case practice. Components of the Guarantee Home Program include development of energy efficient construction standards, branding, builder training curriculum, and marketing collateral.

#### Program Modifications

There have been no program modifications during this reporting period.

#### Program Goals, Objectives, and Savings Targets

The objectives of the program are to:

- Reduce peak demand and overall energy consumption in new homes;
- Increase new home energy efficiency standards to Guarantee Home Program standards in a minimum of 50% of new homes constructed in the TEP service territory;
- Retain existing builder participation and encourage the participation of new builders;
- Stimulate construction of new homes that are inspected and tested to assure energy performance;
- Assist builder sales agents with promoting and selling energy efficient homes;
- Train builder construction staff and subcontractors in advanced building science concepts to increase energy efficiency 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.

#### Levels of Participation

A total of 441 homes were completed to Guarantee Home Program standards during this reporting period. In addition, builders signed contracts committing an additional 1,530 homes to the Program.

#### Evaluation and Monitoring Activities and Results

All Guarantee Home Program homes are inspected and tested to ensure standards are met. Billing data is monitored at each home's anniversary of completion. Customers are contacted when necessary to ensure their homes are performing as designed.

#### kW, kWh, and Therm Savings

No. of Homes	kW savings	kWh savings	Therm savings
441	544	831,239	492

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### Problems Encountered and Proposed Solutions

The Pima County housing market has continued to be very depressed during the first half of 2009. The number of housing permits in Tucson during 2008 was only 3,019. Forecasts have predicted 2,000 new homes will be permitted in Pima County during 2009. For the first half of the year, there have been only 947 permits issued. This reduces the number of homes available to be built to increased energy efficiency standards.

TEP should significantly increase the market share of energy efficient homes in Tucson's new housing market. New homes compete against foreclosures in the Tucson marketplace. TEP seeks to market energy efficiency to builders as a logical strategy to distinguish new construction. The remaining builders face increasing market pressure to keep their homes competitive.

### Costs Incurred

Costs incurred for the program during the reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Program Total Cost
Guarantee Home	\$ 54,800	\$ 7,983	\$ 3,483	\$ 273,855	\$ 79,046	\$ 10,432	\$ 429,599

### Findings from All Research Projects

There were no research projects during this time period.

### Other Significant Information

The Guarantee Home Program markets through a variety of channels including:

- Media outlets (TV, radio, print ads);
- The real estate community with emphasis on builder sales associates;
- The trades community (including HVAC, framing and insulation contractors, among others);
- Consumers and potential new home buyers (increasing consumer demand for energy efficient housing);
- Code officials;
- City housing groups; and
- Guarantee Home Program web page.

A list of marketing materials is shown in Appendix 2. Please see the attached CD for copies of the marketing materials used for this program.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### **TEP EDUCATION AND OUTREACH PROGRAMS**

TEP currently offers education programs targeting both commercial and residential customers. TEP also offers an Academic Education Program.

### **RESIDENTIAL AND COMMERCIAL EDUCATION**

#### **Description**

The TEP residential and commercial education programs are designed to educate customers on energy use and assist them with energy savings suggestions. TEP's primary tool for Energy Savings suggestions is the online Energy Advisor which provides the customer with more than 140 energy savings recommendations or measures and can be personalized for weather and utility rates based on the customer's zip code. TEP promotes the Energy Advisor online audit through a variety of advertising promotions such as bill inserts, web advertising, and radio advertising. Also included in the Education and Outreach Program is educational information on TEP's PowerShift™ Time-of-Use ("TOU") rates.

#### **Program Modifications**

There have been no program modifications during this reporting period. TEP continues to market existing Customer and Academic Education programs which include the Energy Advisor and TOU awareness using the venues listed below:

- Bill inserts and messages;
- Brochures;
- Paid web advertising;
- In-house advertising on tep.com;
- Media Q&A, newspaper and radio ads;
- 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 TOU rates.

#### **Levels of Participation**

##### **Energy Advisor**

For this reporting period, 5,618 residential customers and 492 commercial customers accessed the online Energy Advisor, with 3,826 residential customers and 70 commercial customers completing an online energy audit. These are increases of 95% for residential customers accessing the Energy Advisor, and 201% completing an online audit compared to the same time period in 2008. Commercial customers accessing the Energy Advisor increased 46% and the number of commercial customers completing an online audit also increased by 46%. This implies that commercial customers continue to become more aware of the availability of the commercial Energy Advisor and are also using the tool to receive energy savings information for their businesses. In 2009, TEP plans to survey commercial customers that accessed the Energy Advisor during 2008 to better understand what is necessary to increase the number of commercial customers completing an online energy audit.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### Residential TOU Participation

2,654 on Rate 21 (frozen)  
5,265 on Rate 70 (frozen)  
638 on Rate 201B (frozen)  
213 on Rate 201C (frozen)

### PowerShift TOU Participation (Effective 12-1-2008)

32 on Rate 70NB  
135 on Rate 70NC  
76 on Rate 70ND  
12 on Rate 201BN  
1 on Rate 201CN

### **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

### 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 currently targeted to students in grades K-8. In addition to making available age-appropriate class sets of booklets (with teachers' guides) about electricity, energy efficiency, and conservation to schools, TEP's Academic Education Program features three programs: the *Insulation Station*, *Energy Patrol*, and *Electri-City Exhibit*.

The *Insulation Station* (a program for 4<sup>th</sup> 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 4<sup>th</sup> grade teachers to attend a training session prior to receiving materials.

The *Energy Patrol* is an AEO-sponsored program for elementary school teachers and students approved by the ACC 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.

The *Electri-City Exhibit* at the Tucson Children's Museum is designed to teach very young children (K-3) about saving energy. 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.

#### **Program Modifications**

There have been no program modifications during this reporting period.

#### **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, putting to test the options for saving energy.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### Levels of Participation

The table below includes participation for this reporting period. It's important to keep in mind that teacher trainings for the Insulation Station, orders for classroom materials and creation of Energy Patrols occur primarily in the fall semester of the school year, when the offerings are received. It is difficult to ascertain when teachers actually use the materials or teach the units associated with the materials provided. Figures below for the Insulation Station don't necessarily reflect the actual classroom activity in the spring semester, but rather only the new schools requesting training and materials. However, in May, 17 Insulation Station teachers sent in packets containing the pre and post tests that their classes took, to indicate "lessons learned" and an indication of a completed project.

<i>Program</i>	<i>Number of Schools</i>	<i>Number of Students</i>
Insulation Station*	<b>3 schools/ 9 teachers trained</b>	631
Energy Patrol	<b>2 new schools</b>	1,200 est.
Energy Conservation/ Environmental classroom materials	<b>11 schools/ 21 teachers</b>	2,760
Energy Efficiency Exhibit (TEP's Electri-City at the Museum)**	<b>14 schools 148 Adults</b>	481
<b>TOTAL</b>	<b>30</b>	<b>5,072</b>

\*Numbers refer to teachers trained and kits ordered for students.

\*\*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.

In addition to the school activities listed above, TEP was able to offer a new program to middle schools by adding a hands-on curriculum focusing on energy efficiency, using the Energy Bike as a "vehicle" to illustrate the concepts. Trained presenters visited 23 schools to reach 1,861 students: 1,245 6<sup>th</sup> graders; 269 7<sup>th</sup> graders; and 182 8<sup>th</sup> graders; as well as 165 "others", including high school students and one class at the UA focusing on potential science teachers. At the end of each session, students filled out pledge cards indicating at least three items they committed to do at home to help save energy, and each student was given a refrigerator magnet listing *10 Ways to Save Energy* to share with his/her family.

The Energy Bike team also made community presentations, including the two-day Sustainability Expo, the two-day Festival of Books at the University of Arizona campus, Solar Rock, the Southern Arizona Home Builders Association ("SAHBA") Home Show (2 days), the City of Tucson's Earth Day, the Biosphere 2 Earth Day and the Pima Community College (NW Campus location) Earth Day. Plans are in store to upgrade the energy efficiency presentation for adult audiences for periodic events at various local libraries this fall. Energy Efficiency 101 would augment the basic presentation by featuring a specific TEP DSM program in depth.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### ALL EDUCATION & OUTREACH PROGRAMS

#### **Evaluation and Monitoring Activities and Results**

No evaluation or monitoring is available for this reporting period. In 2009 TEP plans to survey its customers to determine how well the marketing campaigns are educating customers on:

- The existence and availability of DSM programs;
- Influencing their behavior regarding energy use;
- Purchasing energy efficient appliances;
- Utilizing TOU rate strategies; and
- Availability and ease of use for the online Energy Advisor (*see Other Significant Information*).

#### **kW, kWh, and Therm Savings**

There are no kW or kWh savings associated with these programs.

#### **Costs Incurred**

Costs incurred for the Education and Outreach Program during the reporting period are listed below:

DSM Program	Academic Education	Consumer Education	Time of Use Education	Program Implementation	Program Marketing	Planning & Admin	Program Total Cost
Education & Outreach	\$ 35,641	\$ 85,999	\$ 1,112	\$ 6,080	\$ -	\$ 6,592	\$ 135,423

#### **Findings from All Research Projects**

No research projects were performed during this reporting period.

#### **Other Significant Information**

On June 25, 2009, 1,355 TEP residential customers received an email requesting they complete a survey regarding their experience with the Energy Advisor tool. Customers had until July 10, 2009 to complete the survey and receive a Starbucks gift card. TEP received completed surveys from 159 customers – which is an 11.7% response. Results from that survey are noted below.

- The TEP website provided the best “advertising” for the Energy Advisor according to 69% of survey respondents compared to 17% through traditional media (TV, print and radio) and 14% through other means.
- Nearly two-thirds of respondents rated the Energy Advisor easy to locate and over one-third rated it extremely easy to find, while only 1% had difficulty finding it on the Home Page.
- 75% of respondents found the site very easy to use while the remaining 25% agreed that it was somewhat easy. No respondent had difficulty using the Energy Advisor.
- 88% of respondents spent less than 30 minutes completing the audit and 45% of those finished it in 15 minutes or less. Only 12% took longer than 30 minutes to finish the audit.
- 97% indicated the audit was helpful with 53% indicating it was either “very helpful” or “extremely helpful.” Only 3% of respondents noted the audit wasn’t helpful.
- 77% of respondents indicated they had implemented 1 or more energy saving suggestions, and 33% implemented 3 or more.

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- 72% are planning to make energy savings changes in the future and of those, nearly one-third plan to implement three or more of the suggestions provided.
- Finally, 81% of respondents indicated they definitely would recommend the Energy Advisor to others; 16% indicated “maybe.” Only 3% of respondents indicated they would not recommend the Energy Advisor to others.

New this reporting period was the addition of a special TOU tile on our website home page for customers to view the on-peak/off-peak hours for their specific TOU rate. This special tile was on the website from March 2, 2009 through May 31, 2009. It is scheduled to return to the website home page on September 1, 2009, so customers can review the new winter hours. TEP also added a PowerShift™ Plan Analyzer for customers interested in participating in TOU rate plans. By answering four quick questions, customers are given a suggested PowerShift™ rate that may fit their lifestyle.

Other new website additions are the Appliance Usage Guide and Energy Phantom Calculator. The Appliance Usage Guide provides a list of many common household appliances showing average usage times, average kiloWatt-hours used per month and average monthly costs. The Energy Phantom link provides a calculator where customers can enter the number of “phantom” appliances they have in their home and get an estimate of those costs. Both of these links provide a direct link back to the Energy Advisor. TEP is also planning to provide all customers with a more comprehensive survey later in 2009. The purpose of this survey will be to get feedback on all of TEP’s DSM programs.

A list of marketing materials is shown in Appendix 2. Please see the attached CD for copies of the marketing materials for this program.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### TEP SHADE TREE PROGRAM

#### Description

The TEP Shade Tree Program has been in place since December 1992. Desert-adapted trees are provided to individual residences, residential neighborhoods, and low-income families, as well as to community areas and schools through TEP's partnership with Tucson Clean and Beautiful. Residents are allowed two, 5-gallon trees per year (four for homes built before 1980), which must be planted on the south, west, or east side of the home. Residents complete an application provided by Tucson Clean and Beautiful 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 Tucson Clean and Beautiful.

#### Program Modifications

Tucson Clean and Beautiful has started to provide TEP with a list of addresses, number, and type of trees in order for TEP to start conducting random inspections.

#### Program Goals, Objectives, and Savings Targets

The goal 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.

#### Levels of Participation

For this reporting period, Tucson Clean and Beautiful delivered a total of 2,967 trees as follows:

- 2,950 five-gallon trees distributed to approximately 1,398 residential customers;
- 11 fifteen-gallon trees to five schools; and
- 6 fifteen-gallon trees to three community projects.

#### Evaluation and Monitoring Activities and Results

No evaluation or monitoring is available for this reporting period. In 2009 TEP plans to conduct random on-site visits to verify tree type, location, attrition, and home characteristics.

#### kW, kWh, and Therm Savings

No. of Trees	kW savings	kWh savings	Therm savings
2,967	0	525,159	0

#### Problems Encountered and Proposed Solutions

No problems were encountered 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	Program Total Cost
Shade Tree	\$ 80,970	\$ -	\$ 500	\$ 2,347	\$ -	\$ 6,592	\$ 90,408

# **Tucson Electric Power Company**

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## **Findings from All Research Projects**

No research projects were conducted during this reporting period.

## **Other Significant Information**

No other significant information to report this period.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### TEP EFFICIENT HOME COOLING PROGRAM

#### Description

The TEP Efficient Home Cooling Program promotes the installation of high-efficiency air conditioning and heat pump systems in existing homes in the TEP service territory by providing rebates to customers who purchase high Seasonal Energy Efficiency Ratio ("SEER") air conditioners or heat pumps. Air conditioners and heat pumps are eligible for rebates if they have a SEER rating of 14 or greater. Heating, Ventilating, and Air-Conditioning ("HVAC") contractors must also perform a proper sizing calculation for a customer's home to ensure the new air conditioner or heat pump is correctly sized for their needs.

#### Program Modifications

No modifications were made during this reporting period.

#### Program Goals, Objectives, and Savings Targets

This program is designed to encourage customers in existing homes to purchase higher SEER rated air conditioners or heat pumps when replacing their existing HVAC system.

#### Levels of Participation

For this reporting period, TEP paid rebates on 548 HVAC units as follows:

Quantity	Equipment Type	SEER	Incremental Cost
131	Air Conditioner	14	\$211.23
64	Heat Pump	14	\$283.73
90	Air Conditioner	15	\$477.52
42	Heat Pump	15	\$600.52
139	Air Conditioner	16	\$675.72
28	Heat Pump	16	\$850.20
27	Air Conditioner	17	\$924.96
4	Heat Pump	17	\$1,157.32
18	Air Conditioner	18	\$993.43
5	Heat Pump	18	\$1,255.73
<b>548</b>			

In addition 374 rebates of \$25 each were paid to contractors during this reporting period. TEP currently has 173 participating contractors signed to the program.

#### Evaluation and Monitoring Activities and Results

No evaluation or monitoring is available for this reporting period. Summit Blue has been selected as the Measurement, Evaluation, and Research ("MER") contractor for the TEP DSM programs (excluding LIW, Guarantee Home, and Education & Outreach) and is in the process of implementing a MER plan.

#### kW, kWh, and Therm Savings

No. of Units Installed	kW savings	kWh savings	Therm savings
548	236	550,363	0

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## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### Problems Encountered and Proposed Solutions

TEP continues to encounter difficulties with processing applications. Currently there are 41 applications "on hold" for various reasons. The top three reasons are; no sizing calculations (15); no proof-of-purchase (8); and non-participating contractors (9). Although TEP prefers that contractors be on our participating contractors list, if a non-participating licensed contractor installs a qualifying system a customer-only rebate will still be issued as long as the contractor provides all the required information. TEP makes every effort to obtain the missing information by contacting both the customer and contractor with the specific details of what information is needed to process the rebate.

Additionally there were 13 applications that did not qualify for rebates. Reasons for not qualifying include applications for installs on new construction, SEER ratings below the 14 minimum, and applications where the SEER rating cannot be verified through the Air-Conditioning, Heating, and Refrigeration Institute ("AHRI") database due to mismatched equipment.

One contractor requested to be removed from the participating contractors list. His request was due to the sizing calculation requirement. As a small contractor the cost for him to perform the sizing calculation is more than the customer rebate provided by TEP. He has chosen to pay his customers the rebate himself. The sizing calculation requirement continues to be a primary roadblock with HVAC contractors, causing delays in rebate processing and refusals to participate in the program by some contractors. These delays create extra administrative time as well as heightened customer frustration (many customers have applied for rebates but their contractors have refused to provide any sizing calculations). While our participating contractors will provide a Manual J sizing calculation, many have said it costs them more to do than the customer rebate. Other contractors have never heard of Manual J or similar sizing calculation protocols, so TEP is exploring opportunities to provide a Manual J sizing calculation workshop to those contractors unfamiliar with the process sometime in the fall.

Finally, there has been a concern voiced by one contractor that applying for proper permits is not a requirement of the program. TEP understands that in most cases a permit should be applied for and have advised customers on our website to make sure estimates provide details of all associated expenses including permit fees (if applicable) before choosing a contractor. However, the choice of contractor is ultimately the customer's choice and whether or not they apply for a permit is not a requirement of the program.

### 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	Program Total Cost
Efficient Home Cooling	\$ 127,250	\$ -	\$ 500	\$ 32,231	\$ 32,864	\$ 6,903	\$ 199,748

\*Includes \$9,350 in contractor rebates

### Findings from All Research Projects

No research projects were conducted during this reporting period.

### Other Significant Information

During this reporting period an ad campaign based around our online AC calculator was bundled along with the Efficient Home Cooling marketing. A list of marketing materials is shown in Appendix 2. Please see the attached CD for copies of the marketing materials used for this program.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### TEP 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 Modifications

Program participation has been far greater than expected. On June 30, 2009, TEP received Commission approval to increase program funding with Decision No. 71180.

#### Program Goals, Objectives, and Savings Targets

The program objectives 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.

The old 2009 sales, demand, and energy savings projection:

Year	2009	2010	2011	2012
Projected Lamp sales	314,635	324,074	333,796	343,810
Peak Demand Savings (kW)	1,181	1,217	1,253	1,291
Energy Savings (kWh)	10,090,805	10,393,530	10,705,335	11,026,495

The new 2009 sales, demand, and energy savings projection:

Year	2009	2010	2011	2012
Projected Lamp sales	1,073,919	1,106,136	1,139,320	1,173,500
Peak Demand Savings (kW)	5,480	5,645	5,814	5,988
Energy Savings (kWh)	60,390,057	62,201,758	64,067,811	65,989,845

#### Levels of Participation

A total of 390,181 CFLs were sold during this reporting period. CFL sales by retailer and number sold by wattage are listed in Appendix 1.

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## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### Evaluation and Monitoring Activities and Results

No evaluation or monitoring is available for this reporting period. Summit Blue has been selected as the MER contractor for the TEP DSM programs (excluding LIW, Guarantee Home, and Education and Outreach) and is in the process of implementing a MER plan.

### kW, kWh, and Therm Savings

No. of CFLs Sold	kW savings	kWh savings	Therm savings
390,181	19,162	19,246,424	0

### Problems Encountered and Proposed Solutions

Demand for CFL products was greater than the available funds. TEP received Commission approval for increased funding on June 30, 2009.

There is demand for a better quality three way CFL bulbs and a dimmable CFL bulb. TEP is also getting repeated requests for information on LED bulbs. It will take time for the manufacturers to respond and produce a quality ENERGY STAR<sup>®</sup> rated LED product.

### 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	Program Total Cost
Energy Star Lighting (CFL)	\$ 442,740	\$ 2,383	\$ 3,020	\$ 128,964	\$ 5,967	\$ 6,965	\$ 590,039

### Findings from All Research Projects

No research projects were conducted during this reporting period.

### Other Significant Information

TEP has found that retailer visits are playing a critical role toward the success of the program. Visits focus on proper program information and signage; ensuring product is displayed prominently; checking product inventory; and training staff on the benefits of program participation. TEP performed 640 store visits during this reporting period. In addition, TEP held 147 aisle training events for retail employees.

TEP performed 23 week-end outreach events at various retailers during this reporting period. Outreach events consist of one or more TEP representatives promoting various CFL products and using a CFL lighting display to help educate customers. Outreach events typically last about four hours. Retailers are very appreciative of this type of outreach to their customers and always encourage repeat events at their store. Unfortunately retail store traffic has been considered slow by the retail store management during this reporting period.

Marketing efforts for this reporting period include:

- In March, 2009, program presentations were given to TEP employees at group meetings. This gave program exposure to over 400 consumers. CFL Program signage was produced and placed in public viewing areas throughout TEP facilities;

## **Tucson Electric Power Company**

### **SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009**

- TEP manned a booth at the SAHBA Home Show in April. Free CFL bulbs were distributed to people attending so that they could take them home and try them;
- TEP created a bulb display showing an incandescent vs. a CFL bulb. Customers can see the difference in energy used, brightness and colorization. This display is used at in-store outreach events, schools, and other events where TEP is exhibiting;
- The CFL program was featured on the radio talk show "Mrs. Green Goes Mainstream" in May;
- The Marana Chamber of Commerce held a "Green Show" in May. A booth was used to present products and highlight the lighting display of CFL bulbs;
- TEP developed two new marketing pieces during this reporting period. The first was a bulb application guide. This guide was put up at retail stores to help customers select the correct bulb for the correct application. The guide was modeled after the ENERGY STAR® guide. The second piece was a bill insert that was sent to over 320,000 TEP customers in their June bill;
- 55 calls were made to the 800 number during this reporting period. This is less than one call per day. Callers most often ask where they can purchase CFL bulbs; and
- There were 4,600 hits on the web site for this program. The website includes a calendar of events and a retailer locator page.

A list of marketing materials is shown in Appendix 2. Please see the attached CD for copies of the marketing materials used for this program.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### **TEP NON-RESIDENTIAL EXISTING FACILITIES PROGRAM**

#### **Description**

The TEP Non-Residential Existing Facilities Program is a multi-faceted program that will provide 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 customer energy efficiency measures.

#### **Program Modifications**

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

#### **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 including:
  - 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.
- Assure that the participation process is clear, easy to understand and simple; and
- Increase the awareness and knowledge of facility operators, managers and decision-makers on the benefits of high-efficiency equipment and systems.

#### **Levels of Participation**

There were 45 pre-applications and ten final applications during this reporting period for prescriptive measures. In addition, there were five pre-applications and four final applications for custom items. A total of five participants completed energy efficient retrofits.

#### **Evaluation and Monitoring Activities and Results**

No evaluation or monitoring is available for this reporting period. Summit Blue has been selected as the MER contractor for the TEP DSM programs (excluding LIW, Guarantee Home, and Education and Outreach) and is in the process of implementing a MER plan.

# Tucson Electric Power Company

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings	Incremental Cost
Chillers	1	23	986,458	\$114.67
AC-HP	3	22	8,322	\$3,387.00
Motors	10	30	267,411	\$84.14
Lighting	795	16	74,334	\$23.79
<b>Totals</b>	<b>809</b>	<b>92</b>	<b>1,336,525</b>	<b>N/A</b>

### Problems Encountered and Proposed Solutions

TEP has seen a significant increase in interest and participation in the program during this reporting period. TEP anticipates the available funds for 2009 to be either reserved or paid out by 3<sup>rd</sup> Quarter 2009. If necessary, funds will be transferred from another commercial DSM program to this one in accordance with Decision No. 70403. With the anticipated success of this program in 2009, there is concern that budgets for future years will need to be increased to accommodate demand. TEP is exploring alternatives to increase funding, including shifting funds from other DSM programs or seeking Commission approval for additional funding.

### 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	Program Total Cost
Non-Residential Existing Facilities	\$ 23,992	\$ 1,481	\$ -	\$ 86,051	\$ 860	\$ 7,053	\$ 119,438

### Findings from All Research Projects

No research projects were conducted during this reporting period.

### Other Significant Information

Marketing efforts for this reporting period include:

- TEP created a new brochure for all commercial DSM programs. This brochure includes information on the TEP renewable programs in an effort to expose commercial customers to the benefits of both renewable and energy efficiency programs at TEP;
- There were 2,400 web site hits for this program during this reporting period. This program has received more hits than the other two commercial programs showing that it has excellent customer appeal;
- TEP performed over 100 presentations during this reporting period. Presentations were given to:
  - Business associations and individual businesses;
  - All municipal governments within TEP service territory;
  - All school systems within TEP service territory; and
  - Davis Monthan Air Force Base representatives (three meetings).
- In January, the program was promoted on the radio talk show, "Mrs. Green Goes Mainstream";
- In April, TEP participated in the SAHBA Home Show;
- In April a bill insert was sent to all TEP commercial customers in their monthly statement;

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### **SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009**

- In May, an Energy Efficiency and Conservation Block Grant Workshop was held for local municipalities in Tucson. TEP commercial DSM programs were presented and all attending were encouraged to participate; and
- In June, an IT Solutions workshop was held for the major employers in the area. The event highlighted energy conservation devices for computer equipment.

A list of marketing materials is shown in Appendix 2. Please see the attached CD for copies of the marketing materials used for this program.

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## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### TEP SMALL BUSINESS PROGRAM

#### Description

The TEP Small Business Program is designed to minimize some of the barriers to 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". Small firms generally concentrate on their core businesses, and do not have the wherewithal to analyze energy use and improve efficiency.

The program will be an upstream market program providing incentives directly to contractors for the installation of selected high efficiency lighting, HVAC, and refrigeration measures. The incentives would be 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 the overhead expenses, the program will employ internet-based measure analysis and customer proposal processing which will make 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 Modifications

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

#### 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.

Savings targets are as follows:

Year	2009	2010	2012	2013
Energy Savings (kWh)	10,285,945	10,594,523	10,912,359	11,239,730

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## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009

### Levels of Participation

154 applications were approved during this reporting period. Of these, 101 were completed and paid. A total of 61 participants at 101 locations completed energy efficient retrofits.

### Evaluation and Monitoring Activities and Results

No evaluation or monitoring is available for this reporting period. Summit Blue has been selected as the MER contractor for the TEP DSM programs (excluding LIW, Guarantee Home, and Education and Outreach) and is in the process of implementing a MER plan.

### kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings	Incremental Cost
Lighting	8851	790	2,985,998	\$86.83
AC and HP*	92	0	228,912	\$194.00
<b>Totals</b>	<b>8943</b>	<b>790</b>	<b>3,214,910</b>	<b>N/A</b>

*\*All AC and HP measures installed consists of programmable thermostats*

### Problems Encountered and Proposed Solutions

Demand for program participation is increasing. As a result, TEP expects the budgeted amount of incentives to be paid out in 2009. If necessary, funds will be transferred from the TEP Efficient Commercial Building Design Program to this program in accordance with Decision No. 70457.

Lighting retrofit measures are getting the most participation. As a result, savings per dollar spent is below the established goal. More emphasis is being placed on other measures to increase the savings per dollar spent on the program.

### 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	Program Total Cost
Small Business	\$ 434,733	\$ 1,803	\$ 72	\$ 188,328	\$ 1,273	\$ 6,903	\$ 633,113

### Findings from All Research Projects

No research projects were conducted during this reporting period.

### Other Significant Information

Marketing efforts for this reporting period include:

- TEP created a new brochure for all commercial DSM programs. This brochure includes information on the TEP renewable programs in an effort to expose commercial customers to the benefits of both renewable and energy efficiency programs at TEP;
- Four contractor seminars were held during this reporting period. The seminars are designed to generate interest from contractors in becoming certified for the Small Business Program;
- Seventeen contractors were added to the certified list during this reporting period. Using certified contractors to help promote the program has proven to be very successful;

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### **SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2009**

- TEP performed over 100 presentations during this reporting period. Presentations were given to:
  - Business associations and individual businesses;
  - All municipal governments within TEP service territory;
  - All school systems within TEP service territory; and
  - Davis Monthan Air Force Base representatives (three meetings).
- In January, the program was promoted on the radio talk show, "Mrs. Green Goes Mainstream";
- In April a bill insert was sent to all TEP commercial customers in their monthly statement;
- In April TEP participated in the SAHBA Home Show;
- In May, an Energy Efficiency and Conservation Block Grant Workshop was held for local municipalities in Tucson. TEP commercial DSM programs were presented and all attending were encouraged to participate;
- In June, TEP held a targeted information/education workshop for IS people from large businesses. The main area of emphasis was how IS could use programs to save energy for their company; and
- There were over 1,600 hits on the web site for this program. The web has proven to be a successful marketing tool for the program.

A list of marketing materials is shown in Appendix 2. Please see the attached CD for copies of the marketing materials used for this program.

# Tucson Electric Power Company

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### **TEP EFFICIENT COMMERCIAL BUILDING DESIGN PROGRAM**

#### **Description**

The Efficient Commercial Building Design Program is geared toward the building owner/developer and is designed to encourage 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 would provide 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 will provide technical support services to the design community. The program will provide 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 Modifications**

No modifications were made during this past reporting period.

#### **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;
- Assure that the participation process is clear and easy to understand and 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.

Savings targets are as follows:

Year	2009	2010	2012	2013
Number of Facilities	13	14	14	15
Energy Savings (MWh)	3,120	3,214	3,310	3,410

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### Levels of Participation

There were two applications for design assistance and two applications for building performance during this reporting period and. A total of four applications were received.

One payment of \$10,000 was made during this reporting period. \$15,113 has been reserved for design assistance applications submitted but the work is not completed yet.

### Evaluation and Monitoring Activities and Results

No evaluation or monitoring is available for this reporting period. Summit Blue has been selected as the MER contractor for the TEP DSM programs (excluding LIW, Guarantee Home, and Education and Outreach) and is in the process of implementing a MER plan.

### kW, kWh, and Therm Savings

There are no savings to report this period. One payment was made for design assistance.

### Problems Encountered and Proposed Solutions

The slow economy is creating declining interest for project development and design assistance. Longer lead times for active projects are preventing timely completion of new commercial developments.

### 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	Program Total Cost
Efficient Commercial Building Design	\$ 10,000	\$ -	\$ -	\$ 36,819	\$ 108	\$ 6,592	\$ 53,519

### Findings from All Research Projects

No research projects were conducted during this reporting period.

### Other Significant Information

Marketing efforts for this reporting period include:

- TEP created a new brochure for all commercial DSM programs. This brochure includes information on the TEP renewable programs in an effort to expose commercial customers to the benefits of both renewable and energy efficiency programs at TEP;
- TEP gave 17 presentations specifically relating to this program. Presentations were given to:
  - Building Owners and Managers Association (“BOMA”);
  - United States Green Building Council, Southern Arizona Chapter;
  - Architectural and Engineering firms; and
  - Arizona Department of Corrections.
- TEP participated at the Sustainability and Energy Expo, the Green Media Alliance Seminar and at the SAHBA Home Show. Commercial DSM program information was available and discussed with interested attendees; and
- There were over 500 hits on the program web site during this reporting period.

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New commercial construction requires a long lead time. From conception to completion construction can be 18 months or more. This and the current economic recession will make 2009 and onward a challenge. However, TEP is committed to making the Efficient Commercial Building Design Program a success.

A list of marketing materials is shown in Appendix 2. Please see the attached CD for copies of the marketing materials used for this program.

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### APPENDIX 1 – CFL SALES AND WATTAGE INFORMATION

#### CFL Sales by Retailer

Retailer	Jan	Feb	Mar	Apr	May	Jun	Total
99 Cents		8,563	437				9,000
Ace Hardware				1,102	6,365	4,195	11,662
Bashas				154	90		244
Costco	10,269	26,578	27,502	26,028	10,232	6,765	107,374
CVS				500	52		552
Dollar Tree		1,700	801	1,099			3,600
Family Dollar							0
Fry's Foods							0
Home Depot	16,361	39,599	39,734	42,107	31,670	4,105	173,576
Lowe's			1,173	1,863	982	678	4,696
Sam's Club			17,531	8,592	8,929	11,094	46,146
True Value							0
Wal-mart			2,648	11,863	11,937	6,883	33,331
	<b>26,630</b>	<b>76,440</b>	<b>89,826</b>	<b>93,308</b>	<b>70,257</b>	<b>33,720</b>	<b>390,181</b>

#### kWh Savings by Wattage

Units	Watts	Watts Replaced	Watts Saved	Life	Hours/Day	Meas Life	Unit kWh Annual	kWh Annual	kWh Lifetime
1,320	7	40	33	8,000	2.75	8.0	33.1	43,753	348,480
28,120	9	40	31	10,000	2.75	10.0	31.1	875,572	8,717,200
2,146	10	40	30	8,000	2.75	8.0	30.1	64,663	515,040
6,676	11	40	29	8,000	2.75	8.0	29.1	194,459	1,548,832
58	11	45	34	8,000	2.75	8.0	34.2	1,981	15,776
1,073	11	40	29	10,000	2.75	10.0	29.1	31,254	308,618
42,404	13	60	47	8,000	2.75	8.0	47.2	2,001,808	15,943,904
61,524	13	60	47	10,000	2.75	10.0	47.2	2,904,425	28,916,280
4,380	14	60	46	8,000	2.75	8.0	46.2	202,369	1,611,840
10,072	14	65	51	8,000	2.75	8.0	51.2	515,938	4,109,376
156,295	14	60	46	10,000	2.75	10.0	46.2	7,221,298	71,895,700
136	15	60	45	8,000	2.75	8.0	45.2	6,147	48,960
21,975	15	65	50	8,000	2.75	8.0	50.2	1,103,606	8,784,048
1,298	15	60	45	10,000	2.75	10.0	45.2	58,668	577,080
1,236	16	65	49	8,000	2.75	8.0	49.2	60,831	442,512
3,078	18	75	57	8,000	2.75	8.0	57.3	176,222	1,403,568
1,954	19	75	56	10,000	2.75	10.0	56.2	109,907	1,094,240
1,534	20	75	55	8,000	2.75	8.0	55.2	84,743	674,960
77	20	85	65	8,000	2.75	8.0	65.3	5,027	25,872
738	23	90	67	8,000	2.75	8.0	67.3	49,664	395,568
2,198	23	100	77	8,000	2.75	8.0	77.3	169,993	1,353,968
6,420	23	120	97	8,000	2.75	8.0	97.4	625,488	4,981,920
27,120	23	100	77	10,000	2.75	10.0	77.3	2,097,461	20,882,400
192	26	90	64	8,000	2.75	8.0	64.3	12,342	102,912
7,488	26	100	74	8,000	2.75	8.0	74.3	556,561	4,432,896
76	26	95	69	10,000	2.75	10.0	69.3	5,267	52,440
205	29	150	121	10,000	2.75	10.0	121.5	24,914	248,050
388	42	150	108	10,000	2.75	10.0	108.5	42,089	419,040
<b>390,181</b>								<b>19,246,451</b>	<b>179,851,480</b>

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### APPENDIX 2 – MARKETING MATERIALS

#### Guarantee Home Program:

- Cinema – Guarantee Home 4(Wav file)
- Print – 04\_05\_SAHBA\_4.375x7.5\_bw\_ad (JPG)
- TV – Comfort\_Zone\_FINAL (Wav file)

#### Efficient Home Cooling Program:

- Bill insert – Efficient Home Cooling bill insert (PDF)
- Print – TEP EHC ad SCVS (PDF)
- Radio – 10 and 15 metro (Word document) and TEP AC Rebates Radio 15 (MP3)
- Web – TEP ebill banner (Word document) and tepon5109 (Word document)

#### ENERGY STAR® Lighting Program:

- TEP bill insert (PDF)
- TEP Bright Solutions bill insert-brochure (PDF)
- TEP bulbapp guide (PDF)
- TEP handout English (PDF)
- TEP handout Spanish (PDF)
- TEP Recycling Brochure (PDF)

#### Commercial Energy Solutions:

- TEP CES brochure (PDF)
- TEP Commercial insert (PDF)

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### **Residential and Commercial Education and Outreach:**

- All Program Communications:
  - Brochure – Bright Solutions brochure and insert (PDF) and TEP Bright Family insert (PDF)
  - TV – Meet\_The\_Bright\_Family\_TEP\_finalcut\_lor-es (Wav file)
  - Web – Phantom Energy kiloWatt Counters (Word document), TEP Bright Family ebill banner (JPG), TEP Bright Family ebill banner (PDF), and The Bright Solutions Forum (Word document)
  - TEP Bright Family transit sign (PDF)
- Evaluations:
  - Evaluation Sample (Word document)
  - Results Sample (Word document)
- PowerShift™ (TOU):
  - Bill insert – PowerShift (PDF)