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April 1, 2011

Steve Olea  
Director, Utilities Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

Re: UNS Electric, Inc.'s Semi-Annual DSM Report  
Docket No. E-04204A-06-0783, Decision No. 70360

Mr. Olea,

Pursuant to Decision No. 70360 (May 27, 2008) UNS Electric, Inc. ("UNS Electric") is required to submit semi-annual Demand-Side Management ("DSM") program progress reports on April 1<sup>st</sup> and October 1<sup>st</sup> of each year in accordance with Arizona Corporation Commission Staff's recommendations. Enclosed please find UNS Electric's Semi-Annual DSM Program Progress Report for the reporting period of July 1, 2010 through December 31, 2010. The marketing materials for the reported DSM programs are being filed directly with Commission Staff on the attached CD.

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)  
Julie McNeely-Kirwan, ACC (with CD)  
Compliance, ACC (w/o CD)  
Shannon Kanlan, ACC (w/o CD)

Arizona Corporation Commission  
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## UNS Electric, Inc.

### SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

This progress report includes the following information for all UNS Electric, Inc. (“UNS Electric” or “Company”) Demand-Side Management (“DSM”) programs that were in place during this reporting period, including programs for residential, non-residential, and low-income customers:

- a brief description of the programs;
- program modifications;
- program goals, objectives, and savings targets;
- levels of participation;
- 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;
- terminated programs; and
- other significant information.

A summary detailing DSM program expenses are provided in Tables 1 and 2; program energy savings are provided in Tables 3 and 4; societal benefits and the performance incentive calculation are provided in Table 5; lifetime environmental savings are provided in Table 6; and program savings and costs since inception for all programs are provided in Table 7.

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

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# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

**Table 1**

### DSM PROGRAM EXPENSES: JULY - DECEMBER 2010

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
<b>Residential Programs</b>								
Low-Income Weatherization	\$ 83,574	\$ 3,421	\$ -	\$ 1,452	\$ -	\$ 7,167	\$ 4,450	\$ 100,064
Energy Smart Homes	\$ 35,900	\$ 708	\$ 854	\$ 23,793	\$ 2,675	\$ 5,631	\$ 12,042	\$ 81,603
Shade Tree Program	\$ 945	\$ 43	\$ 78	\$ 2,290	\$ 5,033	\$ 923	\$ 2,398	\$ 11,710
ENERGY STAR® Lighting (CFL)	\$ 39,835	\$ 658	\$ -	\$ 66,190	\$ -	\$ 9,057	\$ 19,902	\$ 135,642
Efficient Home Cooling	\$ 66,700	\$ 2,581	\$ 863	\$ 14,809	\$ 4,223	\$ 8,983	\$ 19,688	\$ 117,847
<b>Total for Residential Programs</b>	<b>\$ 226,954</b>	<b>\$ 7,411</b>	<b>\$ 1,796</b>	<b>\$ 108,535</b>	<b>\$ 11,931</b>	<b>\$ 31,761</b>	<b>\$ 58,479</b>	<b>\$ 446,867</b>
<b>Support Programs</b>								
Education & Outreach Programs	\$ -	\$ 283	\$ 67,476	\$ 18,858	\$ -	\$ 6,569	\$ -	\$ 93,186
<b>Total for Support Programs</b>	<b>\$ -</b>	<b>\$ 283</b>	<b>\$ 67,476</b>	<b>\$ 18,858</b>	<b>\$ -</b>	<b>\$ 6,569</b>	<b>\$ -</b>	<b>\$ 93,186</b>
<b>Commercial Programs</b>								
Commercial Facilities Efficiency	\$ 174,106	\$ 781	\$ 973	\$ 55,304	\$ -	\$ 20,875	\$ 36,707	\$ 288,745
<b>Total for Commercial Programs</b>	<b>\$ 174,106</b>	<b>\$ 781</b>	<b>\$ 973</b>	<b>\$ 55,304</b>	<b>\$ -</b>	<b>\$ 20,875</b>	<b>\$ 36,707</b>	<b>\$ 288,745</b>
<b>Portfolio Totals</b>	<b>\$ 401,060</b>	<b>\$ 8,475</b>	<b>\$ 70,244</b>	<b>\$ 182,696</b>	<b>\$ 11,931</b>	<b>\$ 59,205</b>	<b>\$ 95,186</b>	<b>\$ 828,798</b>

Program Costs	\$ 828,798
Program Development, Analysis & Reporting Software	\$ 133,264
Baseline Study	\$ 103,300
<b>TOTAL</b>	<b>\$ 1,065,362</b>

**Table 2**

### DSM PROGRAM EXPENSES: JANUARY - DECEMBER 2010

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
<b>Residential Programs</b>								
Low-Income Weatherization	\$ 100,785	\$ 4,131	\$ -	\$ 3,437	\$ 750	\$ 8,884	\$ 4,450	\$ 122,438
Energy Smart Homes	\$ 39,500	\$ 862	\$ 1,555	\$ 74,741	\$ 11,486	\$ 10,967	\$ 12,042	\$ 151,154
Shade Tree Program	\$ 2,490	\$ 160	\$ 78	\$ 4,005	\$ 10,729	\$ 1,677	\$ 2,398	\$ 21,536
ENERGY STAR® Lighting (CFL)	\$ 156,044	\$ 658	\$ -	\$ 118,717	\$ 4,840	\$ 23,482	\$ 19,902	\$ 323,644
Efficient Home Cooling	\$ 107,550	\$ 4,219	\$ 1,094	\$ 24,269	\$ 25,203	\$ 15,063	\$ 19,688	\$ 197,085
<b>Total for Residential Programs</b>	<b>\$ 406,370</b>	<b>\$ 10,030</b>	<b>\$ 2,727</b>	<b>\$ 225,170</b>	<b>\$ 53,008</b>	<b>\$ 60,073</b>	<b>\$ 58,479</b>	<b>\$ 815,856</b>
<b>Support Programs</b>								
Education & Outreach Programs	\$ -	\$ 283	\$ 108,221	\$ 20,580	\$ -	\$ 10,099	\$ -	\$ 139,183
<b>Total for Support Programs</b>	<b>\$ -</b>	<b>\$ 283</b>	<b>\$ 108,221</b>	<b>\$ 20,580</b>	<b>\$ -</b>	<b>\$ 10,099</b>	<b>\$ -</b>	<b>\$ 139,183</b>
<b>Commercial Programs</b>								
Commercial Facilities Efficiency	\$ 290,189	\$ 1,365	\$ 3,400	\$ 81,337	\$ -	\$ 32,936	\$ 36,707	\$ 445,935
<b>Total for Commercial Programs</b>	<b>\$ 290,189</b>	<b>\$ 1,365</b>	<b>\$ 3,400</b>	<b>\$ 81,337</b>	<b>\$ -</b>	<b>\$ 32,936</b>	<b>\$ 36,707</b>	<b>\$ 445,935</b>
<b>Portfolio Totals</b>	<b>\$ 696,559</b>	<b>\$ 11,679</b>	<b>\$ 114,348</b>	<b>\$ 327,086</b>	<b>\$ 53,008</b>	<b>\$ 103,108</b>	<b>\$ 95,186</b>	<b>\$ 1,400,974</b>

Program Costs	\$ 1,400,974
Program Development, Analysis & Reporting Software	\$ 241,282
Baseline Study	\$ 142,067
<b>TOTAL</b>	<b>\$ 1,784,322</b>

## UNS Electric, Inc.

### SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

#### Definitions

**Rebates & Incentives** – total amount spent on customer rebates, incentives, and payments made to agencies for installation of low-income weatherization measures.

**Training and Technical Assistance** – total amount spent on energy-efficiency training and technical assistance.

**Consumer Education** – total dollars used to support general consumer education about energy-efficiency improvements.

**Program Implementation** – program delivery costs associated with implementing the program – includes implementation contractor (“IC”) labor and overhead costs, as well as other direct program delivery costs.

**Program Marketing** – includes all expenses related to marketing the program 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 – includes management of program budgets, oversight of the request for proposal (“RFP”) process, IC 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 Software** – costs to research and develop new DSM program opportunities, provide analysis of new programs and measures, and develop a database to track participation, savings, and benefits. These costs are essential to comply with reporting and rules requirements.

**Baseline Study** – expenditures for a separate UNS Electric Baseline Study approved in Arizona Corporation Commission (“Commission”) Decision No. 71108 (June 5, 2009).

**UNS Electric, Inc.**

**SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD:  
July through December 2010**

**Table 3**

**DSM ENERGY SAVINGS: JULY – DECEMBER 2010**

<b>Program</b>	<b>Capacity Savings MW</b>	<b>Annual MWh Savings</b>	<b>Annual Therm Savings</b>	<b>Lifetime MWh Savings</b>	<b>Lifetime Therm Savings</b>
Low-Income Weatherization	0.00	160	1,152	2,800	20,160
Energy Smart Homes	0.12	62	537	1,852	16,120
Shade Tree	0.00	11	0	230	0
ENERGY STAR® Lighting (CFL)	0.83	5,128	0	37,064	0
Efficient Home Cooling	0.04	90	0	1,355	0
Commercial Facilities Efficiency	0.34	1,939	0	26,039	0
<b>Portfolio Totals</b>	<b>1.34</b>	<b>7,391</b>	<b>1,689</b>	<b>69,341</b>	<b>36,280</b>

**Table 4**

**DSM ENERGY SAVINGS: JANUARY – DECEMBER 2010**

<b>Program</b>	<b>Capacity Savings MW</b>	<b>Annual MWh Savings</b>	<b>Annual Therm Savings</b>	<b>Lifetime MWh Savings</b>	<b>Lifetime Therm Savings</b>
Low-Income Weatherization	0.00	243	2,048	4,247	35,840
Energy Smart Homes	0.13	71	594	2,137	17,820
Shade Tree	0.01	34	0	685	0
ENERGY STAR® Lighting (CFL)	1.57	9,654	0	69,648	0
Efficient Home Cooling	0.09	176	0	2,636	0
Commercial Facilities Efficiency	0.62	3,015	0	43,381	0
<b>Portfolio Totals</b>	<b>2.41</b>	<b>13,193</b>	<b>2,642</b>	<b>122,734</b>	<b>53,660</b>

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

**Table 5**

**DSM SOCIETAL BENEFITS: JANUARY – DECEMBER 2010**

DSM Program	Program Cost	Societal Benefits	Societal Costs	Net Benefits
<b>Residential</b>				
Low-Income Weatherization <sup>1</sup>	\$ 122,438	\$ 122,437	\$ 122,437	\$ -
Energy Smart Homes	\$ 151,154	\$ 383,060	\$ 261,113	\$ 121,947
Shade Tree	\$ 21,536	\$ 45,493	\$ 26,718	\$ 18,775
ENERGY STAR® Lighting (CFL)	\$ 323,644	\$ 4,583,060	\$ 388,289	\$ 4,194,772
Efficient Home Cooling	\$ 197,085	\$ 214,792	\$ 460,993	\$ (246,202)
<b>Total for Residential</b>	<b>\$ 815,856</b>	<b>\$ 5,348,843</b>	<b>\$ 1,259,551</b>	<b>\$ 4,089,292</b>
<b>Non-Residential</b>				
Commercial Facilities Efficiency	\$ 445,935	\$ 3,683,771	\$ 859,341	\$ 2,824,430
<b>Total for Non-Residential</b>	<b>\$ 445,935</b>	<b>\$ 3,683,771</b>	<b>\$ 859,341</b>	<b>\$ 2,824,430</b>
<b>Portfolio Totals</b>	<b>\$ 1,261,791</b>	<b>\$ 9,032,614</b>	<b>\$ 2,118,891</b>	<b>\$ 6,913,723</b>
<b>Program Development, Analysis &amp; Reporting Software</b>	<b>\$ 241,282</b>	<b>\$ -</b>	<b>\$ 241,282</b>	<b>\$ (241,282)</b>
<b>Baseline Study</b>	<b>\$ 142,067</b>	<b>\$ -</b>	<b>\$ 142,067</b>	<b>\$ (142,067)</b>
<b>TOTAL</b>	<b>\$ 1,645,140</b>	<b>\$ 9,032,614</b>	<b>\$ 2,502,240</b>	<b>\$ 6,530,374</b>

<sup>1</sup>Consistent with Commission Staff's analysis in Commission Decision No. 70347 (May 16, 2008), the societal benefits for low-income weatherization are equal to or greater than the societal costs when taking the environmental benefits into account.

**Table 6**

**DSM LIFETIME ENVIRONMENTAL SAVINGS: JANUARY – DECEMBER 2010**

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	23	505	5,477,077	1,100,024
Energy Smart Homes	12	254	2,542,552	553,379
Shade Tree	4	82	815,269	177,441
ENERGY STAR® Lighting (CFL)	383	8,288	82,881,329	18,038,878
Efficient Home Cooling	15	314	3,137,418	682,850
Commercial Facilities Efficiency	239	5,162	51,622,907	11,235,574
<b>Portfolio Totals</b>	<b>675</b>	<b>14,605</b>	<b>146,476,553</b>	<b>31,788,145</b>

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRAM PROGRESS REPORT FOR THE PERIOD: July through December 2010

Table 7

### DSM SAVINGS & EXPENSES SINCE PROGRAM INCEPTION: JANUARY 1994 – DECEMBER 2010<sup>1</sup>

PROGRAM	Start Date	Program Participants/Units		Program Expenses		MW Savings		MWh Savings		Therm Savings	
		Jan - Dec	Program Inception to Date	Jan - Dec	Program Inception to Date	Jan - Dec	Total Annual <sup>a</sup>	Jan - Dec	Total Annual <sup>a</sup>	Jan - Dec	Total Annual <sup>a</sup>
<b>Residential</b>											
Good Centis Homes	1994	0	452	\$ -	\$ 617,706	0.00	0.72	0	622	N/A	N/A
Energy Smart Homes	2007	99	135	\$ 151,154	\$ 496,772	0.13	0.24	71	135	594	2,345
Shade Tree	2008	155	395	\$ 21,536	\$ 53,075	0.01	0.01	34	92	N/A	N/A
ENERGY STAR® Lighting (CFL)	2008	172,100	343,208	\$ 323,644	\$ 636,553	1.57	2.89	9,654	17,906	N/A	N/A
Efficient Home Cooling	2008	483	931	\$ 197,085	\$ 355,104	0.09	0.24	176	623	N/A	N/A
<b>Commercial</b>											
Commercial Facilities Efficiency	2008	38	91	\$ 445,935	\$ 881,256	0.62	1.42	3,015	6,167	N/A	N/A
<b>Support Programs</b>											
Education & Outreach <sup>*</sup>	1994	26,690	40,917	\$ 139,183	\$ 3,323,258	0.00	3.86	0	11,856	N/A	N/A
Low-Income Weatherization	1994	91	484	\$ 122,438	\$ 441,926	0.00	0.13	243	467	2048	7671
<i>*Includes numbers previously reported separately under Residential and Commercial Energy Survey and Commercial New Construction.</i>											
Measurement, Evaluation & Research (MER) - all programs	NA	NA	NA	\$ 241,282	\$ 506,574	NA	NA	NA	NA	NA	NA
Baseline Study	2009	NA	NA	\$ 142,067	\$ 148,720	NA	NA	NA	NA	NA	NA
<b>TOTAL</b>		<b>199,656</b>	<b>386,613</b>	<b>\$1,784,322</b>	<b>\$ 7,460,943</b>	<b>2.41</b>	<b>9.52</b>	<b>13,193</b>	<b>37,489</b>	<b>2,642</b>	<b>10,016</b>
											<b>27,706</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 savings will decrease as the measure lifetimes expire. Programs with fully expired lifetimes will no longer be reported. Historical programs include Good Centis and historical measures previously reported under Residential and Commercial Surveys and Commercial New Construction and currently reported under Education & Outreach.

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### UNS ELECTRIC LOW-INCOME WEATHERIZATION PROGRAM

#### Description

The UNS Electric 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. Through the LIW Program, UNS Electric will enable these customers to reduce their gas and electric bills. Savings from these measures will help the customers utilize their limited income for other necessary items such as rent, food, or medical expenses.

#### Program Modifications

No Program modifications were made during this reporting period.

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

- Increase the number of homes weatherized each year;
- Lower the average household utility bills of low income customers by utilizing energy conservation measures in the weatherization process; and
- Improve the quality of life for customers by providing them with a safer and healthier home.

#### Levels of Participation

A total of 60 households received weatherization assistance during this reporting period, and a total of 91 households received weatherization assistance for calendar year 2010.

#### Evaluation and Monitoring Activities and Results

The Arizona Energy Office ("AEO"), with billing data from UNS Electric and other Arizona gas and electric utilities, is analyzing and tracking the energy use in weatherized homes statewide. As their database grows, a more accurate analysis of the impact of weatherization activities will emerge. UNS Electric will now report energy savings from weatherization activities based upon the most recent AEO report. The AEO does not report any kW demand savings.

The January 2011 AEO report is summarized below:

#### Utility Bill Analysis

- To date, an analysis of 235 homes has been completed on homes utilizing Arizona Public Service Company ("APS"), Tucson Electric Power Company, ("TEP"), UNS Gas, Inc. ("UNS Gas"), UNS Electric 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 1.19. Health and saving represented 13% of expenditures.

## UNS Electric, Inc.

### SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

- The combined SIR of all jobs reviewed to date for funds spent on energy measures and diagnostics was 1.35.
- The average saving per home reviewed was 2667 kWh and 32 therms of natural gas (gas therms average includes all electric homes).

#### kW, kWh, and Therm Savings

No. of Homes	kW savings	kWh savings	Therm savings
60	0.0	160,020	1,152

#### Problems Encountered and Proposed Solutions

No additional 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	Measurement, Evaluation & Research	Program Total Cost
Low-income Weatherization	\$ 83,574	\$ 3,424	\$ -	\$ 1,452	\$ -	\$ 7,286	\$ 4,450	\$ 100,186

#### Findings from All Research Projects

No research projects were performed during this reporting period.

#### Other Significant Information

The Western Arizona Council of Governments ("WACOG") and the Southeastern Arizona Community Action Program ("SEACAP") requested the majority of their funding during this reporting period; with both of them spending the majority of their allocated annual funding.

WACOG, with full approval from UNS Electric and the AEO, continue to pursue weatherization of multi-family units. Multi-family projects allow the agencies to maximize their funding since travel time and labor costs are reduced along with material costs due to bulk bidding. UNS Electric supports the efforts of WACOG to increase the number of multi-family projects.

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### UNS ELECTRIC ENERGY SMART HOMES PROGRAM

#### Description

The Residential New Construction Program for UNS Electric is marketed under the name of Energy Smart Homes (“ESH”). 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 will be required to ensure the homes meet the ENERGY STAR® Home performance requirements; these will be conducted by third-party Residential Energy Services Network certified energy raters selected by each builder. Components of the ESH Program include development of branding, builder training curriculum, and marketing material.

#### Program Modifications

Decision No. 71641 (April 14, 2010) approved UNS Electric’s Pilot Zero-Net Energy Homes Program as an enhancement to the existing Energy Smart Home Program. In this Decision, the Commission also approved additional incentives for homes exceeding ENERGY STAR® requirements. Builders can now choose from three tiers of Program compliance. These new tiers are based on Home Energy Rating System (“HERS”) scores. A tier I home must achieve a minimum 85 or below HERS score; tier II must achieve a HERS score of 70 or less; and a tier III home must achieve a HERS score 45 or less. These additional tiers and the Pilot Zero-Net Energy Homes Program were introduced to participating builders in May and June; initial responses have been positive.

Program staff is currently working with two participating builders who are interested in building homes meeting tier II or III HERS scores.

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

- Work with local builders to construct energy-efficient homes;
- Train builder construction staff and subcontractors in advanced building science concepts to increase energy efficiency through improved design and installation practices;
- Transform the market and improve construction practices in the UNS Electric service territory;
- Reduce peak demand and overall energy consumption in new homes;
- Assist builder sales agents with promoting and selling energy-efficient homes;
- Increase homebuyer awareness and understanding of energy-efficient building practices and the benefits of purchasing an energy-efficient home; and
- Achieve an annual participation of between 9% and 11% of new home units.

#### Levels of Participation

The Program completed 87 homes during this reporting period, and a total of 99 homes were completed for calendar year 2010. There are currently 17 Builders participating in the ESH Program representing a potential of 649 new homes.

## UNS Electric, Inc.

### SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

#### Evaluation and Monitoring Activities and Results

Navigant Consulting completed an evaluation of the ESH Program for the 2008-2009 program years. All savings claimed by the ESH Program were deemed verified so the program has a realization rate of 100 %. The Program had a B/C ratio of 0.6 due to high start up costs and low participation. The 2008-2009 MER report was submitted to Commission Staff on March 25, 2011.

#### kW, kWh, and Therm Savings

Tier	No. of Homes	kW savings	kWh savings	Therm savings
1	80	97	48,883	152
2	5	11	9,014	385
3	2	8	3,851	0
<b>Totals</b>	<b>87</b>	<b>115</b>	<b>61,748</b>	<b>537</b>

#### Problems Encountered and Proposed Solutions

The primary problem for ESH Program Homes in the UNS Electric territory is receiving an appraisal with appropriate value given to the ENERGY STAR® certification. Program staff is working with ENERGY Star® to educate local appraisers about the added value of ESH Program homes; additional partnering with national appraisal organizations is planned

The ESH PROGRAM has been gaining builder recognition and acceptance, but changes in the requirements for ENERGY STAR® may slow builder participation. The new ENERGY STAR® Version 3.0 requirements may increase costs significantly to builders. Program staff will overcome this challenge by enhanced builder outreach and education. The educational message to builders will emphasize that Program enhancements assist them in building a higher quality product, reducing warranty costs and offering homeowners a better value. Additionally, the Program is continuing to work with local municipalities, green build programs, and homebuyer groups to elevate demand in the marketplace.

#### 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 <sup>b</sup>	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Energy Smart Homes	\$ 35,900	\$ 712	\$ 854	\$ 23,793	\$ 2,675	\$ 5,778	\$ 12,042	\$ 81,754

\*Homes completed in Santa Cruz County have the option of either receiving an incentive or having UNS Electric perform the necessary inspections and testing needed for ENERGY STAR® certification.

#### Findings from All Research Projects

No research projects were undertaken during this reporting period.

#### Other Significant Information

**Builders must comply with ENERGY STAR® Version 2.5 on all homes permitted after 04/01/2011 and ENERGY STAR® Version 3.0 for all homes completed after 01/01/2012. Major changes from ENERGY STAR® Version 2.0 include a variable Home Energy**

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**Scoring Index, a home size adjustment factor, and new inspection checklists for Thermal Enclosure, HVAC Quality Install, and Water Management. Participating Home Energy Raters will also be required to attain additional rater certification to accommodate Version 3.0 requirements.**

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### UNS ELECTRIC EDUCATION AND OUTREACH PROGRAMS

#### COMMERCIAL AND RESIDENTIAL EDUCATION PROGRAMS

##### **Description**

The UNS Electric commercial and residential education programs are designed to educate customers on energy use and assist them with energy savings suggestions. The highlight of these programs is UNS Electric's online Energy Advisor, which provides customers with more than 140 energy savings recommendations that can be personalized for weather and utility rates based on the customer's zip code. UNS Electric promotes its Energy Advisor tool through a variety of means such as bill inserts, web advertising, and radio advertising.

UNS Electric representatives spoke at many civic and other organizational meetings promoting DSM Programs and energy education. These organizations and civic bodies include:

- Mohave County Fair, Kingman, Arizona
- the Mohave County Green Energy Fair in Kingman; and
- the Lake Havasu City Homebuilder's Show.

During this reporting period UNS Electric continued to educate its employees about the Company's DSM programs. Several informational meetings were held to provide education and information regarding the goals, purpose, and funding of the DSM programs. Emphasis was placed on the importance of UNS Electric employees in ensuring the success of the programs. Also discussed were plans for future programs and the Energy Efficiency Standards. The meetings were well attended and received with many questions being answered.

##### **Program Modifications**

No Program modifications were made during this reporting period.

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

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

##### **Levels of Participation**

###### Energy Advisor

For this reporting period, 590 residential customers and 135 commercial customers accessed the online Energy Advisor, with 262 residential customers and 2 commercial customers completing an online energy audit. For calendar year 2010 1,444 residential customers and 320 commercial customers accessed the online Energy Advisor, with 711 residential customers and 7 commercial customers completing an online energy audit. UNS Electric continues to advertise the Energy Advisor along with other programs within the Bright Solutions Family Campaign.

###### PowerShift™ ("TOU")

For this reporting period, 127 customers were enrolled in the PowerShift™ TOU Program.

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

No problems were encountered during this reporting period.

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### ACADEMIC EDUCATION PROGRAM

#### **Description**

UNS Electric offers several school education programs that cover a variety of topics related to energy, natural resource conservation, and environmental awareness. These programs are currently targeted at students in kindergarten through eighth grade. UNS Electric offers age-appropriate, class-sets of booklets (with teachers' guides) about electricity, energy efficiency, and conservation to schools.

#### **Levels of Participation**

For this reporting period, energy conservation/environmental classroom materials were given to 122 teachers and 25,965 students. The Education portion of the UNS Electric website received 3,899 visits with 8,055 pages viewed.

#### **Program Modifications**

No Program modifications were made during this reporting period.

#### **Program Goals and Objectives**

These programs are designed to educate students and their families on ways to save energy and to provide hands-on experiences for testing energy saving options.

### ALL EDUCATION & OUTREACH PROGRAMS

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

No evaluation or monitoring is available for this reporting period as UNS Electric does not claim energy savings for its education and outreach programs. UNS Electric is exploring the option of greatly expanding these programs to include more significant neighborhood outreach, direct education and install of energy saving items, and programs that affect consumer behavior. These expanded programs may allow for measurement and evaluation of energy savings.

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

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

#### **Costs Incurred**

Costs incurred for all Education and Outreach Programs during this reporting period are listed below:

DSM Program	Academic Education	Consumer Education	Time of Use Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Education & Outreach	\$ -	\$ 287	\$ 67,476	\$ 18,858	\$ -	\$ 6,705	\$ -	\$ 93,325

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

No research projects were performed during this reporting period.

#### **Other Significant Information**

No other significant information this reporting period. A list of marketing materials for this Program is shown in Appendix 2 and available on the attached CD.

## UNS Electric, Inc.

### SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

#### UNS ELECTRIC EFFICIENT HOME COOLING PROGRAM

##### Description

The UNS Electric Residential HVAC Retrofit Program is marketed under the Efficient Home Cooling Program ("EHC") name. This Program promotes the installation of high-efficiency air conditioning and heat pump systems in existing homes in the UNS Electric service territory.

##### Program Modifications

Decision No. 72024 (December 10, 2010) approved UNS Electric's request to modify and expand the current Efficient Home Cooling Program. The expanded Program proposes to provide incentives for high-efficiency heating, ventilation and air conditioning ("HVAC") equipment and for home performance services such as sealing leaky duct work, installing insulation, air sealing and other thermal envelope improvements in existing homes. This Program provides direct incentives to the contractors. Along with the direct incentives UNS Electric will provide training and mentoring to the contractors to help them meet the Program requirements.

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

- Promote the installation of high-efficiency air conditioners and heat pumps;
- Reduce customer energy bills, provide equal or better comfort conditions, conserve energy and benefit the environment; and
- Achieve target participation of 700+ air conditioners and heat pumps installed per year.

##### Levels of Participation

For this reporting period, UNS Electric has paid rebates on 235 HVAC units as follows:

Quantity	Equipment Type	SEER	Incremental Cost
53	Air Conditioner	14	\$423.20
71	Heat Pump	14	\$425.27
18	Air Conditioner	15	\$891.07
25	Heat Pump	15	\$857.54
22	Air Conditioner	16	\$1,322.96
29	Heat Pump	16	\$1,284.83
6	Air Conditioner	17	\$1,757.12
1	Heat Pump	17	\$1,757.12
3	Air Conditioner	18	\$2,071.26
7	Heat Pump	18	\$1,955.05
<b>235</b>			

##### Evaluation and Monitoring Activities and Results

Navigant Consulting completed an evaluation of this Program for the 2008-2009 program years. As a result new savings values and incremental costs have been incorporated into this report. Savings were reduced due to a new, more accurate methodology in estimating per unit measure savings from installed equipment. The Program evaluation showed a B/C ratio of 1.2. The 2008-2009 MER report was submitted to Commission Staff on March 25, 2011.

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#### kW, kWh, and Therm Savings

No. of Units Installed	kW savings	kWh savings	Therm savings
235	45	90,336	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	Measurement, Evaluation & Research	Program Total Cost
Efficient Home Cooling	\$ 66,700	\$ 2,586	\$ 863	\$ 14,809	\$ 4,223	\$ 9,174	\$ 19,688	\$ 118,043

#### Findings from All Research Projects

No research projects have been undertaken during this time period.

#### Other Significant Information

To date, 49 HAVC contractors have signed agreements to participate in this Program.

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### SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

#### UNS ELECTRIC ENERGY STAR® LIGHTING PROGRAM

##### Description

The UNS Electric Compact Fluorescent Lamp (“CFL”) Buy-Down Program is marketed under the name of “ENERGY STAR® Lighting Program.” This Program promotes the installation of energy-efficient ENERGY STAR® approved lighting products by residential and commercial customers in the UNS Electric service territory.

##### Program Modifications

No Program modifications were made during this reporting period.

##### 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 UNS Electric customers on the benefits of energy-efficient lighting products.

	2011	2012
<b>Projected Lamp sales</b>	212,451	218,824
<b>Peak Demand Savings (kW)</b>	1,084	1,117
<b>Energy Savings (kWh)</b>	11,946,819	12,305,223

##### Levels of Participation

A total of 90,236 CFLs were sold during this reporting period, and 172,100 CFLs were sold for calendar year 2010. CFL sales increased 10% from the previous 6 month reporting period. CFL sales by retailer and wattage are listed in Appendix 1. UNS Electric’s website received 122 visits for this Program during this reporting period. The website includes a calendar of events and a retailer locator page.

##### Evaluation and Monitoring Activities and Results

Navigant Consulting completed an evaluation of this Program for the 2008-2009 program years. As a result new savings values and incremental costs have been incorporated into this report. Values for demand and energy savings have been reduced.

- Demand Savings reduced 45%
- Energy savings reduced 18% due to leakage, reduced operating hours, and reduced useful life
- B/C ratio is 5.7

Preliminary 2010 MER results for this program indicate that 10% of CFLs sold are being installed in commercial applications. The result is an increase in annual kWh savings but a reduced expected lifetime for these 10% of lamps. These results have been incorporated into this report.

The 2008-2009 MER report was submitted to Commission Staff on March 25, 2011.

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#### kW, kWh, and Therm Savings

No. of CFLs Sold	kW savings	kWh savings	Therm savings
90,236	831	5,127,955	0

#### Problems Encountered and Proposed Solutions

The rural nature of the service territory poses distinct challenges in managing the Program. Travel expenses are greater than typical due to distance between stores, historically reducing the frequency of store visits. During this reporting period UNS Electric increased its emphasis on outreach to participating retailers. The result was increased sales but at an increase in administrative costs. UNS Electric will evaluate the benefits of the increased outreach to decide whether to continue this approach.

There is demand for better quality three way and dimmable CFL bulbs. In addition UNS Electric gets repeated requests for information on LED products. UNS Electric continues to monitor new product technologies and will add them to the Program when appropriate.

#### 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)	\$ 39,835	\$ 667	\$ -	\$ 66,190	\$ -	\$ 9,372	\$ 19,902	\$ 135,966

#### Findings from All Research Projects

No research projects have been undertaken during this time period.

#### Other Significant Information

Participating retailers report a small increase in customer traffic compared to the first six months of the year. Lowe's began participating in July helping give sales an overall boost.

UNS Electric has found that retailer visits are playing a critical role toward the success of the Program. Store 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. UNS Electric performed 146 store visits during this reporting period. In addition, UNS Electric held 10 aisle training events for retail employees.

UNS Electric performed nine weekend outreach events at various retailers during this reporting period. Outreach events generally last for four hours and consist of one or more UNS Electric representatives promoting various CFL products and educating the customer in the retail outlet. Retailers are very appreciative of this type of outreach to their customers and always encourage repeat events at their locations. Unfortunately, retail store traffic has been slow during this reporting period.

Marketing efforts for this reporting period included:

- placing Program signage in public viewing areas;
- installing promotional signs in the UNS Electric lobby where customers come in to pay their bills;

## **UNS Electric, Inc.**

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- in-store outreach and school events' use of the incandescent versus CFL bulbs display, which shows the difference in energy use, brightness, and colorization between the bulbs. A dimmable bulb was added to the display to help answer consumer questions;
- displaying the CFL bulb application guide at retail stores to help customers select the correct CFL bulb for the correct application (this guide was modeled after the ENERGY STAR® guide);
- participation in both the Lake Havasu City and Kingman spring home shows where free CFL bulbs were distributed to promote the Program; and
- delivery of a promotional bill insert to over 82,000 UNS Electric customers in the June/July billing cycle.

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### UNS ELECTRIC SHADE TREE PROGRAM

#### Description

The UNS Electric Shade Tree Program is marketed under the name of "Trees for You" and is primarily targeted to residential customers, including low-income families. Community organizations, commercial customers, and schools can participate if they meet the Program requirements. UNS Electric customers are allowed to purchase two desert adapted, five-gallon trees per year (four for homes built before 1980) which must be planted on the south, west, or east side of the home. Customers purchase the tree(s) from the nursery of their choice, complete an application provided by UNS Electric, provide a copy of their paid invoice, and submit all information to UNS Electric to receive a \$15.00 (per tree) credit on their electric bill.

#### Program Modifications

No Program modifications were made during this reporting period.

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

#### Levels of Participation

For this reporting cycle, UNS Electric received 30 customer applications for a total of 52 trees, and 155 trees were planted for calendar year 2010.

#### Evaluation and Monitoring Activities and Results

Navigant Consulting completed an evaluation of this Program for the 2008-2009 program years. As a result new demand savings values and incremental costs have been incorporated into this report. Energy savings were verified. The Program evaluation showed a B/C ratio of 1.4. Highlights of the MER report include:

- Add 0.6 kW demand savings per tree
- Add maintenance cost of \$7.50 per year, including water, to incremental costs for the first three years

The 2008-2009 MER report was submitted to Commission Staff on March 25, 2011.

#### kW, kWh, and Therm Savings

No. of Trees	kW savings	kWh savings	Therm savings
52	3	11,492	0

#### Problems Encountered and Proposed Solutions

There are a limited number of merchants in the Nogales service territory that supply trees. Only K-Mart, Wal-Mart, and Home Depot have nurseries; research has shown no independent nurseries in Nogales or surrounding areas. Periodic visits to these stores have verified that Wal-Mart and Home Depot carry an inventory of eligible trees. K-Mart's nursery section is quite small, stocking primarily small plants and a very limited tree selection.

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UNS Electric has actively promoted this Program through bill inserts and the website as well as providing information at local events and home shows. Additionally, during this reporting cycle UNS Electric promoted the Trees for You Program through advertisements in three local newspapers.

#### 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
Shade Tree	\$ 945	\$ 44	\$ 78	\$ 2,290	\$ 5,033	\$ 944	\$ 2,398	\$ 11,732

#### Findings from All Research Projects

No research projects were conducted during this reporting period.

#### Other Significant Information

UNS Electric actively promoted the Program in April, May, and June of 2010 to coincide with planting season. Tree planting typically slows down dramatically in the second half of the year. UNS continues to promote the program at local events such as trade and home shows, and educational presentations, etc. Responsibility for promotion of the Program during 2011 has been transferred to employees located in UNS Electric's Kingman office. As local residents they bring a more personal knowledge of potential promotional opportunities through community organizations and charities. Customers in Kingman and the surrounding areas have provided the majority of participation in the Program so it is hoped this switch to a more "boots on the ground" promotional approach will increase the number of trees planted.

A list of new marketing materials for this Program is shown in Appendix 2 and available on the attached CD.

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## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### UNS ELECTRIC COMMERCIAL FACILITIES EFFICIENCY PROGRAM

#### Description

The UNS Electric Commercial Facilities Efficiency Program is designed to minimize some of the barriers to implementing energy-efficiency improvements in the commercial market, such as lack of capital, information search costs, transaction costs, performance uncertainty, and the so-called "hassle factor." Commercial firms generally concentrate on their core business, and do not have the wherewithal to analyze energy use and improve efficiency unaided.

The Program provides incentives directly to contractors for the installation of selected high efficiency lighting; heating, ventilation and air conditioning ("HVAC"); motors 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 UNS Electric marketing and overhead expenses. The Program also employs an internet-based measure analysis and customer proposal processing system which makes the process easier for both contractors and customers. The Program provides customers with the opportunity to propose innovative energy-efficiency solutions through custom energy-efficient measures.

#### Program Modifications

No Program modifications were made during this reporting period.

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

- Encourage commercial 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.
- 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	2011	2012
Energy Savings (kWh)	2,494,000	2,534,000

#### Levels of Participation

Thirty-two new applications were received during this reporting period. Twenty business participants completed twenty-seven projects. A total of \$290,189 was paid for incentives during calendar year 2010, 13% over the budgeted amount. Because budgeted incentive dollars were paid or reserved by mid

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September, UNS Electric instituted a wait list for all new applicants. Incentives totaling \$50,804 were reserved on the wait list at the end of 2010. These projects are scheduled to be completed in 2011.

#### Evaluation and Monitoring Activities and Results

Navigant Consulting completed an evaluation of this Program for the 2008-2009 program years. As a result new savings values and incremental costs have been incorporated into this report. Verified energy savings were 76% of reported savings, and verified demand savings were 110% of reported savings. The Program evaluation showed a B/C of 2.8. The 2008-2009 MER report was submitted to Commission Staff on March 25, 2011.

#### kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings	Incremental Cost
AC and HP*	46	1	31,236	\$816.37
Lighting	3,386	341	1,789,023	\$96.05
Custom	1	0	119,015	\$49,030.00
<b>TOTALS</b>	<b>3,433</b>	<b>342</b>	<b>1,939,274</b>	<b>N/A</b>

\*AC and HP measures installed consists of 43 programmable thermostats and 3 AC/HP units

#### Average Job Cost and Actual Customer Cost

Job #	Total Cost	Customer Cost	Job #	Total Cost	Customer Cost
1	\$9,128.14	\$8,678.14	23	\$39,813.42	\$29,813.42
2	\$11,352.09	\$10,808.65	24	\$14,336.90	\$8,813.13
3	\$49,030.00	\$39,030.00	25	\$8,278.36	\$4,985.02
4	\$27,962.47	\$23,662.47	26	\$3,608.21	\$431.16
5	\$55,600.00	\$54,562.27	27	\$2,500.00	\$1,638.10
6	\$5,250.00	\$3,698.58	28	\$543.20	\$104.80
7	\$4,570.10	\$596.00	29	\$16,427.27	\$11,961.15
8	\$17,495.70	\$7,495.70	30	\$20,498.70	\$12,394.11
9	\$8,147.60	\$3,731.18	31	\$3,220.10	\$1,619.46
10	\$7,500.00	\$3,508.90	32	\$54,744.78	\$44,744.78
11	\$5,250.00	\$3,698.58	33	\$3,118.50	\$318.67
12	\$20,000.00	\$10,000.00	34	\$1,579.20	\$161.37
13	\$10,191.03	\$8,045.96	35	\$2,677.40	\$328.41
14	\$3,250.00	\$1,905.44	36	\$46,266.29	\$36,266.29
15	\$8,549.40	\$2,038.71	37	\$42,493.37	\$32,493.37
16	\$1,582.20	\$193.66	38	\$22,100.00	\$12,100.00
17	\$23,913.40	\$13,913.40	39	\$24,241.40	\$14,241.40
18	\$16,732.00	\$9,445.68	40	\$19,692.00	\$9,692.00
19	\$21,618.40	\$13,902.50	41	\$8,162.60	\$1,224.39
20	\$11,633.30	\$6,158.47	42	\$16,631.70	\$10,349.27
21	\$6,500.00	\$4,845.15	43	\$17,361.50	\$9,822.88
22	\$17,000.00	\$7,000.00	44	\$3,979.00	\$2,077.83
<b>Average:</b>				<b>\$16,239.31</b>	<b>\$10,965.92</b>

#### Problems Encountered and Proposed Solutions

No additional problems were encountered during this reporting period.

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### 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 <sup>b</sup>	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Commercial Facilities Efficiency	\$ 174,106	\$ 781	\$ 973	\$ 55,304	\$ -	\$ 20,875	\$ 36,707	\$ 288,745

### Findings from All Research Projects

No research projects have been undertaken during this time period.

### Other Significant Information

The promotional and Trade Ally efforts of 2009 are paying dividends in 2010, as shown by the continued participation.

Highlights of marketing efforts during this reporting period include eleven outreach events throughout the community, including the Kingman fall show. Representatives were available to discuss Program details and distribute brochures.

See pages 23-29 for an energy analysis of all completed projects.

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## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### Energy Analysis for all Completed Projects - 1 of 7

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
002	Non Standard Contractor	N/A	2	Air Conditioner 5 ton 14 SEER	157	138	1,127
005	Non Standard Contractor	N/A	1	12.5 ton AC	564	138	4,058
007	Non Standard Contractor	Standard thermostats	1	Networked EMS for 119 Heat Pumps	16,530	138	119,015
157	Ambient Edge AC and Refrigeration	N/A	43	Tracker Thermostat	3,618	138	26,051
181	Cornerstone Electrical Contractors	60W Inc lamp	2	13W CF-SCRW	94	86	481
181	Cornerstone Electrical Contractors	100W MH	6	23W CF-SCRW	600	81	2,893
181	Cornerstone Electrical Contractors	2-4' 34/40W hybrid	4	2-4' 32W-T8-HFEB1	48	86	246
181	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	15	2-4' 32W-T8-HFEB1-R	1,140	86	5,837
181	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	19	2-4' 32W-T8-HFEB1-R	1,444	86	7,393
181	Cornerstone Electrical Contractors	250W MH	5	2-4' 54W-T5-EB1	850	81	4,099
181	Cornerstone Electrical Contractors	70W HFS	7	32W CF-SCRW	120	81	579
181	Cornerstone Electrical Contractors	100W HFS	2	32W CF-SCRW	420	81	2,025
181	Cornerstone Electrical Contractors	Exit Sign (2)20W-Inc	8	Exit Sign LED	280	168	2,801
292	DECA Southw est	75W Inc lamp	4	13W CF-SCRW	248	90	1,329
292	DECA Southw est	100W Inc lamp	8	23W CF-SCRW/R	616	78	2,861
292	DECA Southw est	100W Inc lamp	5	23W CF-SCRW/R	385	84	1,925
292	DECA Southw est	2-4' 34/40W hybrid	1	2-4' 32W-T8-EB1	26	78	121
292	DECA Southw est	2-8' 60/75W hybrid	6	2-4' 32W-T8-HFEB1-BC	456	78	2,118
292	DECA Southw est	2-8' 60/75W hybrid	4	2-4' 32W-T8-HFEB1-BC	304	90	1,629
292	DECA Southw est	2-8' 60/75W hybrid	5	2-4' 32W-T8-HFEB1-BC	380	78	1,765
292	DECA Southw est	2-8' 60/75W hybrid	6	2-4' 32W-T8-HFEB1-BC	456	78	2,117
292	DECA Southw est	2-8' 60/75W hybrid	12	2-4' 32W-T8-HFEB1-BC	912	78	4,235
292	DECA Southw est	2-8' 60/75W hybrid	8	2-4' 32W-T8-HFEB1-BC	608	78	2,823
292	DECA Southw est	2-8' 60/75W hybrid	5	2-4' 32W-T8-HFEB1-BC	380	78	1,765
292	DECA Southw est	400W MH	9	4-4' 54W-T5-EB2	1,989	78	9,236
298	Cornerstone Electrical Contractors	4-4' 34/40W hybrid	45	2-4' 32W-T8-HFEB1-R	4,320	168	43,208
298	Cornerstone Electrical Contractors	Exit Sign 30W-Incand	1	Exit Sign LED	25	168	250

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### Energy Analysis for all Completed Projects - 2 of 7

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
326	Cornerstone Electrical Contractors	60W Inc lamp	7	15W CF-SCRW	315	20	375
326	Cornerstone Electrical Contractors	100W Inc lamp	2	18W CF-SCRW	184	20	195
326	Cornerstone Electrical Contractors	2-4' 34/40W hybrid	3	2-4' 32W T8-EB1	78	47	218
326	Cornerstone Electrical Contractors	2-4' 34/40W hybrid	1	2-4' 32W T8-EB1	26	47	73
326	Cornerstone Electrical Contractors	2-4' 34/40W hybrid	12	2-4' 32W T8-EB1	312	68	1,263
326	Cornerstone Electrical Contractors	2-4' 34/40W hybrid	3	2-4' 32W T8-EB1	78	68	316
326	Cornerstone Electrical Contractors	2-4' 34/40W hybrid	6	2-4' 32W T8-EB1	156	68	631
326	Cornerstone Electrical Contractors	2-4' 34/40W hybrid	1	2-4' 32W T8-LPEB1	33	20	39
326	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	2	2-4' 32W T8-EB1-BC	180	47	504
326	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	14	2-4' 32W T8-EB1-BC	1,260	68	5,101
326	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	6	2-4' 32W T8-EB1-BC	540	68	2,186
326	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	39	2-4' 32W T8-HPEB1-R	2,964	47	8,294
326	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	29	2-4' 32W T8-HPEB1-R	2,204	47	6,167
326	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	38	2-4' 32W T8-HPEB1-R	2,888	47	8,081
326	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	3	NEW 2-4' 54W-T5HO-EB1-VP	120	68	486
326	Cornerstone Electrical Contractors	2-8' 60/75W hybrid	4	NEW 2-4' 54W-T5HO-EB1-VP	152	68	615
336	McAtlin Electrical Corp	4-4' 34/40W hybrid	214	2-4' 32W T8-HPEB1-R	20,544	45	55,039
336	McAtlin Electrical Corp	2-4' 34/40W hybrid	33	2-4' 32W T8-HPEB1	396	45	1,061
336	McAtlin Electrical Corp	2-2' 34/40W U hybrid	50	2-2' 17W T8-HPEB1-R	2,150	45	5,760
346	KER Electric Inc	60W Inc lamp	4	13W CF-SCRW	188	50	560
346	KER Electric Inc	2-4' 34/40W hybrid	5	2-4' 30W T8-LPEB1	195	50	580
346	KER Electric Inc	2-4' 34/40W hybrid	4	2-4' 30W T8-LPEB1	156	132	1,230
346	KER Electric Inc	4-4' 34/40W hybrid	20	2-4' 32W T8-EB1	2,200	50	6,549
346	KER Electric Inc	4-4' 34/40W hybrid	2	2-4' 32W T8-EB1	220	168	2,200
346	KER Electric Inc	50W HPS	3	27W CF-FLOOD	99	84	495
346	KER Electric Inc	Exit Sign (2)/20W-Inc	3	Exit Sign LED	105	168	1,050

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### Energy Analysis for all Completed Projects -- 3 of 7

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
347	DECA Southw est	1-4' 34/40W hybrid	5	1-4' 32W-T8-EB1	95	119	673
347	DECA Southw est	40W H-PAR	62	18W CF-HW	1,240	119	8,785
347	DECA Southw est	40W H-PAR	15	18W CF-HW	300	119	2,125
347	DECA Southw est	4-4' 34/40W hybrid	15	2-4' 32W T8 EB1-R	1,650	119	11,690
347	DECA Southw est	4-4' 34/40W hybrid	17	2-4' 32W T8 EB1-R	1,870	119	13,248
347	DECA Southw est	4-4' 34/40W hybrid	9	2-4' 32W T8 EB1-R	990	119	7,014
347	DECA Southw est	4-4' 34/40W hybrid	6	2-4' 32W T8 EB1-R	660	119	4,676
347	DECA Southw est	4-4' 34/40W hybrid	14	2-4' 32W T8 EB1-R	1,540	119	10,910
347	DECA Southw est	2-4' 34/40W hybrid	2	2-4' 32W T8-EB1	52	119	368
347	DECA Southw est	2-4' 34/40W hybrid	2	2-4' 32W T8-EB1	52	119	368
347	DECA Southw est	2-4' 34/40W hybrid	3	2-4' 32W T8-EB1	78	119	552
347	DECA Southw est	1-8' 60/75W hybrid	48	2-4' 32W-T8-EB1-BC	1,776	119	12,582
347	DECA Southw est	1-8' 60/75W hybrid	24	2-4' 32W-T8-EB1-BC	816	119	5,781
347	DECA Southw est	1-8' 60/75W hybrid	8	2-4' 32W-T8-EB1-BC	272	119	1,927
347	DECA Southw est	1-8' 60/75W hybrid	10	2-4' 32W-T8-EB1-BC	340	119	2,409
347	DECA Southw est	1-8' 60/75W hybrid	10	2-4' 32W-T8-EB1-BC	340	119	2,409
347	DECA Southw est	1-8' 60/75W hybrid	2	2-4' 32W-T8-HFEB1-BC	152	119	1,077
347	DECA Southw est	2-8' 60/75W hybrid	35	2-4' 32W-T8-HFEB1-BC	2,660	119	18,845
347	DECA Southw est	2-8' 60/75W hybrid	5	2-4' 32W-T8-HFEB1-BC	380	119	2,692
347	DECA Southw est	2-8' 60/75W hybrid	16	2-4' 32W-T8-HFEB1-BC	1,216	119	8,615
347	DECA Southw est	2-8' 60/75W hybrid	23	2-4' 32W-T8-HFEB1-BC	1,748	119	12,384
347	DECA Southw est	2-8' 60/75W hybrid	170	2-4' 32W-T8-HFEB1-BC	12,920	119	91,533
347	DECA Southw est	2-8' 60/75W hybrid	10	2-4' 32W-T8-HFEB1-BC	760	119	5,384
347	DECA Southw est	250W MH	15	3-4' 32W-T8-EB1	3,150	119	22,317

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### Energy Analysis for all Completed Projects -- 4 of 7

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
348	Sun Lighting Inc	2-4' 34/40W hybrid	1	2-4' 30W T8 LFEB1	39	112	260
348	Sun Lighting Inc	2-4' 34/40W hybrid	3	2-4' 30W T8 LFEB1	117	112	780
348	Sun Lighting Inc	2-4' 34/40W hybrid	3	2-4' 30W T8 LFEB1	117	112	780
348	Sun Lighting Inc	2-4' 34/40W hybrid	1	2-4' 30W T8 LFEB1	39	112	260
348	Sun Lighting Inc	4-4' 34/40W hybrid	5	2-4' 32W T8 EB1	550	84	2,750
348	Sun Lighting Inc	4-4' 34/40W hybrid	38	2-4' 32W T8 EB1	4,180	112	27,872
348	Sun Lighting Inc	4-4' 34/40W hybrid	1	2-4' 32W T8 EB1	110	112	733
348	Sun Lighting Inc	2-8' 60/75W hybrid	1	2-4' 32W-T8-HFEB1	76	112	507
348	Sun Lighting Inc	2-8' 60/75W hybrid	2	2-4' 32W-T8-HFEB1	152	112	1,013
348	Sun Lighting Inc	2-8' 60/75W hybrid	1	2-4' 32W-T8-HFEB1	76	112	507
348	Sun Lighting Inc	2-8' 60/75W hybrid	1	2-4' 32W-T8-HFEB1	152	112	1,013
348	Sun Lighting Inc	2-4' 34/40W hybrid	2	2-4' 30W T8 LFEB1	78	112	520
349	Sun Lighting Inc	2-4' 34/40W hybrid	3	2-4' 30W T8 LFEB1	117	112	780
349	Sun Lighting Inc	2-4' 34/40W hybrid	1	2-4' 30W T8 LFEB1	39	112	260
349	Sun Lighting Inc	4-4' 34/40W hybrid	14	2-4' 32W T8 EB1	1,540	112	10,269
349	Sun Lighting Inc	2-8' 60/75W hybrid	6	2-4' 32W-T8-HFEB1	456	84	2,280
349	Sun Lighting Inc	Exit Sign (2)25W-Inc	3	Exit Sign LED	135	168	1,350
350	Sun Lighting Inc	4-4' 34/40W hybrid	4	2-4' 32W-T8-EB1	440	84	2,200
350	Sun Lighting Inc	4-4' 34/40W hybrid	2	2-4' 32W-T8-EB1	220	84	1,100
350	Sun Lighting Inc	4-4' 34/40W hybrid	2	2-4' 32W-T8-EB1	220	84	1,100
350	Sun Lighting Inc	4-4' 34/40W hybrid	4	2-4' 32W-T8-EB1	440	48	1,257
350	Sun Lighting Inc	2-8' 60/75W hybrid	30	2-4' 32W-T8-HFEB1	2,280	84	11,402
350	Sun Lighting Inc	2-8' 60/75W hybrid	4	2-4' 32W-T8-HFEB1	304	48	869

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### Energy Analysis for all Completed Projects -- 5 of 7

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
359	DECA Southw est	2-4' 32W-T8-EB1	22	2-4' 32W-T8-EB1	176	119	1,247
359	DECA Southw est	2-4' 32W-T8-EB1	33	2-4' 32W-T8-EB1	264	119	1,871
359	DECA Southw est	2-4' 32W-T8-EB1	5	2-4' 32W-T8-EB1	40	119	283
359	DECA Southw est	2-4' 32W-T8-EB1	22	2-4' 32W-T8-EB1	176	119	1,247
359	DECA Southw est	2-4' 34/40W hybrid	1	2-4' 32W-T8-EB1-BCR	34	119	241
359	DECA Southw est	75W MV	12	32W CF-HW	760	119	5,526
359	DECA Southw est	4-4' 32W-T8-EB1	51	3-4' 32W-T8-EB1-R	1,734	119	12,285
359	DECA Southw est	2-8' HO hybrid	84	4-4' 32W-T8-EB1-BC	9,912	119	70,223
359	DECA Southw est	2-8' HO hybrid	197	4-4' 32W-T8-EB1-BC	23,246	119	164,690
359	DECA Southw est	2-8' HO hybrid	60	4-4' 32W-T8-EB1-BC	7,060	119	60,159
359	DECA Southw est	2-8' 56W-T8-HPEB1	9	4-4' 32W-T8-EB1-BCR	72	119	510
359	DECA Southw est	400W MH	14	Permanent Removal	6,370	119	45,129
359	DECA Southw est	400W MH	12	Permanent Removal	5,460	119	38,682
369	DECA Southw est	2-4' 34/40W hybrid	16	1-4' 32W-T8-HPEB1-BC	768	119	5,441
369	DECA Southw est	2-4' 34/40W hybrid	1	1-4' 32W-T8-HPEB1-BC	48	119	340
369	DECA Southw est	4-4' 34/40W hybrid	3	2-4' 32W T8 EB1-R	330	119	2,338
369	DECA Southw est	4-4' 34/40W hybrid	15	2-4' 32W T8 EB1-R	1,650	119	11,690
369	DECA Southw est	4-4' 34/40W hybrid	21	2-4' 32W T8 EB1-R	2,310	119	16,366
369	DECA Southw est	4-4' 34/40W hybrid	22	2-4' 32W T8 EB1-R	2,420	119	17,145
369	DECA Southw est	2-4' 34/40W hybrid	14	2-4' 32W T8-EB1	364	119	2,579
369	DECA Southw est	2-4' 34/40W hybrid	2	2-4' 32W T8-EB1	52	119	368
369	DECA Southw est	2-4' 34/40W hybrid	16	2-4' 32W T8-EB1	416	119	2,947
369	DECA Southw est	2-8' 60/75W hybrid	36	2-4' 32W-T8-HPEB1-BC	2,736	119	19,384
369	DECA Southw est	2-8' 60/75W hybrid	30	2-4' 32W-T8-HPEB1-BC	2,280	119	16,153
369	DECA Southw est	2-8' 60/75W hybrid	235	2-4' 32W-T8-HPEB1-BC	17,860	119	126,531
369	DECA Southw est	2-8' 60/75W hybrid	6	2-4' 32W-T8-HPEB1-BC	456	119	3,231
369	DECA Southw est	2-8' 60/75W hybrid	25	2-4' 32W-T8-HPEB1-BC	1,900	119	13,460

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### Energy Analysis for all Completed Projects -- 6 of 7

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
382	Devault Electric	400W MH	40	6-4' 54W-T5-EB2	5,400	114	36,650
382	Devault Electric	1000W MH	27	6-4' 54W-T5-EB2	20,790	114	141,101
389	North Point Electric LLC	40W Inc lamp	2	13W CF-SCRW	54	20	64
389	North Point Electric LLC	40W Inc lamp	4	13W CF-SCRW	108	20	129
389	North Point Electric LLC	40W Inc lamp	4	13W CF-SCRW	108	20	129
389	North Point Electric LLC	60W Inc lamp	14	15W CF-SCRW	630	20	751
389	North Point Electric LLC	60W Inc lamp	4	15W CF-SCRW	180	20	215
389	North Point Electric LLC	75W Inc lamp	66	15W CF-SCRW	3,960	60	14,145
389	North Point Electric LLC	4-4' 34/40W hybrid	8	2-4' 32W-T8-EB1	880	60	3,143
389	North Point Electric LLC	4-4' 34/40W hybrid	8	2-4' 32W-T8-EB1	880	60	3,143
389	North Point Electric LLC	4-4' 34/40W hybrid	25	2-4' 32W-T8-EB1	2,750	60	9,823
389	North Point Electric LLC	400W MH	1	2-4' 54W-T5-EB1	334	60	1,193
389	North Point Electric LLC	100W H-PAR	8	28W CF-SCRWR	560	20	667
389	North Point Electric LLC	400W MH	4	6-4' 32W-T8-EB1	940	20	1,120
389	North Point Electric LLC	400W MH	75	6-4' 32W-T8-EB1	17,625	84	88,141
389	North Point Electric LLC	400W MH	20	6-4' 32W-T8-EB1	4,700	84	23,504
393	North Point Electric LLC	100W H-PAR	16	28W CF-SCRWR	1,120	60	4,001
393	North Point Electric LLC	150W MH	25	52W CF-Wallpack	2,675	84	13,377
393	North Point Electric LLC	400W MH	54	6-4' 32W-T8-EB2	12,690	84	63,462
393	North Point Electric LLC	400W MH	25	6-4' 32W-T8-EB2	5,875	84	29,380
393	North Point Electric LLC	400W MH	3	Delamping	1,365	84	6,826
394	Inline Electrical Resources	100W Inc lamp	28	23W CF-HW	2,156	67	8,600
394	Inline Electrical Resources	2-4' 34/40W hybrid	14	2-4' 30W-T8-LPEB1	546	168	5,461
394	Inline Electrical Resources	4-4' 34/40W hybrid	4	2-4' 32W-T8-EB1	440	20	524
394	Inline Electrical Resources	4-4' 34/40W hybrid	96	2-4' 32W-T8-EB1	10,560	67	42,122
394	Inline Electrical Resources	4-4' 34/40W hybrid	8	2-4' 32W-T8-EB1	880	168	8,802
394	Inline Electrical Resources	2-8' 60/75W hybrid	4	2-4' 32W-T8-EB1-BC	360	67	1,436
394	Inline Electrical Resources	Exit Sign (2)40W-Inc	2	Exit Sign LED	150	168	1,501

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### Energy Analysis for all Completed Projects – 7 of 7

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
401	Inline Electrical Resources	2-4' 34/40W hybrid	2	1-4' 32W-T8-EB1-BC	106	168	1,060
401	Inline Electrical Resources	2-8' 60/75W hybrid	46	2-4' 32W-T8-EB1-BC	4,140	30	7,394
401	Inline Electrical Resources	2-8' 60/75W hybrid	39	2-4' 32W-T8-EB1-BC	3,510	68	14,210
401	Inline Electrical Resources	2-8' 60/75W hybrid	2	2-4' 32W-T8-EB1-BC	180	168	1,800
401	Inline Electrical Resources	2-8' 55W hybrid	12	4-3' 25W-T8-LPEB1-BC	456	68	1,846
401	Inline Electrical Resources	2-8' 60/75W hybrid	74	4-4' 32W-T8-LPEB1-BC	3,552	68	14,380
401	Inline Electrical Resources	2-8' 60/75W hybrid	12	4-4' 32W-T8-LPEB1-BC	576	168	5,761
401	Inline Electrical Resources	Exit Sign (2)40W-Inc	2	Exit Sign LED	150	168	1,501
412	Inline Electrical Resources	2-2' 20W-T12	1	2-2' 17W-T8-LPEB1	22	70	92
412	Inline Electrical Resources	2-4' 34/40W hybrid	1	2-4' 30W-T8-LPEB1	39	70	163
412	Inline Electrical Resources	2-8' 60/75W hybrid	104	2-4' 32W-T8-EB1-BC	9,360	70	39,007
412	Inline Electrical Resources	2-8' 60/75W hybrid	129	4-4' 32W-T8-EB1	4,366	70	18,278
418	Non Standard Contractor	2-2' 34/40W U hybrid	1	2-2' 32W-T8U-EB1	15	70	63
418	Non Standard Contractor	2-2' 34/40W U hybrid	1	2-2' 32W-T8U-EB1	15	70	63
418	Non Standard Contractor	2-4' 34/40W hybrid	4	2-4' 32W-T8-HPFB1	48	70	200
418	Non Standard Contractor	2-8' 60/75W hybrid	27	2-4' 32W-T8-HPFB1-R	2,052	70	8,552
418	Non Standard Contractor	2-8' 60/75W hybrid	11	2-4' 32W-T8-HPFB1-R	836	70	3,484
418	Non Standard Contractor	4-4' 34/40W hybrid	3	4-4' 32W-T8-HPFB1	144	70	600
418	Non Standard Contractor	4-4' 34/40W hybrid	4	4-4' 32W-T8-HPFB1	192	70	800
418	Non Standard Contractor	Exit Sign 30W-Incand	3	Exit Sign LED	75	168	750
TOTAL KWh SAVINGS							1,939,274

# UNS Electric, Inc.

## SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010

### APPENDIX 1 – CFL SALES AND WATTAGE INFORMATION FOR JANUARY – DECEMBER 2010

#### CFL Sales by City & Retailer

Retailer	Units	kWh Annual
<b>Kingman</b>		
Dollar Tree	2,100	112,901
Family Dollar	929	49,945
Home Depot	38,550	2,065,496
Walmart	7,591	438,223
<b>Kingman Total</b>	<b>49,170</b>	<b>2,666,565</b>
<b>Lake Havasu</b>		
Ace Hardware	2,058	109,667
Family Dollar	854	45,913
Home Depot	18,651	990,620
Lowe's	8,676	509,317
Pro Build	1,500	80,644
Walmart	6,439	353,319
<b>Lake Havasu Total</b>	<b>38,178</b>	<b>2,089,481</b>
<b>Nogales</b>		
Dollar Tree	2,100	112,901
Family Dollar	1,592	85,590
Home Depot	60,827	3,355,874
Walmart	20,233	1,343,647
<b>Nogales Total</b>	<b>84,752</b>	<b>4,898,013</b>
<b>Utility Total</b>	<b>172,100</b>	<b>9,654,059</b>

#### kWh Savings by Wattage

Units	Watts	Watts Replaced	Watts Saved	Unit kWh Annual	kWh Annual
76	7	40	33	37.7	2,865
13,061	9	40	31	35.4	462,601
5,094	10	40	30	34.3	174,602
132	11	50	39	44.6	5,882
270	12	60	48	54.8	14,807
28,170	13	60	47	53.7	1,512,702
92,540	14	60	46	52.6	4,863,580
600	14	65	51	58.3	34,962
1,630	15	60	45	51.4	83,805
1,001	15	65	50	57.1	57,184
76	16	65	49	56.0	4,255
807	18	75	57	65.1	52,555
1,816	19	75	56	64.0	116,191
5,881	20	75	55	62.8	369,558
40	20	85	65	74.3	2,971
66	23	90	67	76.5	5,052
16,728	23	100	77	88.0	1,471,646
718	23	120	97	110.8	79,573
377	26	90	64	73.1	27,567
725	26	100	74	84.5	61,297
1,952	27	120	93	106.3	207,411
91	32	150	118	134.8	12,269
249	42	150	108	123.4	30,725
<b>172,100</b>					<b>9,654,059</b>

## **UNS Electric, Inc.**

### **SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: July through December 2010**

#### **APPENDIX 2 – MARKETING MATERIALS**

##### **Education and Outreach Programs:**

- Bill Inserts:
  - UES PowerShift insert v1 (PDF)
  - UES Phantom Energy insert v1 (PDF)
- TV:
  - Bright Tweets 30 UES (WMV)
  - Full Load 15 UES sm (MOV)
  - Hand Held 15 UES sm (MOV)
  - Shut It Down 15 UES sm (MOV)
  - Water Heater 15 UES sm (MOV)
- Web:
  - marketing icon (GIF)
  - UES Otto ebill banner (JPG)
  - UES PowerShift ebill banner (PDF)
- Print:
  - UNSE PowerShift ad v1 (PDF)
- Radio:
  - UES Powershift TOU Radio 60 9\_16\_09 (MP3)

##### **Shade Tree – Trees for You:**

- Print
  - UES Trees4You ad KDM v2 (PDF)
  - UES Trees4You ad NI v1 (PDF)
  - UES Trees4You ad TNH v5 (PDF)

**UNS Electric, Inc.**

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD:  
July through December 2010

**EXHIBIT 1**

LIW Training, Monitoring and Evaluation Report (January 2011)

**ARIZONA ENERGY OFFICE  
TRAINING, MONITORING AND EVALUATION REPORT  
FISCAL YEAR 2010 ANNUAL REPORT  
January 2011  
Unisource Electric**

**Re: Arizona Department of Commerce Contract M033-08**

**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 funded through the AEO and local utilities, provides Arizona low-income weatherization technicians with the knowledge and skills needed to successfully perform diagnostics and repairs on Arizona's housing stock. The Energy Office has entered into agreement with FSL to fund a full time position to develop, coordinate and implement a comprehensive training program at the training center and an administrative assistant position.

The Training Center is currently seeking permit approval to expand 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 has been committed utilizing American Recovery and Reinvestment Act of 2009 (ARRA) funds for the construction of an expanded diagnostic lab. FSL has awarded the design contract to the architecture firm Moran Downes and it is expected that work on the new training lab will start upon completion of plan review by the City of Phoenix. .

Training center courses

<http://www.fsl.org/services/HomeEnergy/hecourses.html>

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.

In 2010 the Training Center has provided 5,080 training hours (attendees times class hours) and 309 course attendees. To date 272 contractors have been certified through BPI.

Details on BPI

<http://www.bpi.org/>

The Training Center has implemented a 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 has implemented the Weatherization (WAP) contractor mentorship program. The mentorship program is designed specifically to bridge the gap between classroom training and field experience by providing on the job training for new contractors. This training is provided by BPI

certified contractors with a minimum of three year experience in Home Performance Contracting who have been approved through a review process. AEO will fund 16 hours of mentoring per contractor.

Local agencies have the ability to expand the hours of mentorship per contractor utilizing their training funds.

The Training Center has implemented a Lead Renovator Repair and Painting certification class. On April 22<sup>nd</sup> 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 8 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 was also awarded a grant from the Department of Energy to expand the curriculum and tailor it towards the Auditor, Inspector and Crew Members of the technicians in the field. This is a two year grant that will help deliver the skilled workers that will be needed to conduct energy retrofits on existing housing.

### ***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 AEO 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 Southwest's investment, while maintaining or improving the customers' health and safety.

With increased federal funding, a total of five Weatherization field monitors have been hired.

### **Utility Bill Analysis**

To date, an analysis of 235 homes has been completed on 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 measure life, discount rate of 3% and an utility cost escalation rate of 3%.

### ***Results Summary***

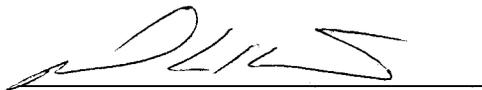
The combined SIR of all jobs reviewed to date for funds spent on diagnostics, energy measures and health and safety measures was 1.19. Health and saving represented 13% of expenditures.

The combined SIR of all jobs reviewed to date for funds spent on energy measures and diagnostics was 1.35

The average saving per home reviewed was 2667 kWh and 32 therms of natural gas (gas therms average includes all electric homes).

STATE OF ARIZONA )  
 ) ss.  
COUNTY of PIMA )

David G. Hutchens, upon his oath, certifies that to the best of his knowledge, the labor and other expenses charged to UNS Electric, Inc.'s Demand-Side Management Programs approved in Decision Nos. 70522, 70523, 70524 and 70556 are incremental costs that are not being recovered in base rates.



David G. Hutchens  
Vice President, Energy Efficiency and  
Resource Planning

SUBSCRIBED AND SWORN to me before this 31 day of March 2011.



Notary Public

My Commission Expires:

6/10/14