

P.O. Box 711
Tucson, Arizona 85702-0711



ORIGINAL



RECEIVED

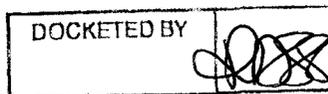
2011 SEP -1 A 11:55

September 1, 2011
ARIZONA CORPORATION COMMISSION
DOCKET CONTROL

Arizona Corporation Commission

DOCKETED

SEP 1 2011



Mr. Steven 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 1st and October 1st 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 January 1, 2011 through June 30, 2011. The marketing materials for the reported DSM programs are being filed directly with Commission Staff on the attached CD.

On January 31, 2011 UNS Electric filed its Energy Efficiency Implementation Plan wherein UNS Electric requested that this reporting requirement be superseded by the reporting requirement in the A.A.C. R14-2-2409. The Commission has yet to approve UNS Electric's Implementation Plan; therefore, UNS Electric is submitting this report in compliance with Decision No. 70360 and R14-2-2409.

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

UNS Electric, Inc.

Semi-Annual Demand-Side Management Programs Progress Report

January – June 2011

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

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 all DSM expenses by program is provided in Table 1; energy savings by program are provided in Table 2; cumulative energy savings as a comparison to the Electric Energy Savings Standard (“EEES”) are provided in Table 3; societal benefits by program are provided in Table 4; lifetime environmental savings by program are provided in Table 5; a summary of participants, year to date expenses, and the yearly budget by program are provided in Table 6; and savings and expenses by program since inception are provided in Table 7.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Table of Contents

DSM Program Expenses: January - June 2011.....	1
DSM Energy Savings: January – June 2011.....	3
Cumulative DSM Savings: January – June 2011.....	3
DSM Societal Benefits: January – June 2011.....	4
DSM Lifetime Environmental Savings: January – June 2011.....	4
DSM Summary of Participation and Expenses: January – June 2011.....	5
DSM Savings & Expenses Since Program Inception: January 1992 – June 2011	6
UNS Electric Low-Income Weatherization Program	7
UNS Electric Energy Smart Homes Program.....	9
UNS Electric Education and Outreach Programs	12
UNS Electric Shade Tree Program	15
UNS Electric Existing Homes Retrofit and Residential Energy Assessment Program.....	17
UNS Electric ENERGY STAR® Lighting Program	23
UNS Electric Commercial Facilities Efficiency Program	26
UNS Electric Miscellaneous DSM Information	29
Appendix 1 – Energy Analysis for all Completed Commercial Projects January – June 2011....	30
Appendix 2 – CFL Sales and Wattage Information for January – June 2011	36
Appendix 3 – Marketing Materials	38
Appendix 4 – Measurement, Evaluation, And Research Reports.....	39

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Table 1

DSM PROGRAM EXPENSES: JANUARY - JUNE 2011

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential Programs								
Low-income Weatherization	\$ 58,939	\$ 359	\$ -	\$ 1,951	\$ -	\$ 3,135	\$ 1,719	\$ 66,103
Energy Smart Homes	\$ 38,200	\$ 2,331	\$ 250	\$ 18,986	\$ 1,583	\$ 3,354	\$ 5,992	\$ 70,696
Shade Tree Program	\$ 165	\$ 148	\$ 90	\$ 2,348	\$ 1,553	\$ 434	\$ 4,403	\$ 9,142
ENERGY STAR® Lighting (CFL)	\$ 91,625	\$ 285	\$ 3,377	\$ 29,787	\$ 11,547	\$ 7,112	\$ 6,210	\$ 149,944
Efficient Home Cooling	\$ 82,150	\$ 4,812	\$ 353	\$ 22,840	\$ 5,875	\$ 4,943	\$ 3,231	\$ 104,204
Existing Home Program	\$ -	\$ 4,653	\$ 145	\$ 102,891	\$ 21,154	\$ 7,986	\$ 2,204	\$ 139,033
Total for Residential Programs	\$ 251,079	\$ 12,589	\$ 4,215	\$ 178,802	\$ 41,713	\$ 26,964	\$ 23,759	\$ 539,121
Support Programs								
Education & Outreach Program	\$ -	\$ 51	\$ 24,768	\$ 389	\$ -	\$ 1,273	\$ 360	\$ 26,840
Total for Support Programs	\$ -	\$ 51	\$ 24,768	\$ 389	\$ -	\$ 1,273	\$ 360	\$ 26,840
Commercial Programs								
Commercial Facilities Efficiency	\$ 165,584	\$ 596	\$ 354	\$ 68,660	\$ -	\$ 12,410	\$ 14,031	\$ 261,636
Total for Commercial Programs	\$ 165,584	\$ 596	\$ 354	\$ 68,660	\$ -	\$ 12,410	\$ 14,031	\$ 261,636
Portfolio Totals	\$ 416,663	\$ 13,236	\$ 29,337	\$ 247,851	\$ 41,713	\$ 40,647	\$ 38,150	\$ 827,597

Program Costs	\$ 827,597
Program Development, Analysis, & Reporting Software	\$ 102,914
Baseline Study	\$ 280
TOTAL	\$ 930,791

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.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

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: January through June 2011

Table 2

DSM ENERGY SAVINGS: JANUARY – JUNE 2011

Program	Capacity Savings MW	Annual MWh Savings	Annual Therm Savings	Lifetime MWh Savings	Lifetime Therm Savings
Low-Income Weatherization	0.00	89	448	1,550	7,840
Energy Smart Homes	0.12	56	456	1,683	13,686
Shade Tree	0.00	3	0	80,726	0
ENERGY STAR® Lighting (CFL)	1.13	5,373	0	32,238	0
Efficient Home Cooling	0.06	116	0	1,738	0
Existing Home Program	0.00	15	0	77	0
Education & Outreach	0.00	13	250	80	2,495
Commercial Facilities Efficiency	0.34	1,775	0	27,451	0
Portfolio Totals	1.65	7,440	1,154	145,544	24,022

Table 3

CUMULATIVE DSM SAVINGS: JANUARY – JUNE 2011

Year	Retail Energy Sales (MWh)	Incremental Annual Energy Savings (MWh)	Cumulative Annual Energy Savings (MWh)	Cumulative Annual Savings as a % of previous year Retail Sales	Cumulative EE Standard
2010	1,857,160				
2011		7,440	7,440	0.40%	1.25%

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Table 4

DSM SOCIETAL BENEFITS: JANUARY – JUNE 2011

DSM Program	Program Cost	Societal Benefits	Societal Costs	Net Benefits
Residential				
Low-Income Weatherization ¹	\$ 66,103	\$ 37,437	\$ 37,437	\$ -
Energy Smart Homes	\$ 70,696	\$ 343,846	\$ 119,953	\$ 223,893
Shade Tree	\$ 9,142	\$ 3,322	\$ 10,653	\$ (7,332)
ENERGY STAR [®] Lighting (CFL)	\$ 149,944	\$ 2,036,928	\$ 231,702	\$ 1,805,226
Efficient Home Cooling	\$ 104,204	\$ 141,268	\$ 263,526	\$ (122,258)
Existing Home Program	\$ 139,033	\$ 4,597	\$ 148,174	\$ (143,577)
Total for Residential	\$ 539,121	\$ 2,567,397	\$ 811,444	\$ 1,755,953
Non-Residential				
Commercial Facilities Efficiency	\$ 261,636	\$ 2,020,538	\$ 436,607	\$ 1,583,931
Total for Non-Residential	\$ 261,636	\$ 2,020,538	\$ 436,607	\$ 1,583,931
Portfolio Totals	\$ 800,756	\$ 4,587,935	\$ 1,248,052	\$ 3,339,884
Program Development, Analysis & Reporting Software	\$ 102,914	\$ -	\$ 102,914	\$ (102,914)
Baseline Study	\$ 280	\$ -	\$ 280	\$ (280)
TOTAL	\$ 903,950	\$ 4,587,935	\$ 1,351,246	\$ 3,236,689

¹Consistent 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 5

DSM LIFETIME ENVIRONMENTAL SAVINGS: JANUARY – JUNE 2011

Program	Lifetime SO _x Reduction (lbs)	Lifetime NO _x Reduction (lbs)	Lifetime CO ₂ Reduction (lbs)	Lifetime Water Reduction (gallons)
Low-Income Weatherization	9	184	1,936,838	401,412
Energy Smart Homes	9	200	2,164,751	436,002
Shade Tree	444	9,606	96,064,198	20,908,090
ENERGY STAR [®] Lighting (CFL)	177	3,836	38,363,528	8,349,709
Efficient Home Cooling	10	207	2,068,542	450,212
Existing Home Program	0	9	91,151	19,839
Education & Outreach	0	10	124,616	20,714
Commercial Facilities Efficiency	151	3,267	32,666,748	7,109,822
Portfolio Totals	800	17,320	173,480,372	37,695,799

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Table 6

DSM SUMMARY OF PARTICIPATION AND EXPENSES: JANUARY – JUNE 2011¹

DSM Program	Participants	# Measures	Expenses YTD	2011 Budget
Residential Programs				
Low-Income Weatherization	30	30	\$ 66,103	\$ 114,737
Energy Smart Homes	68	68	\$ 70,696	\$ 521,910
Shade Tree Program	7	11	\$ 9,142	\$ 66,950
ENERGY STAR® Lighting (CFL)	NA	106,621	\$ 149,944	\$ 360,706
Efficient Home Cooling	261	278	\$ 104,204	\$ 163,609
Existing Home Program	24	24	\$ 139,033	\$ 608,587
Total for Residential Programs	390	107,032	\$ 539,121	\$ 1,836,499
Support Programs				
Education & Outreach Program	971	108	\$ 26,840	\$ 131,127
Total for Support Programs	971	108	\$ 26,840	\$ 131,127
Commercial Programs				
Commercial Facilities Efficiency	24	2,898	\$ 261,636	\$ 437,091
Total for Commercial Programs	24	2,898	\$ 261,636	\$ 437,091
Portfolio Totals	1,385	110,038	\$ 827,597	\$ 2,404,717

¹ UNS Electric provides this table to comply with A.A.C. R-14-2-2409 (B)

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Table 7

DSM SAVINGS & EXPENSES SINCE PROGRAM INCEPTION: JANUARY 1992 – JUNE 2011²

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	Annual ^a	Jan - Jun	Annual ^a	Jan - Jun	Annual ^a
Residential											
Good Cents Homes	1994	0	452	\$ -	\$ 617,706	0.00	0.48	0	414	N/A	N/A
Energy Smart Homes	2007	68	203	\$ 70,696	\$ 567,488	0.12	0.36	56	191	456	2,801
Shade Tree	2008	11	406	\$ 9,142	\$ 62,216	0.00	0.01	3	95	N/A	N/A
ENERGY STAR® Lighting (CFL)	2008	106,621	449,829	\$ 149,944	\$ 786,497	1.13	4.03	5,373	22,879	N/A	N/A
Efficient Home Cooling	2008	261	1,192	\$ 104,204	\$ 459,308	0.06	0.30	116	739	N/A	N/A
Existing Home Program	2011	24	24	\$ 139,033	\$ 139,033	0.00	0.00	15	15	0	0
Commercial											
Commercial Facilities Efficiency	2008	24	115	\$ 261,636	\$ 1,142,892	0.34	1.77	1,775	7,963	N/A	N/A
Support Programs											
Education & Outreach*	1994	971	41,888	\$ 26,840	\$ 3,323,258	0.00	2.57	13	7,917	N/A	N/A
Low-income Weatherization	1994	30	514	\$ 66,103	\$ 441,926	0.00	0.13	89	482	448	8119
<i>*Includes numbers previously reported separately under Residential and Commercial Energy Survey and Commercial New Construction. Starting in 2011 the number of students involved in the Academic Education Program are no longer counted.</i>											
Program Development, Analysis, & Reporting Software	NA	NA	NA	\$ 102,914	\$ 609,488	NA	NA	NA	NA	NA	NA
Baseline Study	2009	NA	NA	\$ 280	\$ 149,000	NA	NA	NA	NA	NA	NA
TOTAL		108,010	494,623	\$ 930,791	\$ 8,296,791	1.65	9.64	7,440	40,694	231,710	10,920
								904			38,626

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.

² 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.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

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.

The 2011 goal is to weatherize 95 homes.

Levels of Participation

A total of 30 households received weatherization assistance during this reporting period.

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 report energy savings from weatherization activities based upon the most recent AEO report. The AEO does not report any kW demand savings. The report is attached as Appendix 4.

The July 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: January through June 2011

- 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 2,667 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
30	0.0	88,563	448

Savings are adjusted for line losses of 10.69% for both demand and energy (excluding therms).

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 ^a	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Low Income Weatherization	\$ 58,939	\$ 359	\$ -	\$ 1,951	\$ -	\$ 3,135	\$ 1,719	\$ 66,103

a. Includes \$17,556 for health and safety related repairs and \$533 for Weatherization Agencies administrative expenses.

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") requests the majority of their funding during the second half of the year. With about half of their budgets spent they are on track to spend their annual budget for 2011.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

UNS ELECTRIC ENERGY SMART HOMES PROGRAM

Description

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

Commission Decision No. 71641 (April 14, 2010) approved UNS Electric’s Pilot Zero-Net Energy Homes Program as an enhancement to the existing ESH 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.

Program Goals, Objectives, and Savings Targets

- Achieve an annual participation of 25% of new homes constructed;
- Stimulate the installation of solar photovoltaic systems and solar water heaters in new homes;
- Stimulate energy efficiency standards that are higher than EPA/ DOE, Energy Star® performance standards;
- Stimulate the installation of high efficiency heating and cooling systems, envelope, lighting, and fixed appliances (Energy Star® products);
- 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;
- Assist builder sales agents with promoting and selling energy-efficient homes; and
- Increase homebuyer awareness and understanding of energy-efficient building practices and the benefits of purchasing an energy-efficient home.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

The goal for 2011 is to capture 30% of the new home market with a tier breakdown as follows:

Tier Group by HERS	Target Goal: % of Program Homes
Tier I < 85 HERS	50%
Tier II < 70 HERS	35%
Tier III < 45 HERS	15%

Levels of Participation

The Program had 68 homes completed in this reporting period. Program staff is working with several of the current builders to bring higher performance homes to the Program. There are currently 20 builders participating in the ESH program, representing 845 potential homes.

Evaluation and Monitoring Activities and Results

Navigant Consulting, Inc. ("Navigant Consulting") performed an evaluation of this Program for 2010. The evaluation resulted in a realization rate of 78% for demand savings and 100% for energy savings. However, after adding in line losses the final realization rates were 86% for demand and 111% for energy. This report was filed in Docket No. E-04204A-06-0783 on June 15, 2011. 2011 savings have been updated as a result of the 2010 evaluation.

kW, kWh, and Therm Savings

Measure Category	No. of Homes	kW savings	kWh savings	Therm savings
Tier 1	60	94	42,185	456
Tier 2	8	23	13,929	0
Tier 3	0	0	0	0
Totals	68	118	56,114	456

Savings are adjusted for line losses of 10.69% for both demand and energy (excluding therms).

Problems Encountered and Proposed Solutions

A continuing problem is getting new construction homes to appraise with appropriate value given to the Energy Star® certification. Program staff is continuing efforts to work with EPA to provide local appraisers and realtors with education on the value of enhanced performance homes. Additional partnering with national appraisal and MLS organizations will be helpful moving into the remainder of 2011.

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.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Costs Incurred

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

DSM Program	Rebates & Incentives ^a	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Energy Smart Homes	\$ 38,200	\$ 2,331	\$ 250	\$ 18,986	\$ 1,583	\$ 3,354	\$ 5,992	\$ 70,696

a. 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

During this reporting period, Program staff began evaluating existing home construction standards for non participating builders to refine the baseline home in Mohave and Santa Cruz Counties.

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.

In 2012 UNS Electric will slightly modify its three tier program; the first level is on par with the current Guarantee Home Program and Energy Star[®] Version 2.0. This tier will require the thermal bypass checklist, tight envelopes and ducts, and a maximum HERS score of 85. Tier II will require Energy Star[®] Version 3.0 qualification and a maximum HERS score of 70. Tier III will start with Energy Star[®] Version 3.0 qualification and a maximum HERS score of 70, but will also incorporate renewable technology to achieve a maximum HERS score of 45.

No new marketing materials were produced during this reporting period.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

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:

- Kingman Home and Garden Expo, Kingman;
- Lake Havasu City Homebuilder's Show, Lake Havasu City;
- Colorado River Builder's Association, Lake Havasu City;
- Northwestern Arizona Builder's Association, Kingman;
- Golden Valley Earth Day Celebration, Golden Valley; and
- Rotary Club, Kingman.

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

UNS Electric continues to market existing customer and academic education programs, including the Energy Advisor and TOU awareness using the venues listed below:

- Bill inserts and messages;
- Brochures;
- Paid web advertising;
- In-house advertising on uesaz.com;
- Media Q&A, newspaper and radio ads;
- Tradeshows/Community events and premium giveaways; and
- Call Center training.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

UNS Electric is developing an energy conservation workshop for its residential customers, complete with a take home energy conservation kit. This workshop was presented to a group of utility employees. Energy savings based on the kits provided to the employees are reported in the All Education and Outreach Programs subsection below. Pending Commission approval of the UNS Electric 2011-2012 Implementation Plan and its Behavioral Comprehensive Program, this early work will expedite roll out of the Community Education portion of that Program.

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, 545 residential customers and 82 commercial customers accessed the online Energy Advisor, with 202 residential customers and 6 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, 129 customers were enrolled in the PowerShift™ TOU Program.

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

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 the 2010-2011 school year, energy conservation/environmental classroom materials were given to 236 teachers for a total of 44,788 pieces. This exceeded the Program goal by 725 booklets. The Education portion of the UNS Electric website received 5,403 visits with 9,158 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 is just beginning to claim energy savings for its education and outreach programs. UNS Electric has included new programs encompassing more significant neighborhood outreach, direct education, installation of energy saving

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

items, and programs that affect consumer behavior in its 2011-2012 Implementation Plan. These expanded programs are designed to allow for measurement and evaluation of energy savings.

kW, kWh, and Therm Savings

No. of Kits	kW savings	kWh savings	Therm savings
108	1.3	13,001	250

Savings are adjusted for line losses of 10.69% for both demand and energy (excluding therms).

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Education & Outreach	\$ -	\$ 51	\$ 24,768	\$ 389	\$ -	\$ 1,273	\$ 360	\$ 26,840

Findings from All Research Projects

No research projects were performed during this reporting period.

Other Significant Information

The 2011-2012 UNS Electric Implementation Plan includes a revised K-12 program aimed at energy conservation education and how it can be applied at home. Revised K-12 curriculum development is anticipated in the second half of 2011. Other new programs in the recently filed Behavioral Comprehensive portfolio include Home Energy Reports, Community Education, CFL give-away and direct neighborhood canvassing.

No new marketing materials were produced during this reporting period.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

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

Program goals for 2011:

No. Trees Planted	250
kWh savings	55,250

Levels of Participation

For this reporting cycle, UNS Electric received 7 customer applications for a total of 11 trees.

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this program for 2010. The evaluation resulted in a realization rate of 78% for demand savings and 100% for energy savings. However, after adding in line losses the final realization rates were 89% for demand and 111% for energy. This report was filed in Docket No. E-04204A-06-0783 on June 15, 2011. 2011 savings have been updated as a result of the 2010 evaluation. Additionally, after the evaluation report, Navigant Consulting has determined that the small demand savings may not be applicable, therefore UNS Electric has decided to no longer report any demand savings.

kW, kWh, and Therm Savings

No. of Trees	kW savings	kWh savings	Therm savings
11	0.0	2,691	0

Savings are adjusted for line losses of 10.69% for both demand and energy.

Problems Encountered and Proposed Solutions

UNS Electric is currently working with the University of Arizona Mohave County Cooperative Extension Programs Master Gardeners Club to help promote the Trees for You Program. They would like to see the eligible tree list expanded to increase the number of trees that are appropriate for the Kingman area.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Winter temperatures in Kingman regularly drop below freezing and some of the eligible trees are not appropriate for that type of weather. Having the expertise and support of the Master Gardeners will help UNS Electric select more appropriate trees for eligibility in the Program which may help increase participation levels.

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.

UNS Electric has actively promoted this Program through the website as well as providing information at local events and home shows.

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	\$ 165	\$ 148	\$ 90	\$ 2,348	\$ 1,553	\$ 434	\$ 4,403	\$ 9,142

Findings from All Research Projects

No research projects were conducted during this reporting period.

Other Significant Information

Tree planting typically slows down dramatically in the second half of the year and program modifications are being explored as stated above. 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 was 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.

No new marketing materials were produced during this reporting period.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

UNS ELECTRIC EXISTING HOMES RETROFIT AND RESIDENTIAL ENERGY ASSESSMENT PROGRAM

Description

The UNS Electric Existing Homes Retrofit Program is designed to encourage homeowners to increase the energy efficiency of their homes. The Program provides incentives for high-efficiency heating, ventilation and air conditioning ("HVAC") equipment and for home performance services such as sealing leaky duct work, installing insulation, air sealing, and other thermal envelope improvements in existing homes. The Program provides direct incentives to participating contractors with the requirement that the incentives are passed on to utility customers as a line item credit toward approved Program measures. Along with the direct incentives UNS Electric provides Building Performance Institute ("BPI") and Program administrative training and mentoring to the contractors to help them meet the Program requirements.

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

The Existing Home Retrofit Program received Commission approval on December 10, 2010, in Decision No. 72028, and the Residential Energy Assessment Program received Commission approval on January 6, 2011 in Decision No. 70263. While contained in separate decisions, the programs are designed to complement each other and are administered and reported as a single program. The Program will be marketed as the BrightSave Home Program, and replaces the previous Efficient Home Cooling Program.

TEP conducted an RFP process to select an Implementation Contractor ("IC") and Conservation Services Group ("CSG") was the successful bidder.

Program Modifications

Upon the initial public launch of the REAP in May 2011 several new homes, including some very large homes (one listed at 31,000 square feet), requested audits. In response new Program participation qualifications were instituted with the goal of reducing the number of audits being performed where little efficiency could be gained and/or the home size exceeded the Programs economic model & technical parameters. The additional qualifications added are as follows:

- Homes must be constructed in or prior to 2005 to avoid testing the most energy efficient homes in the service territory. Homes built after 2005 may still be eligible for a REAP audit when referred as a "high bill" customer that may be experiencing atypical energy use due to acute design, equipment, or other issues.
- Homes may not exceed 3,500 square feet in conditioned floor area. This size designation was established to align with the program's economic model which affords each audit be performed by a single auditor in a half-day increment. Homes over 3,500 square feet require either a full day to audit and/or multiple auditors to staff, significantly increasing the cost of the audit and significantly reducing the cost effectiveness. An additional technical consideration with some

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

very large homes is that their HVAC systems often utilize commercial equipment outside the expertise of residentially trained technicians.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

The following modifications and additions to incentivized retrofit measures have also been instituted:

- HVAC Early Retirement incentive qualification has been modified to include existing systems rated at 10.0 SEER or less (previously had to be less than 10 SEER);
- Air Sealing and Insulation credit for installing vertical insulation in the thermal plane of insulated attic spaces including knee-walls and skylight shafts;
- A \$250 A/C upgrade incentive for swamp cooler replacements based solely on the new equipment meeting minimum Energy Star efficiency standards. The technical justification is identical to the existing ROB incentive designed to motivate customers to install more efficient equipment than currently required by code where other factors have already motivated them to install a new A/C unit; and
- Expanding solar shade screen and window film incentives to exposed easterly facing glazing.

UNS Electric officially ended the Residential Efficient Home Cooling Program May 1, 2011. The contractors were given until May 31, 2011 to complete scheduled jobs and to submit all required paperwork for the participant rebates.

Program Goals, Objectives and Savings Targets

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

- The proper sizing and quality installation of high efficiency HVAC equipment, sealing leaky ductwork, and installation of thermal envelope measures;
- Advance the building science skills of participating contractors leading to BPI certification; and
- Achieving designation as a Home Performance with Energy Star participating program.

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

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

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

The 2011 Program goals are:

Retrofit Measure	Goal
HVAC Replace on Burnout with Quality Install and Duct Sealing- Prescriptive	100
HVAC Replace on Burnout with Quality Install and Duct Sealing- Performance	50
HVAC Early Retirement with Quality Install and Duct Sealing- Prescriptive	75
HVAC Early Retirement with Quality Install and Duct Sealing- Performance	50
Duct Sealing- Prescriptive	100
Duct Sealing- Performance	40
Air Sealing	100
Air Sealing and Attic Insulation	100
Solar Shade Screens/Window Film	50

Energy Assessment Measure	Goal
Audits	400
Direct install- CFL	4,000
Direct install- Power strip	400

Levels of Participation

Efficient Home Cooling

For this reporting period, UNS Electric has paid rebates on 278 HVAC units as follows:

Quantity	Equipment Type	SEER	Incremental Cost
56	Air Conditioner	14	\$419.84
91	Heat Pump	14	\$420.92
26	Air Conditioner	15	\$845.35
27	Heat Pump	15	\$874.39
32	Air Conditioner	16	\$1,316.08
25	Heat Pump	16	\$1,299.82
5	Air Conditioner	17	\$1,757.12
5	Heat Pump	17	\$1,697.05
8	Air Conditioner	18	\$2,020.42
3	Heat Pump	18	\$2,008.69
278			

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

BrightSave Home

The number of contractors recruited into the Program is sixteen of which nine have achieved the BPI certification of participating staff. 24 audits were performed.

Evaluation and Monitoring Activities and Results

UNS Electric will adopt a strategy that calls for integrated data collection, which is designed to provide a quality data resource for Program tracking, management and evaluation. This approach will entail the following primary activities:

- Database management: As part of Program operation, UNS Electric will collect the necessary data elements to populate the tracking database and provide periodic reporting;
- Integrated implementation data collection: UNS Electric will establish systems to collect the data needed to support effective Program management and evaluation through the implementation and customer application processes. The database tracking system will be integrated with implementation data collection processes;
- Field verification: UNS Electric and/or the MER contractor will conduct field verification of the installation of a sample of measures throughout the implementation of the Program; and
- Tracking of savings using deemed savings values: UNS Electric will develop deemed savings values for each measure and technology promoted by the Program and the MER contractor will periodically review and revise the savings values to be consistent with Program participation, and accurately estimate the savings being achieved by the Program.

kW, kWh, and Therm Savings

Efficient Home Cooling

No. of Units	kW savings	kWh savings	Therm savings
278	56.4	115,885	0

BrightSave Home

Measure	Units	kW Savings	kWh Savings
Air Sealing	0	0	0
Duct Testing & Repair	0	0	0
Early Retirement	0	0	0
Replace on Burnout	0	0	0
Shade Screens	0	0	0
Energy Audits	24	2	15,344
Totals	24	2	15,344

Savings are adjusted for line losses of 10.69% for both demand and energy.

Problems Encountered and Proposed Solutions

The use of CSG's sophisticated Energy Measures software to refine energy saving estimates and performance testing has introduced an adaptation period during which refinements to conform to Program requirements and regional climate are ongoing. In addition, work is ongoing to calibrate the software's energy saving calculation models. UNS Electric anticipates the software refinements and calibrations to be complete later this year.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

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 ^a	Program Marketing ^b	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Efficient Home Cooling	\$ 62,150	\$ 4,812	\$ 353	\$ 22,840	\$ 5,875	\$ 4,943	\$ 3,231	\$ 104,204

a. Includes \$18,739 paid to KEMA, the IC.

b. All \$5,875 for contractor rebates.

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation ^a	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Existing Home Program	\$ -	\$ 4,653	\$ 145	\$ 102,891	\$ 21,154	\$ 7,986	\$ 2,204	\$ 139,033

a. Includes \$12,597 paid to CSG, the IC.

Findings from All Research Projects

No research projects have been undertaken during this time period.

Other Significant Information

The timeline of key events during Program planning and launch is as follows:

November 2010	Final Implementation Contractor interviews conducted
December 2010	Letter of Intent issued to Conservation Services Group awarding contract as program implementation contractor
January 2011	Program staff hiring, BPI training and field certification
March 2011	REAP software, CSG's Energy Measure Home, completes UniSource Information Services and Security technical screening
March 2011	Program Launch for Contractors
April 2011	First UNS Electric Contractor BPI Training
May 2011	Phase in of BrightSave Home incentives, phase out of Efficient Home Cooling Program incentives
May 23, 2011	Official launch of REAP audits
June 2011	Efficient Heating and Cooling Program closed out

In July of 2011 UNS Electric will submit an application for the program to become Home Performance with Energy Star certified. UNS Electric expects to achieve certification in August of 2011.

A list of new marketing materials is shown in Appendix 3 and available on the attached CD.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

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.

Sales, demand, and energy savings goals for 2011:

Projected Lamp Sales	212,451
Peak Demand Savings (kW)	1,084
Energy Savings (kWh)	11,946,819

Levels of Participation

A total of 106,621 CFLs were sold during this reporting period. CFL sales by retailer and wattage are listed in Appendix 1.

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2010. The evaluation resulted in a realization rate of 230% for demand savings and 140% for energy savings. However, after adding in line losses the final realization rates were 255% for demand and 154% for energy. This report was filed in Docket No. E-04204A-06-0783 on June 15, 2011. 2011 savings have been updated as a result of the 2010 evaluation.

kW, kWh, and Therm Savings

No. of Units Sold	kW savings	kWh savings	Therm savings
106,621	1132.7	5,373,043	0

Savings are adjusted for line losses of 10.69% for both demand and energy.

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

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

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 is continuing this process because the benefits of increased sales and savings are greater than the extra cost.

A potential problem is the availability of rare earth minerals. CFL bulbs require these minerals to operate. Reduced availability may result in an increase in the price of CFL bulbs, which could negatively impact sales. A possible solution is to increase incentives to lower the price of the bulbs to consumers. UNS Electric will continue to monitor the impact of the price increases on sales and adjust the Program policies or incentives as needed.

There is confusion in the marketplace regarding the Energy Independence and Security Act ("EISA") and the resulting changes in incandescent bulbs that will meet the new efficiency standards. Customers and retail employees do not have a good understanding of the changes that are about to take place. UNS Electric has been conducting training sessions for employees while at retail stores. In addition, a marketing piece has been developed that explains the phase out as mandated by the federal government. These are being handed out during store events.

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 ^a	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
ENERGY STAR [®] Lighting (CFL)	\$ 91,625	\$ 285	\$ 3,377	\$ 29,787	\$ 11,547	\$ 7,112	\$ 6,210	\$ 149,944

a. Includes \$29,787 paid to ECOS, the IC.

Findings from All Research Projects

No research projects have been undertaken during this time period.

Other Significant Information

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 151 store visits during this reporting period. In addition, UNS Electric held seven aisle training events for retail employees.

UNS Electric performed 13 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.

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;
- 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 CFL and an LED bulb were added to the display to help answer consumer questions;

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

- 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;
- A new marketing piece has been developed that explains the EISA rule and the changes being made to the incandescent bulbs;
- Delivery of a promotional bill insert to over 82,000 UNS Electric customers in the June/July billing cycle;
- There were 337 web hits most of which were users searching for a store location to purchase CFL bulbs; and
- During the week surrounding Earth Day, ads were placed in the Nogales, Lake Havasu, and Kingman newspapers promoting the benefits of CFLs.

A list of new marketing materials is shown in Appendix 3 and available on the attached CD.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

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.

The savings goal for 2011 is 2,494 MWh.

Levels of Participation

Twenty-eight new applications were received during this reporting period. A total of \$528,844 in rebates was paid and 24 businesses participated during this reporting period.

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2010. The evaluation resulted in a realization rate of 109% for demand savings and 114% for energy savings. However, after adding in line losses the final realization rates were 120% for demand and 127% for energy. This report was filed in

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Docket No. E-04204A-06-0783 on June 15, 2011. 2011 savings have been updated as a result of the 2010 evaluation.

kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings	Incremental Cost
HVAC ^a	8	1	54,430	\$530.92
Lighting	2,890	341	1,720,745	\$116.37
Totals	2,898	342	1,775,175	

a. HVAC measures installed consist of three AC/HP units and five programmable thermostats.

Savings are adjusted for line losses of 10.69% for both demand and energy.

Average Job Cost and Actual Customer Cost

Job #	Total Cost	Customer Cost	Job #	Total Cost	Customer Cost
1	\$25,409.42	\$15,409.42	13	\$3,643.80	\$2,137.17
2	\$27,552.80	\$17,552.80	14	\$12,359.80	\$6,979.11
3	\$13,286.90	\$4,682.72	15	\$7,336.60	\$2,475.06
4	\$11,629.80	\$3,955.82	16	\$6,500.00	\$3,397.16
5	\$2,593.70	\$237.16	17	\$31,758.97	\$21,758.97
6	\$24,915.00	\$14,915.00	18	\$4,270.20	\$414.04
7	\$20,312.60	\$12,133.72	19	\$22,500.00	\$12,500.00
8	\$2,643.80	\$728.32	20	\$4,363.20	\$2,698.62
9	\$11,136.00	\$7,047.77	21	\$23,240.00	\$13,240.00
10	\$34,203.06	\$24,203.06	22	\$12,118.90	\$6,760.69
11	\$24,112.80	\$14,112.80	23	\$3,430.27	\$2,155.27
12	\$4,740.20	\$2,525.62	24	\$5,680.60	\$550.79
Average:				\$14,155.77	\$8,023.80

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 ^a	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Commercial Facilities Efficiency	\$ 165,584	\$ 596	\$ 354	\$ 68,660	\$ -	\$ 12,410	\$ 14,031	\$ 261,636

a. Includes \$54,145 paid to KEMA, the IC.

Findings from All Research Projects

No research projects have been undertaken during this time period.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Other Significant Information

Marketing efforts for this reporting period include:

- 54 presentations and sales calls made to:
 - Various business associations and individual businesses;
 - Municipal governments within UNS Electric service territory; and
 - School systems within UNS Electric service territory.
- Participation at the Lake Havasu City and Kingman spring home shows where Representatives were available to discuss Program details and distribute brochures;
- A Trade Ally meeting held in April 2011. Year end results were presented and goals for 2011 were outlined. Using certified contractors to help promote the Program has proven to be very successful; and
- There were 2,493 hits on the website. The web is proving to be a successful marketing tool for the Program.

Due to the increased volume of participation, KEMA hired an Outreach Representative for their team. This person helps customers determine which measures are best suited for their participation. This person is also heavily involved in marketing the program through presentations and outreach events. KEMA has also established a sales call tracking data base that will help get more repeat business and help track detailed customer participation.

The UNS Electric Business Program website was updated

See pages 29-34 for an energy analysis of all completed projects.

No new marketing materials were produced during this reporting period.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

UNS ELECTRIC MISCELLANEOUS DSM INFORMATION

Description

UNS Electric filed its 2011-2012 Energy Efficiency Implementation Plan ("Plan") on February 1, 2011, in accordance with Section R14-2-2405 of the Electric Energy Efficiency Standards ("EE Standards"). The Plan asks for continuance of existing DSM programs and the approval of new DSM programs, to be implemented either in 2011 or 2012. UNS Electric is proposing the following new Residential, Commercial, Behavioral and Support DSM Programs: Home Energy Reports, Multi-Family, Appliance Recycling, Schools Program, Retro-Commissioning, Bid-for-Efficiency, Behavioral Comprehensive (including K-12 Education, Direct Canvassing, and Community Education), Residential Financing, and Codes and Support.

In order to properly track and report the extensive energy savings and expenses associated with the EE Standards UNS Electric has identified the need for a comprehensive tracking and reporting software solution. In March UNS Electric submitted an RFI to 12 prospective vendors, and received ten responses. After evaluation UNS Electric submitted a Request for Quote to the top two vendors in June. UNS Electric plans to select a vendor during the 3rd quarter of 2011.

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

APPENDIX 1 – ENERGY ANALYSIS FOR ALL COMPLETED COMMERCIAL PROJECTS JANUARY – JUNE 2011

Energy Analysis for all Completed Projects – 1 of 6

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
290	DECA Southw est	40W Inc lamp	36	11W CF-SCRW	1,044	20	1,205.68
290	DECA Southw est	60W Inc lamp	3	13W CF-SCRW	141	20	165.24
290	DECA Southw est	60W Inc lamp	6	13W CF-SCRW	282	20	330.49
290	DECA Southw est	60W Inc lamp	11	13W CF-SCRW	517	78	2,328.55
290	DECA Southw est	75W Inc lamp	4	13W CF-SCRW	248	84	1,220.70
290	DECA Southw est	1-4' 34/40W hybrid	1	1-4' 32W T8-EB1	19	78	85.58
290	DECA Southw est	1-4' 34/40W hybrid	1	1-4' 32W T8-EB1	19	78	85.58
290	DECA Southw est	100W Inc lamp	1	18W CF-SCRW	82	20	94.70
290	DECA Southw est	100W Inc lamp	8	18W CF-SCRW	656	20	768.79
290	DECA Southw est	2-2' 20W-T12	2	2-2' 17W T8-EB1	40	20	46.19
290	DECA Southw est	2-2' 20W-T12	10	2-2' 17W T8-EB1	200	78	900.79
290	DECA Southw est	2-4' 34/40W hybrid	1	2-4' 32W T8-EB1	26	78	117.10
290	DECA Southw est	2-8' 60/75W hybrid	2	2-4' 32W T8-HFEB1-BC	152	20	175.54
290	DECA Southw est	2-8' 60/75W hybrid	3	2-4' 32W T8-HFEB1-BC	228	84	1,105.90
290	DECA Southw est	2-8' 60/75W hybrid	4	2-4' 32W T8-HFEB1-BC	304	78	1,369.21
290	DECA Southw est	2-8' 60/75W hybrid	6	2-4' 32W T8-HFEB1-BC	456	78	2,053.81
290	DECA Southw est	2-8' 60/75W hybrid	6	2-4' 32W T8-HFEB1-BC	456	78	2,053.81
290	DECA Southw est	2-8' 60/75W hybrid	7	2-4' 32W T8-HFEB1-BC	532	78	2,396.11
290	DECA Southw est	2-8' 60/75W hybrid	8	2-4' 32W T8-HFEB1-BC	608	40	1,404.32
290	DECA Southw est	2-8' 60/75W hybrid	10	2-4' 32W T8-HFEB1-BC	760	78	3,423.02
290	DECA Southw est	2-8' 60/75W hybrid	11	2-4' 32W T8-HFEB1-BC	836	78	3,765.32
290	DECA Southw est	2-8' 60/75W hybrid	13	2-4' 32W T8-HFEB1-BC	988	78	4,449.93
290	DECA Southw est	2-8' 60/75W hybrid	14	2-4' 32W T8-HFEB1-BC	1,064	84	5,160.86
290	DECA Southw est	2-8' 60/75W hybrid	14	2-4' 32W T8-HFEB1-BC	1,064	84	5,160.86
290	DECA Southw est	2-8' 60/75W hybrid	23	2-4' 32W T8-HFEB1-BC	1,748	78	7,872.95
290	DECA Southw est	2-8' 60/75W hybrid	24	2-4' 32W T8-HFEB1-BC	1,824	78	8,215.25
290	DECA Southw est	2-8' 60/75W hybrid	27	2-4' 32W T8-HFEB1-BC	2,052	78	9,242.15
290	DECA Southw est	2-8' 60/75W hybrid	31	2-4' 32W T8-HFEB1-BC	2,356	78	10,611.36

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Energy Analysis for all Completed Projects - 2 of 6

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
290	DECA Southw est	2-4' 34/40W hybrid	1	2-4' 32W T8-LPEB1	33	20	38.11
290	DECA Southw est	2-4' 34/40W hybrid	1	2-4' 32W T8-LPEB1	33	84	160.06
290	DECA Southw est	2-4' 34/40W hybrid	1	2-4' 32W T8-LPEB1	33	78	148.63
290	DECA Southw est	2-4' 34/40W hybrid	2	2-4' 32W T8-LPEB1	66	20	76.22
290	DECA Southw est	2-4' 34/40W hybrid	2	2-4' 32W T8-LPEB1	66	84	320.13
290	DECA Southw est	2-4' 34/40W hybrid	4	2-4' 32W T8-LPEB1	132	30	228.66
290	DECA Southw est	2-4' 34/40W hybrid	5	2-4' 32W T8-LPEB1	165	84	800.32
290	DECA Southw est	2-4' 34/40W hybrid	5	2-4' 32W T8-LPEB1	165	78	743.16
290	DECA Southw est	2-4' 34/40W hybrid	17	2-4' 32W T8-LPEB1	561	78	2,526.73
290	DECA Southw est	150W inc lamp	2	26W CF-SCRW/R	248	84	1,220.70
290	DECA Southw est	400W MH	10	4-4' 54W T5-EB2	2,210	78	8,963.76
343	North Point Electric LLC	2-8' 60/75W hybrid	262	2-4' 32W T8-HPEB1-R	19,912	90	103,480.52
343	North Point Electric LLC	100W HFS	9	52W CF-Wallpack	630	84	2,751.84
343	North Point Electric LLC	400W MH	3	52W CF-Wallpack	1,185	84	5,176.08
358	Sun Lighting Inc	2-6' 55W hybrid	5	2-3' 25W T8-EB1-BC	360	60	1,247.25
358	Sun Lighting Inc	2-6' 55W hybrid	6	2-3' 25W T8-EB1-BC	432	60	1,496.71
358	Sun Lighting Inc	4-4' 34/40W hybrid	6	2-4' 32W T8-EB1	660	60	2,286.63
358	Sun Lighting Inc	4-4' 34/40W hybrid	8	2-4' 32W T8-EB1	880	60	3,048.84
358	Sun Lighting Inc	2-8' 60/75W hybrid	2	2-8' 56W T8-EB1	78	60	270.24
358	Sun Lighting Inc	3-8' 60/75W hybrid	2	2-8' 56W T8-EB1	250	168	2,425.22
358	Sun Lighting Inc	3-8' 60/75W hybrid	4	2-8' 56W T8-EB1	500	168	4,850.43
358	Sun Lighting Inc	3-8' 60/75W hybrid	52	2-8' 56W T8-EB1	6,500	60	22,519.87
358	Sun Lighting Inc	3-8' 60/75W hybrid	59	2-8' 56W T8-EB1	7,375	60	25,551.39
403	Inline Electrical Resources	2-4' 34/40W hybrid	1	2-4' 30W T8-LPEB1	39	68	153.14
403	Inline Electrical Resources	2-4' 34/40W hybrid	6	2-4' 30W T8-LPEB1	234	68	918.81
403	Inline Electrical Resources	2-8' 60/75W hybrid	1	2-4' 32W T8-EB1-BC	90	68	353.39
403	Inline Electrical Resources	2-8' 60/75W hybrid	10	2-4' 32W T8-EB1-BC	900	68	3,533.89
403	Inline Electrical Resources	3-8' 60/75W hybrid	105	4-4' 32W T8-EB1-BC	13,020	68	51,123.56

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Energy Analysis for all Completed Projects - 3 of 6

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
403	Inline Electrical Resources	Exit Sign (2)40W-Inc	1	Exit Sign LED	75	168	742.25
411	Inline Electrical Resources	2-2' 34/40W U hybrid	11	2-2' 32W T8-EB1	165	66	628.82
411	Inline Electrical Resources	4-4' 34/40W hybrid	39	2-4' 32W T8-EB1	4,290	66	16,349.42
411	Inline Electrical Resources	Exit Sign (2)40W-Inc	1	Exit Sign LED	75	168	742.25
415	North Point Electric LLC	400W MH	80	6-4' 32W T8-EB2 High bay	18,800	70	68,432.00
436	North Point Electric LLC	2-8' 60/75W hybrid	4	2-4' 32W T8-HPEB1-R	304	75	1,316.55
436	North Point Electric LLC	400W MH	47	6-4' T8-EB1 High bay	13,677	75	53,340.30
442	Inline Electrical Resources	4-4' 34/40W hybrid	21	2-4' 32W T8-EB1	2,310	63	8,403.38
442	Inline Electrical Resources	2-8' 60/75W hybrid	10	2-4' 32W T8-EB1-BC	900	63	3,274.04
442	Inline Electrical Resources	2-8' 60/75W hybrid	6	4-4' 32W T8-LPEB1-BC	288	63	1,047.69
442	Inline Electrical Resources	Exit Sign (2)40W-Inc	2	Exit Sign LED	150	168	1,484.50
447	North Point Electric LLC	65W PA-R-Inc	7	15W CF-SCRW	350	70	1,274.00
447	North Point Electric LLC	2-8' 60/75W hybrid	4	2-4' 32W T8-HPEB1-BC	304	70	1,228.78
447	North Point Electric LLC	2-8' 60/75W hybrid	72	2-4' 32W T8-HPEB1-BC	5,472	70	22,117.97
447	North Point Electric LLC	1-8' 60/75W hybrid	38	2-4' 32W T8-LPEB1-BC	1,368	84	6,635.39
450	DECA Southw est	4-4' 34/40W hybrid	3	2-4' 32W T8 EB1-R	330	147	2,801.13
450	DECA Southw est	2-4' 34/40W hybrid	1	2-4' 32W T8-EB1	26	147	220.69
450	DECA Southw est	2-4' 34/40W hybrid	11	2-4' 32W T8-EB1	286	147	2,427.64
450	DECA Southw est	3-4' 32W-T8-EB1	4	2-4' 32W T8-EB1-R	120	147	1,018.59
450	DECA Southw est	3-4' 32W-T8-EB1	7	2-4' 32W T8-EB1-R	210	147	1,782.53
450	DECA Southw est	3-4' 32W-T8-EB1	8	2-4' 32W T8-EB1-R	240	147	2,037.18
450	DECA Southw est	3-4' 32W-T8-EB1	14	2-4' 32W T8-EB1-R	420	147	3,565.07
450	DECA Southw est	3-4' 32W-T8-EB1	19	2-4' 32W T8-EB1-R	570	147	4,838.31
450	DECA Southw est	4-4' 34/40W hybrid	10	2-4' 32W T8-EB1-R	1,100	147	9,337.08
450	DECA Southw est	4-4' 34/40W hybrid	11	2-4' 32W T8-EB1-R	1,210	147	10,270.79
450	DECA Southw est	2-8' 60/75W hybrid	9	2-4' 32W T8-HPEB1-BC	684	147	5,805.97
450	DECA Southw est	2-8' HO hybrid	44	4-4' 32W T8-EB1-BC	5,192	147	44,071.03
450	DECA Southw est	2-8' HO hybrid	213	4-4' 32W T8-EB1-BC	25,134	147	213,343.87

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Energy Analysis for all Completed Projects - 4 of 6

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
450	DECA Southw est	3-8' 60/75W hybrid	22	4-4' 32W T8-EB1-R	2,892	147	24,463.16
452	North Point Electric LLC	1-8' 60/75W hybrid	2	2-4' 32W T8-EB1	46	40	106.25
452	North Point Electric LLC	2-8' 60/75W hybrid	2	2-4' 32W T8-HPEB1-BC	152	50	438.85
452	North Point Electric LLC	2-8' 60/75W hybrid	2	2-4' 32W T8-HPEB1-BC	152	20	175.54
452	North Point Electric LLC	2-8' 60/75W hybrid	12	2-4' 32W T8-HPEB1-BC	912	70	3,686.33
452	North Point Electric LLC	2-8' 60/75W hybrid	33	2-4' 32W T8-HPEB1-BC	2,508	70	10,137.40
452	North Point Electric LLC	2-8' 60/75W hybrid	33	2-4' 32W T8-HPEB1-BC	2,508	70	10,137.40
452	North Point Electric LLC	2-8' 60/75W hybrid	34	2-4' 32W T8-HPEB1-BC	2,584	70	10,444.60
452	North Point Electric LLC	400W MH	2	6-4' 32W T8-EB2 High bay	470	70	1,710.80
452	North Point Electric LLC	400W MH	2	6-4' 32W T8-EB2 High bay	470	70	1,710.80
452	North Point Electric LLC	400W MH	3	6-4' 32W T8-EB2 High bay	705	70	2,566.20
452	North Point Electric LLC	400W MH	4	6-4' 32W T8-EB2 High bay	940	70	3,421.60
452	North Point Electric LLC	400W MH	16	6-4' 32W T8-EB2 High bay	3,760	70	13,686.40
452	North Point Electric LLC	2-8' 60/75W hybrid	2	6-4' T8-HPEB2	-144	70	-582.05
452	North Point Electric LLC	250W MH	3	6-4' T8-HPEB2 High bay	210	70	764.40
452	North Point Electric LLC	250W MH	9	6-4' T8-HPEB2 High bay	630	70	2,293.20
452	North Point Electric LLC	250W MH	12	6-4' T8-HPEB2 High bay	840	70	3,057.60
452	North Point Electric LLC	2-8' 60/75W hybrid	2	6-4' T8-HPEB2 High bay	-144	70	-582.05
452	North Point Electric LLC	2-8' 60/75W hybrid	2	6-4' T8-HPEB2 High bay	-144	70	-582.05
452	North Point Electric LLC	2-8' 60/75W hybrid	2	6-4' T8-HPEB2 High bay	-144	70	-582.05
452	North Point Electric LLC	2-8' 60/75W hybrid	3	6-4' T8-HPEB2 High bay	-216	70	-873.08
452	North Point Electric LLC	2-8' 60/75W hybrid	9	6-4' T8-HPEB2 High bay	-648	70	-2,619.23
452	North Point Electric LLC	2-8' 60/75W hybrid	2	Permanent Removal	325	70	1,384.11
452	North Point Electric LLC	2-8' 60/75W hybrid	2	Permanent Removal	325	70	1,384.11
452	North Point Electric LLC	2-8' 60/75W hybrid	6	Permanent Removal	975	70	4,152.33
452	North Point Electric LLC	2-8' 60/75W hybrid	8	Permanent Removal	1,300	70	5,536.44
452	North Point Electric LLC	2-8' 60/75W hybrid	9	Permanent Removal	1,463	70	6,228.50
452	North Point Electric LLC	2-8' 60/75W hybrid	12	Permanent Removal	1,950	70	8,304.66

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Energy Analysis for all Completed Projects - 5 of 6

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
460	Inline Electrical Resources	2-4' 34/40W hybrid	2	2-4' 30W T8-LPEB1	78	70	315.28
460	Inline Electrical Resources	2-8' 60/75W hybrid	2	2-4' 32W T8-EB1-BC	180	168	1,746.16
460	Inline Electrical Resources	2-8' 60/75W hybrid	10	2-4' 32W T8-EB1-BC	900	70	3,637.82
460	Inline Electrical Resources	2-8' 60/75W hybrid	13	2-4' 32W T8-EB1-BC	1,170	70	4,729.17
460	Inline Electrical Resources	2-8' 60/75W hybrid	2	4-4' 32W T8-LPEB1-BC	96	70	388.03
460	Inline Electrical Resources	2-8' 60/75W hybrid	25	4-4' 32W T8-LPEB1-BC	1,200	70	4,850.43
460	Inline Electrical Resources	Exit Sign (2)40W-inc	1	Exit Sign LED	75	168	742.25
463	Inline Electrical Resources	2-8' 60/75W hybrid	25	2-4' 32W T8-EB1-BC	2,250	63	8,185.11
463	Inline Electrical Resources	2-8' 60/75W hybrid	17	4-4' 32W T8-LPEB1-BC	816	63	2,968.46
465	Inline Electrical Resources	2-4' 34/40W hybrid	1	2-4' 30W T8-LPEB1	39	66	148.63
465	Inline Electrical Resources	2-4' 34/40W hybrid	3	2-4' 30W T8-LPEB1	117	66	445.89
465	Inline Electrical Resources	2-8' 60/75W hybrid	18	2-4' 32W T8-EB1-BC	1,620	66	6,173.91
465	Inline Electrical Resources	2-8' 60/75W hybrid	18	2-4' 32W T8-EB1-BC	1,620	66	6,173.91
465	Inline Electrical Resources	2-8' 60/75W hybrid	48	2-4' 32W T8-EB1-BC	4,320	66	16,463.76
465	Inline Electrical Resources	1-8' 60/75W hybrid	4	2-4' 32W T8-LPEB1	144	66	548.79
465	Inline Electrical Resources	2-8' 60/75W hybrid	2	4-4' 32W T8-LPEB1-BC	96	66	365.86
465	Inline Electrical Resources	2-8' 60/75W hybrid	4	4-4' 32W T8-LPEB1-BC	192	66	731.72
465	Inline Electrical Resources	2-8' 60/75W hybrid	48	4-4' 32W T8-LPEB1-BC	2,304	66	8,780.67
466	Inline Electrical Resources	2-4' 34/40W hybrid	2	2-4' 30W T8-LPEB1	78	73	328.79
466	Inline Electrical Resources	4-4' 34/40W hybrid	15	2-4' 32W T8 EB1	1,650	73	6,955.17
466	Inline Electrical Resources	2-8' 60/75W hybrid	7	2-4' 32W T8-EB1-BC	630	73	2,655.61
466	Inline Electrical Resources	2-8' 60/75W hybrid	25	2-4' 32W T8-EB1-BC	2,250	73	9,484.33
466	Inline Electrical Resources	2-8' 60/75W hybrid	41	2-4' 32W T8-EB1-BC	3,690	73	15,554.30
466	Inline Electrical Resources	2-8' 60/75W hybrid	5	4-4' 32W T8-LPEB1-BC	240	73	1,011.66
469	Devault Electric	400W MH	20	4-4' 54W T5-EB2	4,420	90	20,685.60
473	Sw ords Electric LLC	400W MH	108	4 lamp T5	23,760	144	177,914.88
474	Inline Electrical Resources	4-4' 34/40W hybrid	2	2-4' 32W T8-EB1	220	168	2,134.19
474	Inline Electrical Resources	4-4' 34/40W hybrid	25	2-4' 32W T8-EB1	2,750	62	9,845.22

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

Energy Analysis for all Completed Projects - 6 of 6

PROPOSAL ID	CONTRACTOR NAME	EXISTING DESCRIPTION	REPLACEMENT QUANTITY	REPLACEMENT DESCRIPTION	WATTS SAVED	EXISTING HOURS USE PER WEEK	ANNUAL KWH SAVINGS
474	Inline Electrical Resources	4-4' 34/40W hybrid	45	2-4' 32W T8-EB1	4,950	62	17,721.40
474	Inline Electrical Resources	2-8' 60/75W hybrid	6	2-8' 56W T8-EB1	234	62	837.74
478	Walker Service Electric Inc.	400W HFS	90	4-4' 54W T5-EB2	20,790	84	100,840.50
479	Inline Electrical Resources	2-8' 60/75W hybrid	12	2-4' 32W T8-EB1-BC	1,080	76	4,739.57
479	Inline Electrical Resources	2-8' 60/75W hybrid	36	4-4' 32W T8-LFEB1-BC	1,728	76	7,583.31
483	North Point Electric LLC	2-8' 60/75W hybrid	72	4-4' 32W T8 High bay	144	70	582.05
483	North Point Electric LLC	2-8' 60/75W hybrid	142	Delamping	23,075	70	96,776.61
491	North Point Electric LLC	2-4' 34/40W hybrid	1	2-4' 32W T8-HFEB1	12	20	13.86
491	North Point Electric LLC	2-8' 60/75W hybrid	4	2-4' 32W T8-HFEB1	304	50	877.70
491	North Point Electric LLC	2-8' 60/75W hybrid	44	2-4' 32W T8-HFEB1	3,344	70	13,516.54
491	North Point Electric LLC	100W MH	10	52W CF-Wallpack	600	84	2,620.80
491	North Point Electric LLC	400W MH	25	6-4' T8-EB1 High bay	7,275	70	26,481.00
494	Non Standard Contractor	N/A	1	Heat Pump 4 ton 16 SEER	278	167	2,413.67
494	Non Standard Contractor	N/A	2	Heat Pump 5 ton 15 SEER	775	107	4,322.20
494	Non Standard Contractor	N/A	5	Programmable T-stats Office	0		42,437.05
509	Inline Electrical Resources	2-2' 34/40W U hybrid	1	2-2' 32W T8U-EB1	15	65	56.30
509	Inline Electrical Resources	2-2' 34/40W U hybrid	3	2-2' 32W T8U-EB1	45	65	168.90
509	Inline Electrical Resources	4-4' 34/40W hybrid	9	2-4' 32W T8-EB1-R	990	168	9,603.86
509	Inline Electrical Resources	4-4' 34/40W hybrid	11	2-4' 32W T8-EB1-R	1,210	168	11,738.05
509	Inline Electrical Resources	4-4' 34/40W hybrid	24	2-4' 32W T8-EB1-R	2,640	65	9,908.74
509	Inline Electrical Resources	4-4' 34/40W hybrid	32	2-4' 32W T8-EB1-R	3,520	65	13,211.66
509	Inline Electrical Resources	2-8' 60/75W hybrid	2	4-4' 32W T8-LFEB1-BC	96	65	360.32
509	Inline Electrical Resources	Exit Sign (2)40W-Inc	3	Exit Sign LED	225	168	2,226.75
					TOTAL kwh SAVINGS @ METER		1,603,735.65
					TOTAL kwh SAVINGS ADJUSTED FOR LINE LOSSES		1,775,174.99

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD:
January through June 2011

APPENDIX 2 – CFL SALES AND WATTAGE INFORMATION FOR JANUARY – JUNE 2011

CFL Sales by City & Retailer

Retailer	Units	kWh Annual
Kingman		
Dollar Tree	9	383
Family Dollar	140	5,957
Home Depot	16,977	727,716
Walmart	8,441	385,688
Kingman Total	25,567	1,119,744
Lake Havasu		
Ace Hardware	1,395	64,210
Family Dollar	316	13,445
Home Depot	11,825	489,999
Lowe's	5,277	249,252
Walmart	7,211	316,435
Lake Havasu Total	26,024	1,133,341
Lake Havasu City		
Albertsons	384	17,652
Lake Havasu City Total	384	17,652
Nogales		
Dollar Tree	333	14,169
Family Dollar	101	4,297
Home Depot	32,203	1,448,997
Outreach	1,000	69,707
Walmart	21,009	1,046,229
Nogales Total	54,646	2,583,399
Total @ Meter	106,621	4,854,136
Adjusted for line losses	106,621	5,373,043

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

KWH Savings by Wattage

Units	Watts	Watts Replaced	Watts Saved	Unit kWh Annual	kWh Annual
44	7	40	33	30	1,316
7,849	9	40	31	28	220,473
3,567	10	40	30	27	96,963
924	11	40	29	26	24,280
40	11	50	39	35	1,414
68	12	60	48	43	2,958
21,844	13	60	47	43	930,272
42,599	14	60	46	42	1,775,567
254	14	65	51	46	11,738
2,015	15	60	45	41	82,161
2,152	15	65	50	45	97,497
113	15	75	60	54	6,143
47	16	65	49	44	2,087
874	18	75	57	52	45,140
2,432	19	75	56	51	123,405
4,914	20	75	55	50	244,894
65	23	90	67	61	3,946
12,247	23	100	77	70	854,477
171	25	115	90	82	13,991
159	26	90	64	58	9,221
21	26	95	69	63	1,313
3,075	26	100	74	67	206,185
970	27	120	93	84	81,740
146	42	150	108	98	14,288
31	55	150	95	86	2,668
106,621				Total @ Meter	4,854,136
106,621				Adjusted for line losses	5,373,043

UNS Electric, Inc.

SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD: January through June 2011

APPENDIX 3 – MARKETING MATERIALS

BrightSave Home:

- Brochure
 - UES_BSH FINAL (pdf)
- Press Release
- Web Content
- Print Ad
 - UES BSH Print Ad.No QR June 28 (pdf)
- Web Banner
 - UES_BSH_300x260_Banner_Ad_June_9 (pdf)
 - UES_BSH_728x90_Banner_Ad_June_9_pm (pdf)

Energy Star Lighting:

- Ad
 - UES_kingman_ad_5.04x5 (pdf)
 - UES_lakeh_ad_3.305x5.25 (pdf)
 - UES_nogales_ad_4 464x5_Span (pdf)
- Bill Insert
 - UES_bill_insert (pdf)

UNS Electric, Inc.

**SEMI-ANNUAL DSM PROGRESS REPORT FOR THE PERIOD:
January through June 2011**

APPENDIX 4 – MEASUREMENT, EVALUATION, AND RESEARCH REPORTS

- Arizona Energy Office Training, Monitoring, and Evaluation Report – July 2011

ARIZONA GOVERNOR'S OFFICE of ENERGY POLICY
TRAINING, MONITORING AND EVALUATION REPORT
FISCAL YEAR 2011 ANNUAL REPORT
July 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 OEP 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 has received 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. Additional funding is being requested to address the additional requirements set forth by the City of Phoenix Development Services Department that was not accounted for in the beginning of the project. 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 later this year.

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 2010-11 the Training Center has provided almost 10,000 hours of training hours (attendees times class hours) to over 500 course attendees. Since 2009 over 350 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. OEP 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 22nd 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 has implemented an OSHA 30 hour and 10 hour certification course.

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

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

The Training Center 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 OEP to meet and discuss issues that arise in the program. Agencies are able to share solutions to common problems and other information. These peer-to-peer meetings occur every two months and have been a great arena to discuss any changes or improvement to the program.

Agency Personnel Performance Reviews

A review and monitoring process to evaluate the competency of agency personnel performing the various requirements of the weatherization program was developed for the statewide weatherization

assistance program. Based on this process, additional one-on-one training and technical assistance is provided on an as-needed basis.

Inspections

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

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).