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

Re: Notice of Filing – UNS Electric, Inc.'s Annual DSM Progress Report
Docket No. E-000004-12-0068

Pursuant to the Electric Energy Efficiency Standards of the Arizona Administrative Code, Section R14-2-2409.A, UNS Electric, Inc. hereby submits its annual DSM progress report for each of its Commission-approved DSM programs for 2011.

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

Sincerely,

Jessica Bryne
Regulatory Services

Enclosure: Report

cc: Julie McNeely-Kirwan, ACC
Compliance Section, ACC

Arizona Corporation Commission
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UNS Electric, Inc.

Annual DSM Progress Report

January – December 2011

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

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

- A brief description of the programs;
- Program modifications;
- Program goals, objectives, and savings targets;
- Levels of participation;
- A description of evaluation and monitoring activities and results;
- kW, kWh, and therm savings;
- Problems encountered and proposed solutions;
- Costs incurred during the reporting period disaggregated by type of cost, such as administrative costs, rebates, and monitoring;
- Findings from all research projects;
- 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 Efficiency Standards (“EEES” or “Standard”) are provided in Table 3; societal benefits by program and the performance incentive calculation are provided in Table 4; lifetime environmental savings by program are provided in Table 5; and a summary of participants, year to date expenses, and the yearly budget by program are provided in Table 6. A list of Commission approved DSM programs and measures are attached in Appendix 2.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

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UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

Table 1

DSM PROGRAM EXPENSES: JANUARY - DECEMBER 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	\$ 88,712	\$ 8,193	\$ -	\$ 4,162	\$ -	\$ 3,825	\$ 3,328	\$ 108,220
Residential New Construction	\$ 54,600	\$ 4,753	\$ 250	\$ 33,128	\$ 1,783	\$ 3,866	\$ 9,925	\$ 108,302
Shade Tree Program	\$ 3,290	\$ 1,870	\$ 735	\$ 5,579	\$ 6,412	\$ 931	\$ 7,528	\$ 26,344
ENERGY STAR® Lighting (CFL)	\$ 207,165	\$ 2,057	\$ 3,377	\$ 88,152	\$ 14,760	\$ 11,981	\$ 10,986	\$ 338,459
Efficient Home Cooling	\$ 62,150	\$ 4,739	\$ 353	\$ 25,222	\$ 11,200	\$ 3,959	\$ 4,387	\$ 112,010
Existing Home Program	\$ 192,614	\$ 12,410	\$ 1,466	\$ 308,773	\$ 89,498	\$ 24,605	\$ 8,457	\$ 637,823
Total for Residential Programs	\$ 608,531	\$ 34,022	\$ 6,182	\$ 465,013	\$ 123,653	\$ 49,146	\$ 44,610	\$ 1,331,157
Support Programs								
Education & Outreach Program	\$ -	\$ 98	\$ 83,754	\$ 3,145	\$ -	\$ 3,200	\$ 360	\$ 90,557
Total for Support Programs	\$ -	\$ 98	\$ 83,754	\$ 3,145	\$ -	\$ 3,200	\$ 360	\$ 90,557
Commercial Programs								
Commercial Facilities Efficiency	\$ 347,177	\$ 881	\$ 1,110	\$ 139,360	\$ 329	\$ 19,153	\$ 33,958	\$ 541,969
Total for Commercial Programs	\$ 347,177	\$ 881	\$ 1,110	\$ 139,360	\$ 329	\$ 19,153	\$ 33,958	\$ 541,969
Portfolio Totals	\$ 955,708	\$ 35,001	\$ 91,046	\$ 607,517	\$ 123,983	\$ 71,500	\$ 78,928	\$ 1,963,682

Program Costs	\$ 1,963,682
Program Development, Analysis, & Reporting Software	\$ 149,433
Baseline Study	\$ 280
TOTAL	\$ 2,113,395

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.

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DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

Performance Incentive – share (%) of DSM net economic benefits, capped at either 10% of net benefits or 10% of expenditures, whichever is less. The performance incentive was approved in Commission Decision No. 72747 (January 20, 2012).

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.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

Table 2

DSM ENERGY SAVINGS: JANUARY – DECEMBER 2011

Program	Capacity Savings MW	Annual MWh Savings	Annual Therm Savings	Lifetime MWh Savings	Lifetime Therm Savings
Low-Income Weatherization	0.00	255	1,925	4,468	33,688
Residential New Construction	0.19	101	1,310	3,029	39,295
Shade Tree	0.00	83	0	2,491	0
ENERGY STAR® Lighting (CFL)	2.21	10,462	0	62,774	0
Efficient Home Cooling	0.06	116	0	1,738	0
Existing Home Program	0.22	263	0	4,422	0
Education & Outreach	0.00	5	154	47	1,540
Commercial Facilities Efficiency	0.50	3,719	0	54,936	0
Portfolio Totals	3.18	15,005	3,389	133,905	74,522

Table 3

CUMULATIVE DSM SAVINGS: JANUARY – DECEMBER 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	1,852,904	15,005	15,005	0.81%	1.25%

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

Table 4

DSM SOCIETAL BENEFITS & PERFORMANCE INCENTIVE: JANUARY – DECEMBER 2011¹

DSM Program	Program Cost	Societal Benefits	Societal Costs	Net Benefits
Residential				
Low-Income Weatherization	\$ 108,220	\$ 285,084	\$ 105,098	\$ 179,986
Residential New Construction	\$ 108,302	\$ 585,575	\$ 228,998	\$ 356,577
Shade Tree	\$ 26,344	\$ 102,479	\$ 76,860	\$ 25,619
ENERGY STAR [®] Lighting (CFL)	\$ 338,459	\$ 3,970,397	\$ 468,341	\$ 3,502,056
Efficient Home Cooling	\$ 112,010	\$ 141,823	\$ 271,332	\$ (129,509)
Existing Home Program	\$ 637,823	\$ 480,323	\$ 719,042	\$ (238,719)
Total for Residential	\$ 1,331,157	\$ 5,565,681	\$ 1,869,671	\$ 3,696,010
Non-Residential				
Commercial Facilities Efficiency	\$ 541,969	\$ 3,417,836	\$ 824,735	\$ 2,593,101
Total for Non-Residential	\$ 541,969	\$ 3,417,836	\$ 824,735	\$ 2,593,101
Support Programs				
Education & Outreach Program	\$ 90,557	\$ 4,121	\$ 91,036	\$ (86,915)
Total for Support Programs	\$ 90,557	\$ 4,121	\$ 91,036	\$ (86,915)
Program Totals				
Program Totals	\$ 1,963,682	\$ 8,987,638	\$ 2,785,442	\$ 6,202,196
Program Development, Analysis & Reporting Software	\$ 149,433	\$ -	\$ 149,433	\$ (149,433)
Baseline Study	\$ 280	\$ -	\$ 280	\$ (280)
Portfolio Total	\$ 2,113,396	\$ 8,987,638	\$ 2,935,155	\$ 6,052,483
Performance Incentive Calculation:				
Total Spending / Total Net Benefits ^a	\$ 1,914,620			\$ 5,959,411
10% of Spending / Net Benefits	\$ 191,462			\$ 595,941
Performance Incentive for 2011	\$ 191,462			

a. Total spending and total net benefits do not include Low-Income Weatherization or Education & Outreach Programs. The Performance Incentive allowed is capped at 10% of net benefits or 10% of total spending, whichever is less.

¹ The UNS Electric Performance Incentive was established in Commission Decision No. 72747 (January 20, 2012).

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DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

Table 5

DSM LIFETIME ENVIRONMENTAL SAVINGS: JANUARY – DECEMBER 2011

Program	Lifetime SO _x Reduction (lbs)	Lifetime NO _x Reduction (lbs)	Lifetime CO ₂ Reduction (lbs)	Lifetime Water Reduction (gallons)
Low-Income Weatherization	25	532	5,714,593	1,157,247
Residential New Construction	17	360	4,068,483	784,575
Shade Tree	14	296	2,963,725	645,046
ENERGY STAR® Lighting (CFL)	345	7,470	74,701,051	16,258,464
Efficient Home Cooling	10	207	2,068,542	450,212
Existing Home Program	24	526	5,261,822	1,145,220
Education & Outreach	0	6	74,444	12,248
Commercial Facilities Efficiency	302	6,537	65,373,806	14,228,417
Portfolio Totals	736	15,935	160,226,466	34,681,429

UNS Electric, Inc.

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Table 6

DSM SUMMARY OF PARTICIPATION AND EXPENSES: JANUARY – DECEMBER 2011²

DSM Program	Participants	# Measures	Expenses YTD	2011 Budget
Residential Programs				
Low-Income Weatherization	84	84	\$ 108,220	\$ 114,737
Residential New Construction	97	97	\$ 108,302	\$ 521,910
Shade Tree Program	183	353	\$ 26,344	\$ 66,950
ENERGY STAR® Lighting (CFL)	N/A	208,638	\$ 338,459	\$ 360,706
Efficient Home Cooling	261	278	\$ 112,010	\$ 163,609
Existing Home Program	188	214	\$ 637,823	\$ 608,587
Total for Residential Programs	813	209,664	\$ 1,331,157	\$ 1,836,499
Support Programs				
Education & Outreach Program	1,396	108	\$ 90,557	\$ 131,127
Total for Support Programs	1,396	108	\$ 90,557	\$ 131,127
Commercial Programs				
Commercial Facilities Efficiency	61	6,089	\$ 541,969	\$ 437,091
Total for Commercial Programs	61	6,089	\$ 541,969	\$ 437,091
Portfolio Totals	2,270	215,861	\$ 1,963,682	\$ 2,404,717

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

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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

The Program objectives are to:

- 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 was to weatherize 95 homes.

Levels of Participation

A total of 84 households received weatherization assistance during calendar year 2011.

Evaluation and Monitoring Activities and Results

The Governor's Office of Energy Policy ("GOEP"), formerly known as 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 GOEP report. The GOEP does not report any kW demand savings. The report is attached in Appendix 1.

The January 2012 GOEP report is summarized below:

- To date, an analysis of 275 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 1.21. Health and saving represented 16% of expenditures.

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- The combined SIR of all jobs reviewed to date for funds spent on energy measures and diagnostics was 1.38.
- The average saving per home reviewed was 2,746 kWh and 35 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
84	0.0	255,322	1,925

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 *	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Low Income Weatherization	\$ 88,712	\$ 8,193	\$ -	\$ 4,162	\$ -	\$ 3,825	\$ 3,328	\$ 108,220

a. Includes \$21,819 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. Both Agencies spent the majority of their funding in 2011; however, WACOG exceeded their Health & Safety allocation by 3%. The majority of these costs occurred in the first five months of 2011. UNS Electric notified WACOG mid-year that additional Health & Safety funding requests would be denied until such time as funding for energy efficiency measures increased. WACOG funding requests for Health & Safety expenses from June through December was limited to less than \$500.

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DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

RESIDENTIAL NEW CONSTRUCTION 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 is required to ensure that homes meet the Energy Star® Home performance requirements; these will be conducted by third-party Residential Energy Services Network (“RESNET”) certified energy raters selected by each builder. Components of the ESH Program include development of branding, builder training curriculum, and marketing material.

Program 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

Program objectives are to:

- 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.

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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 goal of capturing 30% of the new home market was reached in 2011. In the UNSE service territory there were 127 residential new construction permits issued in 2011; 41 of these were committed to the ESH Program, resulting in 32% participation rate.

The program had 97 homes completed during calendar year 2011. Of the 97 homes, 79 are Tier I (82%), 16 are Tier II (17%) and 2 are Tier III (1%). Program staff is working with several of the current builders to bring higher performance homes to the program. Program staff is working on a true up of potential homes and contractors. There are currently 11 active builders participating in the ESH program, representing approximately 235 potential homes. This number does not include the owner/builder participants that historically account for 8 to 10 homes per year.

Program staff has placed increased emphasis to educate home builders on energy efficient construction techniques, process evaluation and mentoring. In addition, Program staff has been training builder construction staff and subcontractors in advanced building science concepts to increase energy efficiency through improved design and installation practices. This is being accomplished through planning and site visits with the builder, construction staff and HERS Rater.

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for calendar year 2011. The evaluation resulted in a realization rate of 99% for non-coincident demand savings and 98% for energy savings. The report is attached in Appendix 1. 2011 savings have been updated as a result of the 2011 evaluation.

kW, kWh, and Therm Savings

Measure Category	No. of Homes	kW savings	kWh savings	Therm savings
Tier 1	79	128	65,563	935
Tier 2	16	43	26,671	375
Tier 3	2	17	8,741	0
Totals	97	189	100,975	1,310

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

Problems Encountered and Proposed Solutions

UNS Electric serves a large geographic territory making builder interaction difficult. Program staff's area assignments were refined in 2011 giving better coverage leading to increased program participation.

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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 to builders significantly. Program staff will overcome this challenge by providing enhanced builder outreach and education.

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 ^b	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential New Construction	\$ 54,600	\$ 4,753	\$ 250	\$ 33,126	\$ 1,783	\$ 3,866	\$ 9,925	\$ 108,302

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.

b. Includes \$26,704 paid to CSG, the Implementation Contractor ("IC")

Findings from All Research Projects

During this reporting period, Program staff finished an evaluation of existing home construction standards for non-participating builders. The result was a minor revision to the baseline home being constructed in Mohave and Santa Cruz Counties. This new baseline will be used to determine savings for homes constructed as part of the ESH Program starting in 2012.

Other Significant Information

Builders must comply with Energy Star® Version 3.0 for all homes completed after 01/01/2012.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

EDUCATION AND OUTREACH PROGRAMS

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

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;
- Northwestern Arizona Builder's Association, Kingman;
- Mohave County Fair, Kingman;
- Rotary Club, Kingman;
- Lake Havasu City Homebuilder's Show, Lake Havasu City;
- Colorado River Builder's Association, Lake Havasu City;
- Home Depot Fall Safety Fair, Lake Havasu City; and
- Golden Valley Earth Day Celebration, Golden Valley.

UNS Electric continues 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;

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

- Tradeshows/Community events and premium giveaways; and
- Call Center training.

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 ("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

For this reporting period, 921 residential customers and 131 commercial customers accessed the online Energy Advisor, with 326 residential customers and 11 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. 130 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 9,308 visits with 15,020 pages viewed.

Program Modifications

In December 2011, UNSE launched its Bright Students: The Conservation Generation classroom program. This program is aimed toward Middle School aged students and provides an interactive learning approach to engage the students in the concept of energy conservation and efficiency. The Environment Education Exchange presented 25 Bright Students: The Conservation Generation programs reaching approximately 745 students. These classroom presentations are 50-60 minutes in length and include a pre-visit lesson and post-visit activity; all are aligned with the Arizona Department of Education middle school science standards. Pledge cards stating the student's intentions to save energy at home are collected for potential use in estimating energy savings.

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DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

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

Navigant Consulting performed an evaluation of the energy kits distributed as part of this program. The evaluation resulted in a realization rate of 239% for energy savings, and some associated demand savings. The report is attached in Appendix 1. Kit savings have been updated as a result of the 2011 evaluation.

UNS Electric has included new programs encompassing more significant neighborhood outreach, direct education, installation of energy saving items, and programs that affect consumer behavior in its 2011-2012 Plan. These expanded programs are designed to allow for measurement and evaluation of energy savings. The Plan had not been approved as of December 31, 2011.

kW, kWh, and Therm Savings

No. of Kits	kW savings	kWh savings	Therm savings
108	0.8	5,442	154

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	\$ -	\$ 98	\$ 83,754	\$ 3,145	\$ -	\$ 3,200	\$ 360	\$ 90,557

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. Other new programs include Home Energy Reports, Community Education, CFL give-away and direct neighborhood canvassing.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

SHADE TREE PROGRAM

Description

The UNS Electric Shade Tree Program is marketed under the name of "Trees for You" ("TFY") and is primarily targeted to residential customers, including low-income families. Community organizations, commercial customers, and schools can participate if they meet Program requirements. UNS Electric customers are allowed to purchase two desert adapted, five-gallon trees per year (four trees are allotted 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. However, customers must 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

Due to low participation levels in the first half of 2011 (11 trees), UNS Electric decided to try a new delivery method to determine if participation could be increased. UNS Electric participated in the Lake Havasu City Home Depot fall safety event where the company offered a "give away" of 300 trees to promote the Program. After discussions with the Master Gardener for Lake Havasu City, it was determined that fall is an ideal time to plant trees in the climate area. Based on the Gardener's experience, advice, and direction, UNSE purchased Desert Willow and Blue Palo Verde trees through a wholesale nursery for \$9.00 per tree, lower than the \$15 rebate being offered. This resulted in a 40% cost savings for incentives for these 300 trees.

Customers receiving free trees were required to fill out an application to determine eligibility and to ensure their inclusion in Program evaluation. The tree recipients also received a tree planting guide, a CFL bulb, and various energy-efficiency program materials. During this promotion the Master Gardener was in attendance providing information to our customers regarding planting, care, and maintenance of trees. Customers who attended this event appreciated the guidance and UNS Electric looks forward to further involvement from the Master Gardener in future events. The Company considered this promotion a success and may continue to offer give-away promotions in the future.

Program Goals, Objectives, and Savings Targets

The objective of the Program is to promote energy conservation and the environmental benefits associated with planting trees that have low water usage. 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 calendar year 2011 UNS Electric processed 177 customer applications for a total of 356 trees, resulting in a participation rate of 142% of goal.

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this program for 2011. The evaluation resulted in a realization rate of 96% for energy savings. The report is attached in Appendix 1. 2011 savings have been updated as a result of the 2011 evaluation.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

kW, kWh, and Therm Savings

No. of Trees	kW savings	kWh savings	Therm savings
353	0.0	86,353	0

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

Problems Encountered and Proposed Solutions

UNS Electric continues to work 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. 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 that there are no independent nurseries in Nogales or the surrounding areas. Periodic visits to these stores have verified that Wal-Mart and Home Depot carry a suitable 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	\$ 3,290	\$ 1,870	\$ 735	\$ 5,579	\$ 6,412	\$ 931	\$ 7,528	\$ 26,344

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; however, in 2011 the Company was able to capitalize on this by hosting a fall TFY Giveaway event in Lake Havasu City. Lake Havasu City's temperate winter weather allows for the fall planting of most desert adapted trees which makes it ideal for UNS Electric to continue to gain participation in the slower months of the program. Lake Havasu City also has a large community of retirees that only live there during late fall and winter. Based on the fall event these retirees represented a large number of those who chose to participate. UNS Electric will continue to partner with local retailers to conduct events that will bring awareness to the TFY program to increase participation.

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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.

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

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- Program contractors have requested the ability to administer energy assessments directly to their own customers versus referring them to the utility audit team. Recognizing the market penetration gained by the contractor-auditor model used in the UNS Gas and APS shared service territory UNS Electric initiated a mentoring pilot in the 4th quarter of 2011 to train contractors to provide in-home assessments. This effort will have the added benefit of enabling contractors to utilize their own resources to offer assessments to homes larger than 3,500 square feet without adversely impacting program resources. Home energy assessments completed by Program contractors will meet all program standards and be subject to QA review by Program staff; approved audits will qualify for the programs flat \$200 per dwelling fee.

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

- HVAC Early Retirement incentive qualification have 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 including air sealing and insulation;
- Advance the building science skills of HVAC contractors in the marketplace by providing training resources and partial reimbursement of the tuition and fees associated with BPI certification required as a prerequisite to participating in the BrightSave Program as of January 1, 2012; 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 advanced power strip; and
- Educate homeowners about applicable UNS Electric rebates and simple behavioral modifications to increase energy efficiency.

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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

For this reporting period, UNS Electric paid rebates on 278 HVAC retrofits under the previous Efficient Home Cooling Program. 33 contractors were recruited into the BrightSave Home Program; 21 have achieved the BPI certification of participating staff. 188 customers participated in the BrightSave Home Program for a total of 233 measures, of which 68 were audits. Of the 68 customers that had audits performed, eight had additional measures installed.

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of the Efficient Home Cooling Program and the BrightSave Home Program for 2011. The evaluation resulted in a realization rate of 100% for both demand and energy savings for Efficient Home Cooling, and a realization rate of 95% for non-coincident demand and 91% for energy savings for BrightSave Home. The report is attached in Appendix 1.

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kW, kWh, and Therm Savings

Efficient Home Cooling

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

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

BrightSave Home

Measure	Units	kW Savings	kWh Savings
Air Sealing	14	10	23,679
Duct Testing & Repair	11	8	7,697
Early Retirement	82	143	185,877
Replace on Burnout	46	50	59,020
Shade Screens	2	0	497
Energy Audits	68	0	34,839
Totals	223	210	311,608

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. Efforts to calibrate the software's energy saving calculation models and derive customized savings reporting tables persisted through the end of 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	\$ 4,739	\$ 353	\$ 25,222	\$ 11,200	\$ 3,959	\$ 4,387	\$ 112,010

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

b. All \$11,200 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	\$ 192,814	\$ 12,410	\$ 1,466	\$ 308,773	\$ 89,498	\$ 24,605	\$ 8,457	\$ 637,823

a. Includes \$265,536 paid to CSG, the IC.

Findings from All Research Projects

No research projects were performed during this reporting period.

Other Significant Information

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

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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
July 2011	Home Assessment Program application submitted to EPA for Home Performance with Energy Star Status.
November 2011	Energy Star application approved by EPA pending transfer and verification by DOE. (the Energy Star brand transitions from EPA to DOE control January, 2012)
November 2011	Launch of pilot home assessment training for program contractors

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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 208,638 CFLs were sold during this reporting period, which was 98% of goal.

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2011. The evaluation resulted in a realization rate of 100% for both demand and energy savings. The report is attached in Appendix 1.

kW, kWh, and Therm Savings

No. of Units Sold	kW savings	kWh savings	Therm savings
208,638	2207.6	10,462,332	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 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.

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A potential problem is the availability of rare earth minerals. CFL bulbs require these minerals to operate. Reduced availability has resulted 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. Anecdotal evidence from retailers suggests that 100 Watt incandescent bulbs sales increased at the end of 2011 in response to the pending implementation of EISA rules beginning in 2012.

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)	\$ 207,165	\$ 2,057	\$ 3,377	\$ 88,152	\$ 14,760	\$ 11,961	\$ 10,986	\$ 338,459

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

Findings from All Research Projects

No research projects were performed during this reporting 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 254 store visits during this reporting period. In addition, UNS Electric held nineteen aisle training events for retail employees.

UNS Electric performed 30 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;

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- 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 701 web hits, most of which were users searching for a retailer 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.

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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

The Program objectives are to:

- 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; and
- Increase the awareness and knowledge of business owners, building owners and managers, and other decision-makers on the benefits of high-efficiency equipment and systems.

The savings goal for 2011 is 2,494 MWh.

Levels of Participation

53 signed participation agreements were received and 61 businesses participated during this reporting period.

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Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2011. The evaluation resulted in a realization rate of 110% for demand savings and 111% for energy savings. The report is attached in Appendix 1. 2011 savings have been updated as a result of the 2011 evaluation.

kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings	Incremental Cost
HVAC	54	12	234,959	\$466.32
Lighting	5,588	464	2,855,995	\$92.62
Refrigeration	443	16	332,278	\$106.45
Custom	4	7	296,087	\$10,015.82
Totals	6,089	499	3,719,319	

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

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	\$ 347,177	\$ 881	\$ 1,110	\$ 139,360	\$ 329	\$ 19,153	\$ 33,958	\$ 541,969

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

Findings from All Research Projects

No research projects were performed during this reporting period.

Other Significant Information

Marketing efforts for this reporting period include:

- 88 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 Program representatives were available to discuss Program details and distribute brochures. Table top presentations were held at the Home Depot in Kingman four times in 2011. This is an opportunity to expose potential customers to the program.
- 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; fourteen contractors participated in the program in 2011.
- The UNS Electric Commercial Facilities Program website was updated. There were 3,429 hits on the website. The web is proving to be a successful marketing tool for the Program.

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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.

Window clings were introduced to participating business in 2011. A one page flyer was developed to encourage businesses to change out T12 lighting.

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MISCELLANEOUS DSM INFORMATION

UNS Electric filed its 2011-2012 Energy Efficiency Implementation Plan ("Plan") on February 1, 2011, in accordance with Section R14-2-2405 of the EEES. 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. The Residential Efficient Home Cooling Program was the only program terminated in 2011; no other programs or measures were terminated. Please see that the Existing Homes Retrofit and Residential Energy Assessment section for further information. No programs or measures are expected to be terminated in 2012.

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 selected a vendor during the 4th quarter of 2011.

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DSM PROGRESS REPORT FOR THE PERIOD:
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APPENDIX 1 – MEASUREMENT, EVALUATION, AND RESEARCH REPORTS

- Governor's Office of Energy Policy LIW Training, Monitoring, and Evaluation Report – January 2012
- Navigant Consulting - UNSE Demand Side Management 2011 Portfolio Savings Verification Report

**ARIZONA GOVERNOR'S OFFICE of ENERGY POLICY
TRAINING, MONITORING AND EVALUATION REPORT
FISCAL YEAR 2012 ANNUAL REPORT**

**January 2012
Unisource Electric**

Re: Arizona Governor's Office of Energy Policy 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 started the expansion of the training center by developing a multistory training lab that will be used to provide real world hands on training to the new green workforce. Funding has been committed utilizing American Recovery and Reinvestment Act of 2009 (ARRA) funds for the construction of an expanded diagnostic lab. The lab has received additional funding and donations for utility companies, manufacturing companies and local contractors.

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 2011-12 the Training Center has provided almost 8,000 hours of training hours (attendees times class hours) to over 350 course attendees. Since 2009 over 400 contractors have been certified through BPI.

Details on BPI

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

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 15% 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 275 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 1%.

Results Summary

The combined SIR of all jobs reviewed to date for funds spent on diagnostics, energy measures and health and safety measures was 1.21. Health and safety represented 16% of expenditures.

The combined SIR of all jobs reviewed to date for funds spent on energy measures and diagnostics was 1.38

The average saving per home reviewed was 2746 kWh and 35 therms of natural gas (gas therms average includes all electric homes).

**UNSE Demand Side Management
2011 Portfolio Savings Verification
Report**

January 1, 2011-December 31, 2011

**Presented to:
UNS Electric
Randy Altergott and Denise Smith**

February 24, 2012

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Section 1. Summary

This report presents realization rates, proposed changes, and adjustments to the 2011 energy and demand savings calculations for the Unisource Electric (UNSE) residential and commercial energy efficiency programs after completing a savings verification review of reported savings. Benefit-Cost calculations were outside the scope of this task and were not reviewed.

For details on algorithms or assumptions, see the Navigant-reviewed workbooks:

Commercial Program -

2011_UNSE_Commercial_2012_02_24_FINAL

Residential Programs -

2011_UNSE_Efficient Home Cooling_2012_02_24_FINAL

2011_UNSE_Energy Smart Homes_2012_02_24_FINAL

2011_UNSE_LIW_Shade_CFL_Kit_2012_02_24_FINAL

2011_UNSE_Existing Homes_2012_02_24_FINAL

UNSE has reported values at meter. Navigant presents values both at meter and at generator. A line-loss factor (LLF) of 10.69% was applied to the demand and energy savings to account for transmission and distribution losses from generator to meter. The following algorithm is used to calculate at generator values:

$$\text{At generator} = \text{At meter value} * (1 + \text{Line Loss Factor (LLF)})$$

Ex-Ante utility reported Capacity Savings (kW) were detailed as non-coincident demand savings for some programs but not for others. As a result, Navigant has calculated realization rates based on non-coincident demand savings. Programs that report coincident demand savings will not have applicable realization rates. Navigant recommends that all ICs report one type of capacity savings in the future.

Table 1-1, Table 1-2, and Table 1-3 present summary findings and adjustments for energy savings.

Overall, UNSE had at generator verified non-coincident demand savings of 14.53 MW. Verified coincident savings were determined to be 2.93 MW. Verified at generator annual energy savings were determined to be 15,005 MWh.

Total at meter verified non-coincident demand savings were determined to be 13.1 MW. Verified coincident demand savings at meter were determined to be 2.6 MW. Verified at meter annual energy savings were determined to be 13,787 MWh.

Total reported gas savings for Low Income Weatherization, Energy Smart Homes, and Behavioral programs were 3,929 therms. The verified gas savings were determined to be 3,389 therms.

Realization rates for demand and annual energy savings were calculated to be 100% and 102% respectively. The realization rate for annual therm savings was calculated to be 86%.

Table 1-1. UNSE 2011 Portfolio Demand & Energy Savings Summary at Generator

Program	Non-Coincident Demand Savings (MW)			Verified Coincident Demand Savings (MW)			Annual Energy Savings (MWh)			
	Reported Demand	NCl Verified Demand	Realization Rate	Percent of Portfolio	Reported	NCl Verified	Realization Rate	Reported	NCl Verified	Percent of Portfolio
Residential Programs										
Low-Income Weatherization	N/A	N/A	N/A	N/A	N/A	255	100%	255	255	1.7%
Energy Smart Homes	0.2	0.2	100%	1.3%	N/A	103	98%	101	101	0.7%
Shade Tree	N/A	N/A	N/A	N/A	N/A	86	96%	83	83	0.6%
Efficient Products Program	13.4	13.4	100%	92.0%	2.2	10,472	100%	10,462	10,462	69.7%
Efficient Home Cooling	0.1	0.1	100%	0.4%	N/A	116	100%	116	116	0.8%
Existing Homes & Audit Direct-Install	0.3	0.3	95%	1.7%	0.2	289	91%	263	263	1.8%
Behavior - Kits*	N/A	0.001	N/A	N/A	0.001	2	239%	5	5	0.0%
Commercial Facilities Efficiency										
AC-HP	0.003	0.003	100%	0.0%	0.00	156	133%	206	206	1.4%
Refrigeration	0.02	0.02	100%	0.1%	0.02	332	100%	332	332	2.2%
Lighting	0.6	0.6	111%	4.3%	0.46	2,543	112%	2,856	2,856	19.0%
Custom	0.02	0.02	90%	0.1%	0.02	323	101%	325	325	2.2%
UNSE Totals	14.48	14.53	100%	100%	2.93	14,677	102%	15,005	15,005	100%

At generator values are calculated by the following algorithm: at meter * (1+LLF).

* Behavior Program only reported coincident demand savings.

Table 1-2. UNSE 2011 Portfolio Demand & Energy Savings Summary at Meter

Program	Non-Coincident Demand Savings (MW)			Percent of Portfolio	Verified Coincident Demand Savings (MW)			Annual Energy Savings (MWh)		
	Reported Demand	NCI Verified Demand	Realization Rate		Reported Demand	NCI Verified Demand	Realization Rate	Reported	NCI Verified	Realization Rate
Residential Programs										
Low-Income Weatherization	N/A	N/A	N/A	N/A	N/A	N/A	231	231	100%	1.7%
Energy Smart Homes	0.2	0.2	100%	1.3%	N/A	N/A	93	91	98%	0.7%
Shade Tree	N/A	N/A	N/A	N/A	N/A	N/A	78	75	96%	0.5%
Efficient Products Program	12.1	12.1	100%	92.0%	2.0	2.0	9,461	9,452	100%	68.6%
Efficient Home Cooling	0.1	0.1	100%	0.4%	N/A	N/A	105	105	100%	0.8%
Existing Homes & Audit Direct-Install	0.2	0.2	95%	1.7%	0.20	0.20	261	238	91%	1.7%
Behavior - Kits*	N/A	0.001	N/A	0.0%	0.001	0.001	2	5	239%	0.0%
Commercial Facilities Efficiency										
AC-HP	0.003	0.003	100%	0.0%	0.00	0.00	141	186	133%	1.4%
Refrigeration	0.01	0.01	100%	0.1%	0.01	0.01	300	300	100%	2.2%
Lighting	0.5	0.6	111%	4.3%	0.42	0.42	2,297	2,580	112%	18.7%
Custom	0.02	0.01	90%	0.1%	0.01	0.01	292	293	101%	2.1%
Utility	13.1	13.1	100%	100%	2.6	2.6	13,490	13,787	102%	100%

* Behavior Program only reported coincident demand savings.

Table 1-3. UNSE 2011 Therm Savings Summary

Program	Annual Therm Savings			Percent of Portfolio
	UNSE Reported	NCI Verified	Realization Rate	
Residential Programs				
Low-Income Weatherization	1,925	1,925	100%	57%
Energy Smart Homes	1,755	1,310	75%	39%
Shade Tree	N/A	N/A	N/A	N/A
Efficient Products Program	N/A	N/A	N/A	N/A
Efficient Home Cooling	N/A	N/A	N/A	N/A
Existing Homes & Audit Direct-Install	N/A	N/A	N/A	N/A
Behavior - Kits	250	154	62%	5%
Commercial Facilities Efficiency				
AC-HP	N/A	N/A	N/A	N/A
Refrigeration	N/A	N/A	N/A	N/A
Lighting	N/A	N/A	N/A	N/A
Custom	N/A	N/A	N/A	N/A
UNSE Totals	3,929	3,389	86%	100%

The following sections present a summary of major findings of proposed changes and/or confirmation that no changes are required to reported savings.

Section 2. Residential Programs

2.1 *Low Income Weatherization*

Savings per home are derived per AEO directive; savings per home increased slightly from 2010 (2667 kWh and 32 therms) to 2011 (2746 kWh and 35 therms). The Low Income Weatherization program has a realization rate of 100%. There are no demand savings reported for this program.

2.2 *Energy Smart Homes*

The Energy Smart Homes Program had an energy realization rate of 99% and a non-coincident demand realization rate of 98%.

The slightly low energy and non-coincident demand savings realization rates is due to a slight overestimation of the IC's claimed energy savings on one program home. Navigant's verification efforts focused on a review of the IC's provided end-use savings summaries and the as-built REM/Rate building files.

This program, as part of the national ENERGY STAR® program, reported performance-based savings based on RESNET testing procedures.

Navigant conducted a desk review of a sample of as-built REM/Rate building files for actual home premises. Navigant found the building files to be in good order with no erroneous building input fields that would affect savings calculations. There was one home premise that over-reported electricity savings than compared to what was verified in the modeling output results through the desk review process.

2.3 *Shade Trees*

The overall annual realization rate for energy savings is 96%; there are no demand savings reported for this program.

Savings per tree are derived per ACC directive and need not be changed. However, TEP conducted inspections in 2011 on over 530 trees. Twenty-two trees were mis-planted (planted North of the home, or 20-50 feet away from home) and three trees were found dead. Navigant used a 4% misplacement rate reduction to account for these trees for TEP as well as UNSE. This rate is in line with other utility shade tree programs. Navigant will support this rate with modeling in the future. This lowered the realization rate.

2.4 *Efficient Products Program*

The Efficient Products program, which in 2011 only consisted of CFLs, had an overall annual energy and non-coincident demand realization rate of 100%. Navigant verified annual savings of the CFLs bought based on the extended database provided by Ecova and deemed savings for each bulb model type from the program's 2011 Measure Analysis Sheet (MAS). Slight

differences between the reported and verified savings occurred in assumptions for 3-way bulb (base and efficient) wattages.

2.5 Efficient Home Cooling

The energy and non-coincident demand savings realization rates for this program are both 100%.

The IC's reported deemed savings values for this program were consistent with 2010 and 2009 MER results. Navigant found no issues or discrepancies in the program tracking datasets used to determine program savings. This program stopped providing incentives in summer 2011 and was replaced by the newly approved Existing Homes and Audit Direct Install Program.

2.6 Existing Homes and Audit Direct Install

The Existing Homes and Audit Direct-Install Program had an energy savings realization rate of 91% and a non-coincident demand savings realization rate of 95%. The primary reason for a slightly low energy savings realization rate is due to a misclassification of the HVAC Early Replacement measure subcategories (i.e., Packaged versus Split, A/C versus Heat Pump, and the addition of Duct Test & Repair), which overestimated energy savings on a few homes. In addition, Navigant determined that the Air Sealing and Attic Insulation measure energy savings were overestimated based upon actual home conditioned areas and the building envelope leakage reduction; this also affected the non-coincident demand savings realization rate.

Navigant's verification efforts focused on a review of the IC's provided program tracking dataset. Subsequent data requests were made to the IC along with a review of invoice summaries for site homes that received audits, a cross-check of site home addresses within UNSE's Customer Care and Billing system, and correspondence with UNSE's staff.

2.7 Behavioral Suite

The only measures in the Behavioral Suite that were implemented in 2011 were the Community Education kits. The reported demand savings were coincident demand savings; as such no realization rate was calculated. The overall annual energy realization rate for this program was calculated to be 239%.

The high realization rate was mostly due to the fact that the TEP MAS and all of TEP's assumptions, instead of the most updated 2011 UNSE MAS, were being used to calculate energy savings.

2.8 Residential Summary

Overall, Navigant's savings verification of UNSE's residential programs resulted in realization rates of 100% for non-coincident demand savings and annual electric energy savings and 86% annual gas savings.

Table 2-3 below presents Reported at Meter (as provided by UNSE to Navigant for review) and Verified Savings at Generator (adjusted savings post Navigant review), as well as the Realization Rate (Verified Savings/Reported Savings).

Table 2-1. Residential Summary

	Non Coincident Demand Savings (MW)	Annual Energy Savings (MWh)	Annual Therm Savings
Reported at Meter	12.3	9,969	3,929
Verified at Meter	12.3	9,958	3,389
Realization Rate	100%	100%	86%

3.1 Air Conditioning and Heat Pumps

Air Conditioning and Heat Pump measures had an overall energy realization rate of 133% and a non-coincident demand realization rate of 100%.

The high energy realization rate was due to wrong reported savings by the IC from the deemed savings values in the most updated 2011 MAS for one programmable thermostat measure and one AC measure installed. The demand savings were reported correctly.

3.2 Refrigeration

Refrigeration measures had an overall energy and demand realization rate of 100%.

3.3 Lighting

Navigant's review of the Commercial Lighting measures reported savings identified an overall annual energy realization rate of 112% and annual overall non-coincident demand realization rate of 111%.

The following adjustments were made to the lighting savings estimates, which increased and decreased energy and demand realization rates on a per measure basis:

- Fixture wattages were reviewed and updated based on the most updated 2011 MAS. For lamp types not in the current MAS, Navigant used industry standard fixture wattage assumptions to verify reported fixture wattages
- Navigant included HVAC Interaction Factors in the calculation of demand and energy savings
- Due to the lack of detail regarding occupancy sensor installations, Navigant assumed that the occupancy sensors were installed to a connected load equal only to that of the sum of the wattages of all new fixtures. Where new fixture information was not available, it was assumed that only occupancy sensors were installed and the connected load was that of the existing fixture wattage
- Navigant also assumed demand and energy savings factors based on building type from the most updated 2011 occupancy sensor MAS
- Furthermore, Navigant assumed that occupancy sensors' savings are based on the reported operating hours of fixtures replaced

Navigant recommends the implementation of the following items for better documentation and review in future years of the UNSE Commercial program:

- Create standardized nomenclature for lighting fixtures so that there is no uncertainty regarding the wattage of each fixture replaced and installed

- Document whether projects are interior or exterior lighting measures. This is essential for calculating coincident demand savings (especially whether the lighting fixture is an interior or exterior measure) as well utilizing the correct HVAC Interaction Factors for demand and energy savings.

3.4 Custom

Navigant's review of the custom measures reported savings identified an overall annual energy realization rate of 101% and annual overall non-coincident demand realization rate of 90%.

There were 11 custom projects that included VSDs, economizers, AC and HPs, an EMS system, and a protein cabinet. Savings for majority of these measures were verified by reviewing the project files and, where applicable, re-calculating savings based on the most updated 2011 TEP or UNSE MAS.

3.5 Commercial Program Summary

Overall, Navigant's savings verification of UNSE's commercial program resulted in realization rates of 110% for non-coincident demand savings and 111% for annual electric energy savings.

Table 3-1 below presents Reported (as provided by UNSE to Navigant for review) and Verified Savings (adjusted savings post Navigant review), as well as the Realization Rate (Verified Savings / Reported Savings).

Table 3-1. Commercial Program Summary

	Non Coincident Demand Savings (MW)	Annual Energy Savings (MWh)	Annual Therm Savings
Reported at Meter	0.54	3,030	-
Verified at Meter	0.60	3,360	-
Realization Rate	110%	111%	-

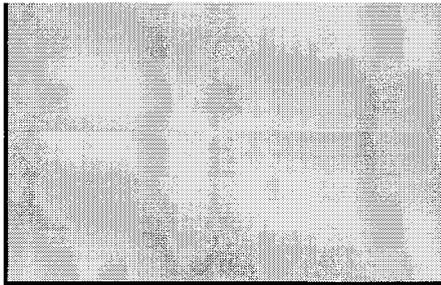
UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2011

APPENDIX 2 – COMMISSION APPROVED DSM PROGRAMS AND MEASURES FOR 2011	
DSM Program	Approved Measures
Residential Programs	
Low-Income Weatherization	Whole House Low Income Weatherization
Residential New Construction	Tier 1
	Tier 2
	Tier 3
Shade Tree Program	Shade Tree
ENERGY STAR® Lighting (CFL)	Integral CFL
Efficient Home Cooling	SEER 14 or greater AC or Heat Pump Retrofits
Existing Home Program	Air Sealing
	Air Sealing & Attic Insulation
	Duct Sealing (Performance)
	Duct Sealing (Prescriptive)
	Early Retirement HVAC with QI and Duct Sealing (Performance)
	Early Retirement HVAC with QI and Duct Sealing (Prescriptive)
	ROB HVAC with QI and Duct Sealing (Performance)
	ROB HVAC with QI and Duct Sealing (Prescriptive)
	Shade Screens
	Screw in CFL - Direct Install from Audit
	Advanced Power Strips - Direct Install from Audit
	Behavioral changes resulting from Energy Assessments
Commercial Programs	
Commercial Facilities Efficiency	Programmable Thermostats
	14 SEER Packaged and Split AC's
	14 SEER Packaged and Split HP's
	15 SEER Packaged and Split AC's
	15 SEER Packaged and Split HP's
	16 SEER Packaged and Split AC's
	16 SEER Packaged and Split HP's
	Daylighting controls
	Delamping
	Energy efficient exit signs
	Hard Wire CFL
	HIDs to T8/T5
	Integral Screw In CFL
	Occupancy sensors

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2011

	Screw in cold cathode CFL
	Standard T8 Lighting
	Variable Speed Drives
	Anti-sweat heater controls
	Occupancy Sensor Vending Machine and Reach-in Cooler Controls
	Strip Curtains and Night Covers
	Custom Measures