



0000151513

P.O. L...
Tucson, Arizona 85702-0711



RECEIVED

2014 MAR -3 P 1:48

AZ CORP COMMISSION
DOCKET CONTROL

March 3, 2014

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

ORIGINAL

Re: Notice of Filing – UNS Electric, Inc.’s Annual Demand-Side Management Progress Report, Docket No. E- 00000U-14-0049

The Electric Energy Efficiency Standards set forth in the Arizona Administrative Code, Section R14-2-2409.A, require UNS Electric, Inc. (“UNS Electric”) to submit an annual DSM progress report for each of its Commission-approved DSM programs by March 1st. UNS Electric hereby files its DSM Progress Report for 2013. The MER listed in Appendix 1 of the DSM Progress Report is being filed directly with Commission Staff.

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

Sincerely,

Jessica Bryne
Regulatory Services

Arizona Corporation Commission
DOCKETED

MAR 03 2014

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

DOCKETED BY

UNS ELECTRIC, INC.

ANNUAL DSM PROGRESS REPORT

January – December 2013

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

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:

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

A summary list of tables includes:

Table 1	DSM expenses by program
Table 2	DSM energy savings by program
Table 3	Cumulative energy savings as a comparison to the Electric Energy Efficiency Standards ("EEES" or "Standard")
Table 4	Societal benefits and performance incentive: January – June 2013
Table 5	Lifetime environmental savings by program

Commission approved DSM programs and measures, including Commission Staff's benefit/cost calculation per measure, and the actual benefit/cost calculation per measure based upon 2013 results, are attached in Appendix 2.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

Table of Contents

Definitions.....	3
DSM Program Expenses: January - December 2013.....	4
DSM Energy Savings (Planned & Actual): January – December 2013	5
Cumulative DSM Savings: January – December 2013.....	6
DSM Societal Benefits & Performance Incentive: January – December 2013	7
DSM Lifetime Environmental Savings: January – December 2013.....	8
Efficient Products Program.....	9
Appliance Recycling Program	11
Residential New Construction Program.....	13
Existing Homes Retrofit and Residential Energy Assessment Program	15
Shade Tree Program.....	18
Low-Income Weatherization Program.....	20
Multi-Family Housing Efficiency Program	22
C&I Facilities Program	24
Bid for Efficiency Program.....	26
Retro-Commissioning Program	28
C&I Demand Response Program.....	30
Schools Facilities Program	32
Behavioral Comprehensive Program	34
Home Energy Reports Program	36
Consumer Education and Outreach Program.....	38
Residential Energy Efficiency Financing Pilot Program	40
Energy Codes & Standards Enhancement Program.....	41
Miscellaneous DSM Information.....	43
Appendix 1 – Measurement, Evaluation, And Research Reports.....	44
Appendix 2 – Commission Approved DSM Programs and Measures for 2013.....	45

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

DEFINITIONS

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

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

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

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

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

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

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

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

Performance Incentive – 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).

UNS Electric, Inc.

DSM PROGRAM PROGRESS REPORT FOR THE PERIOD: January through December 2013

Table 1

DSM PROGRAM EXPENSES: JANUARY - DECEMBER 2013

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential Programs								
Appliance Recycling	\$14,970	\$693	\$0	\$39,143	\$9,699	\$4,908	\$2,687	\$72,101
Low-Income Weatherization	\$117,353	\$239	\$0	\$13,538	\$75	\$10,415	\$12,081	\$153,701
Residential New Construction	\$76,300	\$502	\$320	\$64,993	\$368	\$10,599	\$3,333	\$156,414
Shade Tree Program	\$11,793	\$113	\$7,730	\$7,264	\$2,039	\$2,150	\$647	\$31,737
Efficient Products	\$397,565	\$1,152	\$2,056	\$209,803	\$53,928	\$50,244	\$26,782	\$741,510
Existing Home Program	\$563,279	\$3,699	\$544	\$234,222	\$338	\$58,731	\$5,952	\$866,765
Multi-Family Housing Efficiency	\$21,354	\$95	\$0	\$35,022	\$131	\$4,159	\$623	\$61,384
Total for Residential Programs	\$1,202,615	\$6,493	\$10,650	\$603,985	\$66,577	\$141,207	\$52,086	\$2,083,613
Commercial Programs								
C&I Facilities	\$302,975	\$988	\$37	\$235,860	\$131	\$43,070	\$52,577	\$635,637
Bid For Efficiency	\$152,693	\$311	\$0	\$33,495	\$0	\$13,557	\$18	\$200,074
Retro-Commissioning	\$0	\$9	\$0	\$5,509	\$0	\$401	\$0	\$5,920
C&I Demand Response	\$0	\$304	\$0	\$181,900	\$0	\$13,243	\$0	\$195,447
Schools Facilities	\$124,960	\$232	\$0	\$14,027	\$0	\$10,128	\$125	\$149,472
Total for Commercial Programs	\$580,628	\$1,644	\$37	\$470,791	\$131	\$80,400	\$52,720	\$1,186,550
Behavioral Programs								
Behavioral Comprehensive	\$205,204	\$557	\$15,463	\$105,663	\$4,989	\$24,276	\$2,115	\$358,267
Home Energy Reports	\$0	\$142	\$0	\$84,143	\$0	\$6,173	\$648	\$91,106
Total for Behavioral Programs	\$205,204	\$699	\$15,463	\$189,806	\$4,989	\$30,449	\$2,762	\$449,372
Support Programs								
Consumer Education & Outreach	\$0	\$116	\$62,929	\$5,979	\$0	\$5,037	\$275	\$74,336
Residential EE Financing	\$0	\$4	\$0	\$2,388	\$0	\$174	\$0	\$2,566
Energy Codes & Standards Enhancement	\$0	\$3	\$0	\$1,092	\$0	\$127	\$650	\$1,872
Total for Support Programs	\$0	\$122	\$62,929	\$9,460	\$0	\$5,338	\$925	\$78,774
Portfolio Totals	\$1,988,446	\$9,158	\$89,079	\$1,274,042	\$71,697	\$257,393	\$108,493	\$3,796,308

Program Costs	\$3,796,308
Program Development, Analysis & Reporting	\$76,301
TOTAL	\$3,874,609

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

Table 2

DSM ENERGY SAVINGS (PLANNED & ACTUAL): JANUARY – DECEMBER 2013¹

Program	Planned Capacity Savings MW	Actual Capacity Savings MW	Planned Annual MWh Savings	Actual Annual MWh Savings	Planned Annual Therm Savings	Actual Annual Therm Savings	Planned Lifetime MWh Savings	Actual Lifetime MWh Savings	Planned Lifetime Therm Savings	Actual Lifetime Therm Savings
Appliance Recycling	0.29	0.05	1,795	406	NA	NA	10,771	2,434	NA	NA
Low-Income Weatherization	0.00	0.12	365	248	NA	2,940	6,383	4,344	NA	51,450
Residential New Construction	0.03	0.10	173	162	NA	112	5,196	4,868	NA	3,370
Shade Tree Program	0.12	0.21	122	241	NA	NA	2,446	7,236	NA	NA
Efficient Products	1.10	0.56	15,328	13,783	NA	NA	117,501	96,892	NA	NA
Existing Home Program	1.63	1.99	2,320	3,073	NA	NA	45,784	58,491	NA	NA
Multi-Family Housing Efficiency	0.01	0.01	235	290	NA	NA	1,818	1,949	NA	NA
C&I Facilities	0.83	0.56	5,367	3,653	NA	NA	77,891	56,449	NA	NA
Bid For Efficiency	0.99	0.24	1,771	2,835	NA	NA	17,710	24,952	NA	NA
Retro-Commissioning	1.11	0.00	1,992	0	NA	NA	19,924	0	NA	NA
C&I Demand Response	5.00	5.99	3,219	3,219	NA	NA	NA	NA	NA	NA
Schools Facilities	0.27	0.14	3,123	635	NA	NA	33,241	9,349	NA	NA
Behavioral Comprehensive	0.14	0.12	1,545	3,222	NA	62,298	11,913	26,102	NA	560,684
Home Energy Reports	1.23	0.19	6,641	1,200	NA	NA	6,641	1,200	NA	NA
Consumer Education & Outreach	NA	0.00	NA	NA	NA	NA	NA	0	NA	NA
Residential EE Financing	NA	0.00	NA	NA	NA	NA	NA	0	NA	NA
Energy Codes & Standards Enhancement	0.00	0.10	0	1,857	NA	NA	NA	0	NA	NA
Portfolio Totals	12.75	10.39	43,996	34,764	NA	65,350	357,019	294,066	NA	615,503

¹ This table is provided to comply with A.A.C. R-14-2-2409 and Commission Decision No. 74262. Planned savings for annual and lifetime are from updated information provided to Commission Staff March 2013. Capacity savings for C&I Demand Response reflect the capacity available for reduction events. Annual MWh savings for C&I Demand Response reflect the credit available toward the EE Standard per A.A.C. R14-2-2404 (C). UNS Electric does not do planning for therm savings but does show them when appropriate.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

Table 3

CUMULATIVE DSM SAVINGS: JANUARY – DECEMBER 2013

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%
2012	1,755,541	35,032	50,037	2.70%	3.00%
2013		34,764	84,801	4.83%	5.00%

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

Table 4

DSM SOCIETAL BENEFITS & PERFORMANCE INCENTIVE: JANUARY – DECEMBER 2013²

DSM Program	Program Cost	Planned Societal Benefits	Actual Societal Benefits	Planned Societal Costs	Actual Societal Costs	Planned Net Benefits	Actual Net Benefits
Residential							
Appliance Recycling	\$72,101	\$452,126	\$102,023	\$341,132	\$57,131	\$110,994	\$44,892
Low-Income Weatherization	\$153,701	\$313,070	\$288,907	\$313,114	\$248,853	(\$44)	\$40,054
Residential New Construction	\$158,414	\$354,922	\$304,558	\$248,521	\$257,136	\$106,401	\$47,422
Shade Tree Program	\$31,737	\$167,747	\$486,044	\$93,837	\$137,440	\$73,910	\$348,604
Efficient Products	\$741,510	\$5,143,581	\$3,938,572	\$1,794,542	\$697,393	\$3,349,039	\$3,241,179
Existing Home Program	\$866,765	\$2,953,976	\$3,826,457	\$1,252,697	\$1,263,463	\$1,701,279	\$2,562,994
Multi-Family Housing Efficiency	\$61,384	\$76,655	\$82,716	\$71,201	\$47,486	\$5,454	\$35,230
Total for Residential	\$2,083,613	\$9,462,077	\$9,029,277	\$4,115,044	\$2,708,902	\$5,347,033	\$6,320,376
Non-Residential							
C&I Facilities	\$635,637	\$3,278,891	\$2,474,409	\$1,379,008	\$992,101	\$1,899,883	\$1,482,308
Bid For Efficiency	\$200,074	\$1,037,882	\$1,012,020	\$471,486	\$205,102	\$566,396	\$806,918
Retro-Commissioning	\$5,920	\$1,167,617	\$0	\$406,794	\$5,920	\$760,823	(\$5,920)
C&I Demand Response	\$195,447	NA	NA	NA	NA	NA	NA
Schools Facilities	\$149,472	\$1,352,026	\$431,184	\$327,054	\$343,471	\$1,024,972	\$87,714
Total for Non-Residential	\$1,186,560	\$6,836,416	\$3,917,613	\$2,584,342	\$1,646,592	\$4,262,074	\$2,371,021
Behavioral Programs							
Behavioral Comprehensive	\$358,267	\$721,673	\$1,178,453	\$229,697	\$323,133	\$491,976	\$855,320
Home Energy Reports	\$91,106	\$218,957	\$39,163	\$295,259	\$91,106	(\$76,302)	(\$51,943)
Total for Behavioral Programs	\$449,372	\$940,630	\$1,217,616	\$524,956	\$414,239	\$415,674	\$803,377
Support Programs							
Consumer Education & Outreach	\$74,336	NA	\$0	NA	\$74,336	NA	(\$74,336)
Residential EE Financing	\$2,566	NA	\$0	NA	\$2,566	NA	(\$2,566)
Energy Codes & Standards Enhancement	\$1,872	\$0	\$0	\$0	\$1,872	\$0	(\$1,872)
Total for Support Programs	\$78,774	\$0	\$0	\$0	\$78,774	\$0	(\$78,774)
Program Totals							
Program Totals	\$3,798,308	\$17,239,123	\$14,164,506	\$7,224,342	\$4,748,507	\$10,014,781	\$9,416,000
Program Development, Analysis & Reporting	\$76,301	\$0	\$0	\$0	\$76,301	\$0	(\$76,301)
Portfolio Total	\$3,874,609	\$17,239,123	\$14,164,506	\$7,224,342	\$4,824,807	\$10,014,781	\$9,339,699
Performance Incentive Calculation:							
Total Spending	\$3,451,125						
Total Net Benefits	\$9,373,981						
10% Net Benefits	\$937,398						
10% of Spending	\$345,113						
Performance Incentive for 2013	\$345,113						

² The UNS Electric performance incentive was established in Commission Decision No. 72747 (January 20, 2012). Societal costs, societal benefits, and net benefits are not calculated on an annual basis for Demand Response Programs. Total spending and net benefits for the performance incentive calculation does not include Low-income Weatherization, Education & Outreach, or Demand Response/Direct Load Control Programs. The performance incentive is capped at 10% of net benefits or 10% of total spending, whichever is less.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

Table 5

DSM LIFETIME ENVIRONMENTAL SAVINGS: JANUARY – DECEMBER 2013

Program	Lifetime SO _x Reduction (lbs)	Lifetime NO _x Reduction (lbs)	Lifetime CO ₂ Reduction (lbs)	Lifetime Water Reduction (gallons)
Appliance Recycling	13	290	2,896,750	630,469
Low-Income Weatherization	24	517	5,775,994	1,124,992
Residential New Construction	27	579	5,832,545	1,260,782
Shade Tree Program	40	861	8,610,845	1,874,125
Efficient Products	532	11,506	115,063,600	25,043,254
Existing Home Program	322	6,960	69,604,268	15,149,164
Multi-Family Housing Efficiency	11	232	2,319,177	504,762
C&I Facilities	310	6,717	67,174,815	14,620,401
Bid For Efficiency (Pilot)	137	2,969	29,692,966	6,462,587
Retro-Commissioning	0	0	0	0
C&I Demand Response	18	383	3,830,604	833,720
Schools Facilities	51	1,113	11,125,069	2,421,339
Behavioral Comprehensive	144	3,106	37,677,126	6,760,348
Home Energy Reports	7	143	1,427,873	310,772
Consumer Education & Outreach	0	0	0	0
Residential EE Financing	0	0	0	0
Energy Codes & Standards Enhancement	0	0	0	0
Portfolio Totals	1,635	35,377	361,031,633	76,996,716

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

EFFICIENT PRODUCTS PROGRAM

Description

The UNS Electric Efficient Products Program promotes the purchase of energy efficient retail products through in store buy-down promotions or other delivery methods. The Program promotes the installation of energy-efficient lighting products and other energy saving appliances by residential and commercial customers in the UNS Electric service territory.

Program Goals, Objectives, and Savings Targets

The objectives of this Program are to:

- Reduce peak demand and overall energy consumption in homes and small businesses;
- Increase the purchase of Compact Florescent Lights (“CFLs”);
- Increase the purchase of other energy efficient appliances;
- Promote market transformation through retail partnerships; and
- Increase stocking and selection of energy efficient retail products.

Sales, demand, and energy savings goals for 2013:

CFL Sales	240,000
Variable Speed Pool Pumps	300
Pool Pump Timers	0
Advanced Power Strips	2,000
Peak Demand Savings (MW)	0.63
Energy Savings (MWh)	13,674

Levels of Participation

A total of 260,857 CFLs and 31 variable speed pool pumps were sold during this reporting period.

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation ^a	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Efficient Products	\$ 397,565	\$ 1,152	\$ 2,056	\$ 209,803	\$ 53,928	\$ 50,244	\$ 26,782	\$ 741,510

Evaluation and Monitoring Activities and Results

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings
CFL Lighting	260,857	554	13,713,987
Pool Pump Motors	31	7	69,419
Totals	260,888	561	13,783,406

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

Problems Encountered and Proposed Solutions

UNS Electric continues to use an online rebate process for customers to apply for rebates on variable speed pool pumps. Rebate participants showed a steady increase throughout the year. However, UNS Electric was not able to cost-effectively use the online rebate process for load controlled power strips. UNS Electric will continue to monitor this measure in 2014. Finally, UNS Electric did not discover an available pool pump timer that meets the Commission-approved product specifications but will continue to research new products.

Program Modifications

No modifications were made during this reporting period.

Programs or Measures Terminated

No measures were terminated during this reporting period. UNS Electric does not plan to terminate this Program or any Program measures in 2013.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

APPLIANCE RECYCLING PROGRAM

Description

The Appliance Recycling Program is designed to remove and recycle inefficient yet functioning refrigerators and freezers. National studies indicate that approximately 20% of customers have at least one secondary inefficient refrigerator or freezer in their home, suggesting a significant potential for energy savings. This program permanently removes inefficient appliances that may otherwise remain in service either at the customer's home or elsewhere, through donation or resale. In addition to providing the customer with an incentive, the program removes the usual barriers of taking these appliances offline by eliminating both the cost and inconvenience associated with the disposal of the appliance.

Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Remove old and inefficient refrigerators and freezers from customer's homes;
- Permanently remove the inefficient refrigerators and freezers from the grid, which eliminates the possibility of any re-introduction either through donations or resale; and
- Recycle the refrigerators and freezers in an environmentally responsible way.

The 2013 goal was to remove and recycle 700 refrigerators or freezers.

Levels of Participation

A total of 308 units – 255 Refrigerators and 53 freezers - were recycled 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
Appliance Recycling	\$ 14,970	\$ 693	\$ -	\$ 39,143	\$ 9,699	\$ 4,908	\$ 2,687	\$ 72,101

Evaluation and Monitoring Activities and Results

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

kW, kWh, and Therm Savings

Units Recycled	kW savings	kWh savings	Therm savings
308	55	405,707	NA

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

Problems Encountered and Proposed Solutions

UNS Electric did not achieve its participation goal in 2013; however, it did increase by 35% over 2012. There are few advertising venues available to promote the program that fit within the program's marketing budget. UNS Electric launched a consolidated advertising campaign that started in mid-April and ran through September. The Program was promoted in local newspapers, on radio, in one bill stuffer, and the UNS Electric website. The Program achieved its highest participation during the campaign months. Program information is also included in materials distributed through the Direct Canvassing

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

subprogram of the Behavioral Comprehensive Program and the Consumer Education and Outreach Program. UNS Electric plans to continue a mix of advertising opportunities in 2014.

Program Modifications

No Program modifications were made during this reporting period.

Programs or Measures Terminated

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

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 Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- 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.

The goal for 2013 was:

Tier Group by HERS	Target Goal: Number of Homes
Tier I < 85 HERS	44
Tier II < 70 HERS	40
Tier III < 45 HERS	24

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

Actual Levels of Participation

Tier Group by HERS	Number of Homes Completed
Tier I < 85 HERS	10
Tier II < 70 HERS	42
Tier III < 45 HERS	0

Costs Incurred

Costs incurred during the reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation*	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential New Construction	\$ 76,300	\$ 502	\$ 320	\$ 64,993	\$ 368	\$ 10,599	\$ 3,333	\$ 156,414

Evaluation and Monitoring Activities and Results

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

kW, kWh, and Therm Savings

No. of Homes	kW savings	kWh savings	Therm savings
52	97	162,263	112

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. In 2013 the IC relocated a program manager to northern Arizona to support this Program.

Program Modifications

In May, UNS Electric eliminated Tier III from incentives due to low cost-effectiveness and participation. Starting January 2014 UNS Electric will discontinue the tiered incentive structure and will offer only one incentive level of \$800 per qualifying home, as approved in Commission Decision No. 74262 (January 7, 2014).

Programs or Measures Terminated

Tier III homes were terminated during this reporting period. Starting in January 2014 UNS Electric will eliminate the tiered incentive structure and will offer only one incentive level per qualifying home.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

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 REAP 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. This Program is marketed as the BrightSave Home Program.

Program Goals, Objectives and Savings Targets

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

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

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

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

The 2013 Program goals were:

Retrofit Measure	Goal
HVAC Replacements	300
Duct Sealing	100
Air Sealing	125
Air Sealing and Attic Insulation	50
Solar Shade Screens/Window Film	50

Peak Demand Savings (MW)	1.51
Energy Savings (MWh)	2,554

Levels of Participation

Participation levels during this reporting period	
HVAC Replacements	405
Duct Sealing	172
Air Sealing	121
Solar Shade Screens/Window Film	24
Audits	51

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation*	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Existing Home Program	\$ 563,279	\$ 3,699	\$ 544	\$ 234,222	\$ 338	\$ 58,731	\$ 5,952	\$ 866,765

Evaluation and Monitoring Activities and Results

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings
Air Sealing	121	74	110,585
Duct Test & Repair	172	130	195,297
HVAC	405	1783	2,751,065
Shade Screens	24	6	8,521
Energy Assessment	51	1	7,596
Totals	773	1,994	3,073,064

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

Problems Encountered and Proposed Solutions

No problems were encountered during the 2013 program year.

Program Modifications

In-home Program audits by HVAC contractors were discontinued in 2013 due to low cost-effectiveness. To maximize cost-effectiveness UNS Electric has designed the new *Energizer Workshop*. Instead of visiting customers at their homes, UNS Electric can more effectively deliver the educational component through a tutorial workshop attended by participants. Participants learn how to use an available web portal that delivers a similar home energy assessment as the in-home audit, and they receive information on other EE programs and rebates available from UNS Electric. Participants also receive a direct install energy kit including six CFLs, and learn how to identify and complete simple do-it-yourself energy saving projects and make behavioral changes to save energy. Implementation for the UNS Electric *Energizer Workshop* is funded through the Behavioral Comprehensive Program, and EE savings are counted toward that Program. The REAP subprogram component of the Existing Home Program will effectively cease in 2014.

Programs or Measures Terminated

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

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 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 2013:

No. Trees Planted	1,200
Energy Savings (MWh)	294

Levels of Participation

Customer Applications Processed	490
No. Trees Planted	986

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 Program	\$ 11,793	\$ 113	\$ 7,730	\$ 7,284	\$ 2,039	\$ 2,150	\$ 647	\$ 31,737

Evaluation and Monitoring Activities and Results

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

kW, kWh, and Therm Savings

No. of Trees	kW savings	kWh savings	Therm savings
986	209	241,200	NA

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

Problems Encountered and Proposed Solutions

No new problems were encountered during this reporting period.

UNS Electric, Inc.

**DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013**

Program Modifications

There were no program modifications during this reporting period.

Programs or Measures Terminated

No measures were terminated during this reporting period. UNS Electric does not plan to terminate this Program in 2014.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

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 enables these customers to reduce their electric bills. Savings from these measures will help the customers utilize their limited income for other items such as rent, food, or medical expenses.

Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

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

The 2013 goal was to weatherize 130 homes.

Levels of Participation

A total of 99 households received weatherization assistance during this reporting period.

Costs Incurred

Costs incurred during this reporting period are listed below:

DSM Program	Rebates & Incentives ^a	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Low Income Weatherization	\$ 117,353	\$ 239	\$ -	\$ 13,538	\$ 75	\$ 10,415	\$ 12,081	\$ 153,701

a. Includes \$ for health and safety related repairs and \$22,088 for Weatherization Agencies administrative expenses.

Evaluation and Monitoring Activities and Results

The Governor’s Office of Energy Policy (“GOEP”), 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 2014 GOEP report is summarized below:

- To date, an analysis of 208 homes was 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).

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

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

kW, kWh, and Therm Savings

No. of Homes	kW savings	kWh savings	Therm savings
99	120	248,206	2,940

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

Problems Encountered and Proposed Solutions

UNS Electric, along with other major utilities in Arizona, continues to experience low participation from some low income agencies. Several meetings held in 2013 with all of the state's Weatherization agencies, Arizona Community Action Association ("ACAA") and the GOEP have included discussions on this issue. Some agencies are having difficulty adjusting to the loss of ARRA funding, requiring them to operate on reduced budgets and less staff. The GOEP continues to advise the agencies on best practices to maximize funds.

Program Modifications

There were no Program modifications during this reporting period.

Programs or Measures Terminated

No measures were terminated during this reporting period. UNS Electric does not plan to terminate this Program or any Program measures in 2013.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

MULTI-FAMILY HOUSING EFFICIENCY PROGRAM

Description

The UNS Electric Multi-family Housing Efficiency Program is designed to promote energy efficiency in the residential multi-family sector, on properties with five or more units, to overcome barriers typical to the multi-family housing market, which has limited past participation in energy efficiency programs.

Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Reduce peak demand and overall energy consumption in the multi-family housing market segment;
- Promote energy efficient retrofits of both dwelling units and common areas; and
- Increase overall awareness about the importance and benefits of energy efficiency improvements to the landlord and property ownership community;

The 2013 goal was to provide direct-install measures consisting of CFLs, low-flow kitchen and bathroom faucet aerators, and low-flow water-sensing showerheads to 225 complex units.

Levels of Participation

Through year end 2013, measures were installed in 490 units. The participating units in 2013 consisted of lower-income subsidized housing or senior living complexes.

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
Multi-Family Housing Efficiency	\$ 21,354	\$ 95	\$ -	\$ 35,022	\$ 131	\$ 4,159	\$ 623	\$ 61,384

Evaluation and Monitoring Activities and Results

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

kW, kWh, and Therm Savings

No. of Multi-Family Facilities	Measures	kW savings	kWh savings
7	3,072	12	229,925

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

Problems Encountered and Proposed Solutions

Due to the limited density of the UNS Electric service territory the Program has succeeded in reaching the majority of qualifying large scale multi-family housing facilities. Therefore, in 2014 Program staff will need to allocate additional time for outreach since program savings will rely on aggregating smaller projects.

UNS Electric, Inc.

**DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013**

Program Modifications

There were no Program modifications during this reporting period.

Programs or Measures Terminated

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

C&I FACILITIES PROGRAM

Description

The UNS Electric C&I Facilities Program is designed to minimize 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." The purpose of the program is to assist Commercial firms, whose main focus is generally on their core business, with analyzing their energy use to improve efficiency.

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 Goals, Objectives, and Savings Targets

The objectives of the Program 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 2013:

Peak Demand Savings (MW)	0.97
Energy Savings (MWh)	8,225

Levels of Participation

68 business customers participated during this reporting period.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation*	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
C&I Facilities	\$ 302,975	\$ 988	\$ 37	\$ 235,860	\$ 131	\$ 43,070	\$ 52,577	\$ 635,637

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 112% for coincident demand savings and 97% for energy savings. The report is attached in **Appendix 1**.

kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings
Custom	1,505	408	1,917,016
HVAC	149	21	306,212
Lighting	3,944	122	1,387,459
Refrigeration	52	6	42,506
Totals	5,650	557	3,653,193

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

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

Program Modifications

There were no modifications during the reporting period.

Programs or Measures Terminated

Two energy efficiency measures (Standard T-8 to Premium T-8 lighting and Night Covers) were terminated during this reporting period, due to low cost-effectiveness and in accordance with Commission Decision No. 74262. UNS Electric does not plan to terminate this Program or any additional Program measures in 2014.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

BID FOR EFFICIENCY PROGRAM

Description

UNS Electric's Bid for Efficiency Pilot Program is designed so customers or project sponsors can propose their own energy efficiency projects and then bid competitively for incentives within Program guidelines. UNS Electric will select winning applicants based upon specified criteria.

Program participants and project sponsors may include commercial or industrial customers, Energy Service Companies ("ESCOs") or other aggregators who submit proposals for multiple sites.

After two years of implementation, this Program was approved for continuance in Commission Decision No. 74262. The Program has proven to be cost-effective so UNS Electric will no longer consider this a "Pilot" Program and will refer to it as the Bid for Efficiency Program in future filings.

Program Goals, Objectives, and Savings Targets

The Program objectives are to encourage customers and project sponsors to think holistically regarding energy systems and to develop energy efficiency projects designed to optimize energy use by encouraging a systems approach to energy efficiency. Program goals include:

- Ensure projects are submitted, approved, implemented, and verified in a timely manner;
- Allow projects to be customer-driven; the customer or project sponsor will select appropriate trade and professional allies to design and implement projects;
- Encourage implementation of multiple measures; and
- Encourage applications that aggregate measures at multiple sites.

The savings goal for 2013:

Peak Demand Savings (MW)	0.25
Energy Savings (MWh)	1,056

Levels of Participation

Eleven customers participated 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
Bid For Efficiency	\$ 152,693	\$ 311	\$ -	\$ 33,495	\$ -	\$ 13,557	\$ 18	\$ 200,074

Evaluation and Monitoring Activities and Results

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

kW, kWh, and Therm Savings

No. of Projects	Measures Installed	kW savings	kWh savings
11	2,186	244	2,834,576

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

Problems Encountered and Proposed Solutions

UNS Electric's initial model for delivery of this Program was dependent upon the same or similar program receiving Commission approval in the 2011-2012 TEP EE Plan. However, in June 2013 Docket No. E01933A-11-0055 (the docket for TEP's 2011-2012 EE Plan) was closed and TEP's program was not approved. In response UNS Electric simplified the delivery process, removing some metering requirements, and substituting a robust engineering review of prospective projects. All projects were also subject to pre and post inspection. The result was a substantial increase in both participation and cost-effectiveness.

Program Modifications

Some metering requirements were removed in order to increase cost-effectiveness and simplify the Program process.

Programs or Measures Terminated

No measures were terminated during this reporting period. UNS Electric does not plan to terminate this Program in 2014.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

RETRO-COMMISSIONING PROGRAM

Description

UNS Electric's Retro-commissioning ("RCx") Program is designed to identify deficiencies in existing facilities and make necessary adjustments to produce energy savings and other benefits, such as improved occupant comfort. The Program assists owners of large existing commercial and industrial facilities in identifying methods and processes to improve energy performance. The targeted improvements are relatively inexpensive to implement and may offer simple paybacks in less than two years.

Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Target large facilities that have lighting, cooling, and ventilation as their primary end uses of energy;
- Improve building performance, reduce maintenance, and lower energy bills for participants;
- Facilitate development of an RCx contractor pool; and
- Develop relationships with commercial and industrial customers leading to other areas of participation in UNS Electric's portfolio of DSM programs.

The savings goal for 2013:

Peak Demand Savings (MW)	0.02
Energy Savings (MWh)	221

Levels of Participation

There was no participation in 2013.

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Retro-Commissioning	\$ -	\$ 9	\$ -	\$ 5,509	\$ -	\$ 401	\$ -	\$ 5,920

Evaluation and Monitoring Activities and Results

No evaluation was performed for this program in 2013.

kW, kWh, and Therm Savings

There were no energy savings in 2013.

Problems Encountered and Proposed Solutions

UNS Electric's initial model for delivery was dependent upon the same program receiving approval in the 2011-2012 TEP EE Plan. However, in June 2013 Docket No. E01933A-11-0055 (the docket for the 2011-2012 EE Plan) was closed and a Retro-commissioning Program was not approved for TEP. Without the economies of scale that a similar TEP program would provide, UNS Electric must re-evaluate its delivery method in order to remain cost-effective and within the approved budget. UNS Electric is committed to delivering a cost-effective version of this Program in 2014.

UNS Electric, Inc.

**DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013**

Program Modifications

No Program modifications were made during this reporting period.

Programs or Measures Terminated

No measures were terminated during this reporting period. UNS Electric does not plan to terminate this Program in 2014.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

C&I DEMAND RESPONSE PROGRAM

Description

The UNS Electric Commercial and Industrial ("C&I") Demand Response Program is designed to manage peak demand and mitigate system emergencies through a commercial and industrial load curtailment program. The Program is delivered in-house by engaging with commercial and industrial customers, and encouraging those customers to participate in a proactive demand response program. For those customers who choose to participate, UNS Electric will install equipment that provides Company control of either selected loads or the entire electric load in a facility.

The Company will install metering equipment for all participants to enable proper tracking of interval load data to ensure customer participation in any control event and also to provide data for post event analysis. In addition, participants must agree to be placed on UNS Electric's Interruptible Power Service tariff in lieu of any cash incentive for participation.

Program Goals, Objectives, and Savings Targets

The primary goal of the Program is to provide up to 10 MW of summer peak demand reduction, available for up to 80 hours per year, in order to mitigate system emergencies.

Levels of Participation

While no participants were enrolled in 2013, the Company has 41 existing C&I customers enrolled on an interruptible rate. These customers will be primary targets for participation in the Program. UNS Electric has purchased equipment to implement the in-house delivery method and will be actively recruiting participants in early 2014.

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
C&I Demand Response	\$ -	\$ 304	\$ -	\$ 181,900	\$ -	\$ 13,243	\$ -	\$ 195,447

Evaluation and Monitoring Activities and Results

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

kW, kWh, and Therm Savings

The Energy Efficiency Standard allows a credit for demand response and load management programs per A.A.C. R14-2-2404 (C). Peak reduction capability may be converted to an annual energy savings equivalent based on an assumed 50% load factor. The credit shall not exceed 10% of the annual standard. The following table shows the allowable credit for this Program based on the available capacity reduction and the 10% cap. See the Program Modifications section below for more information.

Based upon an updated analysis of the existing customers on UNS Electric's Interruptible Power Service tariff, the Company has identified a conservative potential of 5,994 kW in available load reduction

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

capacity. Therefore, the Company will be taking the demand response credit for 2013 as allowed in A.A.C. R14-2-2404 (C).³

Maximum MW Available	MWh Savings Credit
5.99	3219

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

Program Modifications

The Commission approved the Company's proposed in-house delivery method in Decision No. 74262.

Programs or Measures Terminated

UNS Electric does not plan to terminate this Program in 2014.

³ See also R-14-2-2401, definition no. 10 "Demand response" and definition no. 29 "Load management."

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

SCHOOLS FACILITIES PROGRAM

Description

Schools represent a market segment that has historically been underserved. The Schools Facilities Program is designed to increase participation in energy efficiency retrofits by schools. The Program is open to participation by all existing kindergarten through twelfth grade school facilities. The Program utilizes the same delivery method and pays incentives for the same energy efficiency measures as the Commercial Facilities Efficiency Program.

Program Goals, Objectives, and Savings Targets

The Program objectives are to:

- Encourage schools 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 schools;
- Overcome the unique market barriers of the 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; and
- Assure that the participation process is clear, easy to understand and simple.

The savings goal for 2013:

Peak Demand Savings (MW)	0.07
Energy Savings (MWh)	446

Levels of Participation

Five school facilities participated in 2013.

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Schools Facilities	\$ 124,960	\$ 232	\$ -	\$ 14,027	\$ -	\$ 10,128	\$ 125	\$ 149,472

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 111% for coincident demand savings and 121% for energy savings. The report is attached in **Appendix 1**.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings
HVAC	147	93	251,244
Lighting	3,857	47	384,208
Totals	4,004	140	635,453

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.

Program Modifications

No Program modifications were made during this reporting period.

Programs or Measures Terminated

Commission Decision No. 74262 combined the budget and EE measures into the UNS Electric C&I Facilities Program starting January 2014 so the Schools Facilities Program will cease as a separate Program.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

BEHAVIORAL COMPREHENSIVE PROGRAM

Description

The Behavioral Comprehensive Program consists of four subprograms. The focus of the Program is to educate residential customer on how changes in behavior, including purchasing decisions, can improve energy efficiency. The subprograms include low-cost measures, such as CFLs, faucet aerators, LED nightlights and refrigerator thermometers, in addition to educational components.

The four subprograms consist of:

- **Direct Canvassing**
 - o The Direct Canvassing initiative is a grass-root, door to door approach to promote energy efficiency, and is designed to reach neighborhoods difficult to reach through traditional messaging. Two CFLs will be left with each customer, along with program materials for appropriate UNS Electric DSM programs.
- **K-12 Education**
 - o In addition to energy based class room curriculum, students would be instructed in energy saving approaches for their homes. Students in grades 6-8 are given a take home kit which includes CFLs, LED nightlights, and educational material on how to reduce energy use.
- **Community Education**
 - o The Community Education program engages community groups and works with public entities to conduct - hands-on energy efficiency workshops. Attendees receive an Energy Efficiency Kit with a wide sample of materials such as weather-stripping, low flow showerheads, caulk, and CFLs.
- **CFL Giveaway**
 - o The CFL Giveaway Program is designed to complement UNS Electric's presence at community events, and its overall education and outreach efforts and efficiency messaging. Free CFLs are made available both at community events and to community organizations, including those involved in our Community Education Program.

Program Goals, Objectives, and Savings Targets

The Program objectives are to influence energy related behaviors including the following:

- **Habitual behaviors**
 - o Adjust thermostat setting
 - o Turn off unnecessary lights
- **Small purchasing and maintenance behaviors**
 - o Purchase and install faucet aerators and low flow shower heads
 - o Purchase and install compact fluorescent light bulbs
 - o HVAC maintenance
- **Larger purchasing decisions**
 - o Purchase an ENERGY STAR® appliance
 - o Purchase higher energy efficient heating and cooling equipment

The savings goal for 2013 was 2,420 MWh.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

Levels of Participation

Direct Canvassing distributed 8,406 kits. Each kit consists of two CFLs.

The K-12 Education Program conducted 100 classroom presentations and distributed 3,146 Energy Saving Kits.

Ten Community Education workshops were conducted in 2013 and 212 Energy Saving Kits were distributed.

45,020 CFLs were distributed to UES customers in all three service areas. Methods of delivery included Home Shows, County Fairs, service organizations, food banks and builder associations.

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
Behavioral Comprehensive	\$ 205,204	\$ 557	\$ 15,463	\$ 105,663	\$ 4,989	\$ 24,276	\$ 2,115	\$ 358,267

Evaluation and Monitoring Activities and Results

Navigant Consulting performed an evaluation of this Program for 2013. The evaluation resulted in a realization rate of 100% for coincident demand and electric energy savings, and 100% for therm savings. This report is attached in **Appendix 1**. 2013 savings have been updated as a result of the 2013 evaluation.

kW, kWh, and Therm Savings

Measure	No. of Units	kW savings	kWh savings	Therms savings
Community/K-12 Educational Kits	3,358	36	864,383	62,298
CFL Promotion	45,020	59	1,693,396	NA
Direct Canvassing	8,406	23	664,078	NA
Totals	56,784	118	3,221,856	62,298

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.

Program Modifications

No Program modifications were made during this reporting period.

Programs or Measures Terminated

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

HOME ENERGY REPORTS PROGRAM

Description

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

Program Goals, Objectives, and Savings Targets

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

The major objectives from this Program are to:

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

The savings goal for 2013:

Peak Demand Savings (MW)	0.28
Energy Savings (MWh)	4,981

Levels of Participation

On average, 19,023 UNS Electric customers were enrolled in the Home Energy Reports Program 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
Home Energy Reports	\$ -	\$ 142	\$ -	\$ 84,143	\$ -	\$ 6,173	\$ 648	\$ 91,106

Evaluation and Monitoring Activities and Results

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

kW, kWh, and Therm Savings

Participants	kW savings	kWh savings	Therm savings
19,023	193	1,199,894	NA

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

Problems Encountered and Proposed Solutions

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

This Program was not cost-effective for UNS Electric in 2013 and it was not approved for UNS Gas customers. Because the program cannot utilize economies of scale, as well as the customer complaints, UNS Electric has decided not to renew the contract with the vendor. UNS Electric did negotiate an agreement with the vendor to maintain the web based home energy report and savings plan tool at a greatly reduced fee that will be funded as a component of the Behavioral Comprehensive Program.

Program Modifications

There were no Program modifications during this reporting period.

Programs or Measures Terminated

UNS Electric will terminate this Program in 2014 due to low cost-effectiveness.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

CONSUMER EDUCATION AND OUTREACH PROGRAM

The Consumer Education and Outreach Program is responsible for the marketing of the UNS Electric portfolio as a whole, as well as general consumer education. The focuses of activities are as follows:

- Develop brochures and communications materials that showcase all available EE programs;
- Develop and maintain communication material related to general energy savings information;
- Provide labor and materials to staff trade shows and community events;
- Develop and maintain web content to educate consumers on energy use and TOU rate choices; and
- Cross communication of Energy Efficiency Programs and general energy savings information.

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 Homebuilders Show, Lake Havasu;
- Kingman Regional Medical Center, Kingman;
- Mohave County Fair, Kingman;
- Rotary Club, Kingman;
- Boys & Girls Club, Kingman;
- Lee Williams High School, Kingman;
- Colorado River Builder's Association, Lake Havasu City;
- Kingman Cancer Care Unit, Kingman;
- Mohave County Community Services Department, Kingman

UNS Electric continues to educate its employees about the Company's DSM programs, with an emphasis on the importance of UNS Electric employees helping to ensure the success of the programs.

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

169 customers were enrolled in the PowerShift™ TOU Program.

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation*	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Consumer Education & Outreach	\$ -	\$ 116	\$ 62,929	\$ 5,979	\$ -	\$ 5,037	\$ 275	\$ 74,336

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

Evaluation and Monitoring Activities and Results

There is no third-party evaluation for this program.

kW, kWh, and Therm Savings

There are no energy savings to report for this program.

Programs or Measures Terminated

UNS Electric does not plan to terminate this Program in 2014.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

RESIDENTIAL ENERGY EFFICIENCY FINANCING PILOT PROGRAM

Description

The Residential Energy Financing Pilot program offers home improvement loans to UNS Electric customers seeking to finance home energy efficiency improvements promoted through the Existing Homes and Audit Direct Install program. The program is primarily delivered through participating contractors who receive training and support from UNS Electric and the program lender, Vantage West Credit Union ("Vantage West").

Program Goals, Objectives, and Savings Targets

The Program objective is to support the implementation of residential energy efficiency measures by providing an equitable financing mechanism.

Levels of Participation

No program loans were issued in 2013.

Costs Incurred

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

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential EE Financing	\$ -	\$ 4	\$ -	\$ 2,388	\$ -	\$ 174	\$ -	\$ 2,566

Evaluation and Monitoring Activities and Results

There is no evaluation for this program.

kW, kWh, and Therm Savings

There is no energy savings associated with this program.

Problems Encountered and Proposed Solutions

This program had only one participant in two years.

Program Modifications

No Program modifications were made during this reporting period.

Programs or Measures Terminated

Due to lack of participation this Program will be terminated in 2014.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

ENERGY CODES & STANDARDS ENHANCEMENT PROGRAM

Description

The Energy Codes and Standards Enhancement Program (“ECSEP”) will strive to maximize energy savings through adherence to local building energy codes and enhanced energy efficient appliance standards. The program will employ a variety of tactics aimed at: i) improving levels of compliance with existing building energy codes and appliance standards; and ii) supporting periodic updates to energy codes and appliance standards as warranted by market conditions.

Program Goals, Objectives, and Savings Targets

The program is designed to increase energy savings in new construction, and renovated buildings, in both the residential and commercial sectors through improving levels of compliance with existing building energy codes, supporting periodic energy code updates as warranted by market conditions, and advocating for higher efficiency electric appliances.

Levels of Participation

In 2013, UNS Electric program staff met with building officials in Kingman, Lake Havasu City, Mohave County, and Santa Cruz County to educate and encourage them to consider and adopt energy building codes within their jurisdiction.

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 Codes & Standards Enhancement	\$ -	\$ 3	\$ -	\$ 1,092	\$ -	\$ 127	\$ 650	\$ 1,872

Evaluation and Monitoring Activities and Results

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

kW, kWh, and Therm Savings

An analysis performed by UNS Electric identified energy savings through improved appliance standards. The following table shows the incremental energy savings credit allowed by Commission Decision No. 72747 (January 20, 2012) for 2013.⁴

Year	2013
Energy Savings (kWh)	1,856,553

Problems Encountered and Proposed Solutions

Arizona is one of only nine states in the country that allow “home rule” adoption of residential building codes, and counties and municipalities may adopt some or all of the residential building codes available (some minimum code standards are enforced for non-residential structures such as municipal buildings, schools, and health care facilities). The jurisdictions within UNS Electric service territory have historically not adopted energy conservation building codes. UNS Electric has been proactive in

⁴ Decision No. 72747, p. 56, lines 17-19 states “...allow the Company to also count toward meeting the Energy Efficiency Standard in A.A.C. R14-2-2404, for 2012 – 2020, up to one third of the energy savings resulting from energy efficiency appliance standards...”

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

educating code officials and contractors on the advantages of energy conservation codes, and will continue its efforts to overcome some of the barriers and misconceptions of Code adoption

Program Modifications

There were no Program modifications during this reporting period.

Programs or Measures Terminated

UNS Electric does not plan to terminate this Program 2014.

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD: January through December 2013

MISCELLANEOUS DSM INFORMATION

Some of the DSM programs approved by the Commission in January 2012 were dependent upon the same or similar programs or measures receiving approval in TEP's 2011-2012 EE Plan, especially programs designed for commercial customers. In June 2013 the Commission closed Docket No. E01933A-11-0055 (the docket for the 2011-2012 EE Plan) and did not approve any new programs. The result is that UNS Electric cannot take advantage of economies of scale in implementing certain EE programs. This hindered UNS Electric's ability to meet the Standard for 2013 and will continue to hinder it in subsequent years.

UNS Electric's 2013 EE Plan was approved in December 2013, but no new measures or programs were approved. Without Commission approval of new EE measures or programs in subsequent years it will be difficult for UNS Electric to meet the Standard.

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

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

APPENDIX 1 – MEASUREMENT, EVALUATION, AND RESEARCH REPORTS

- GOEP Training, Monitoring, and Evaluation Report – January 2014
- Navigant Consulting - UNSE PY2013 Year-end Measurement, Evaluation, and Research Report⁵

⁵ This report is being provided directly to Commission Staff.

UNS Electric, Inc.

DSM PROGRAM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

APPENDIX 2 – COMMISSION APPROVED DSM PROGRAMS AND MEASURES FOR 2013⁶

DSM Program	Commission Approved 2013 Program Budget	Actual 2013 Program Expenditures	Approved EE Measures	Benefit/Cost Ratio per Staff per Analysis	Actual Benefit/Cost Ratio for 2013
Residential Programs					
Efficient Products	\$766,185	\$741,510	Integral CFL	1.50	5.79
			Pool Pump Timers	2.16	NA ⁷
			Variable Speed Pool Pump	1.29	1.38
			Advanced Power Strip – Load Sensor	1.10	NA ⁷
Appliance Recycling	\$225,249	\$72,101	Refrigerator Recycling	2.69	1.79
			Freezer Recycling	2.04	1.79
Residential New Construction	\$360,743	\$156,414	Tier 1	1.35	1.95
			Tier 2	1.16	1.13
			Tier 3 ⁸	NA	NA ⁷
Existing Home Program	\$872,989	\$866,765	Air Sealing	0.90	2.64
			Air Sealing & Attic Insulation	1.07	1.80
			Duct Sealing (Performance) ⁹	1.03	1.60
			Duct Sealing (Prescriptive) ⁹	1.03	NA ⁷
			Early Retirement HVAC with QI and Duct Sealing (Performance)	1.75	3.44

⁶ This table is provided to comply with A.A.C. R-14-2-2409 and Commission Decision No. 74262. Staff's benefit/cost ratios taken from Commission Decision No. 74262, Appendix A, unless otherwise noted. Actual benefit/cost ratio calculations for 2013 use the Staff-approved method with all criteria updated with the most recent data available, per Commission Decision No. 74262.

⁷ No prescriptive participation during this reporting period

⁸ The tiered incentive offering will be discontinued in 2014

⁹ EE measure discontinued per Commission Decision No. 74262

UNS Electric, Inc.

DSM PROGRAM PROGRESS REPORT FOR THE PERIOD: January through December 2013

				Early Retirement HVAC with QI and Duct Sealing (Prescriptive) ⁹	1.75	2.35
				ROB HVAC with QI and Duct Sealing (Performance) ⁹	1.13	2.27
				ROB HVAC with QI and Duct Sealing (Prescriptive) ⁹	1.13	1.38
				Shade Screens	0.89	0.98
				Home Energy Audits ⁹	NA	NA ⁷
Shade Tree Program	\$39,412	\$31,737		Shade Tree	1.69	3.54
Low-Income Weatherization	\$351,817	\$153,701		Whole House Low Income Weatherization	1.01	1.16
Multi-Family Housing Efficiency	\$63,393	\$61,384		Integral CFL	2.80	1.71
				Low Flow Showerheads	2.30	1.71
				Faucet Aerators	2.90	1.87
Commercial Programs						
C&I Facilities	\$756,700	\$635,637		Programmable Thermostats	1.64	3.21
School Facilities	\$197,645	\$149,472		14 SEER Packaged and Split AC's	0.98	NA ⁷
				14 SEER Packaged and Split HP's	1.23	1.35
				15 SEER Packaged and Split AC's	0.98	1.03
				15 SEER Packaged and Split HP's	1.23	0.87
				16 SEER Packaged and Split AC's	0.98	0.81
				16 SEER Packaged and Split HP's	1.23	NA ⁷
				Daylighting controls	2.87	NA ⁷
				Delamping	2.87	6.90
				Energy efficient exit signs	1.16	3.04
				Hard Wire CFL	1.03	1.10
				Interior HID to T8/T5	2.87	4.70
				Exterior HID to T8/T5	2.87	4.93

UNS Electric, Inc.

DSM PROGRESS REPORT FOR THE PERIOD:
January through December 2013

	Integral Screw In CFL	1.03	1.93
	Occupancy sensors	4.47	NA ⁷
	Screw in cold cathode CFL	2.87	NA ⁷
	Standard T8 Lighting	1.60	2.61
	Variable Speed Drives	2.87	NA ⁷
	Anti-sweat heater controls	1.46	NA ⁷
	Custom Measures	NA	2.2
	Shade Screens	1.38	1.30
	Window Films	1.38	1.42
	Induction Lighting	1.38	2.75
	LED Channel Signs	1.38	NA ⁷
	Outdoor CFL	1.38	4.00
	Reduced LPD	1.38	NA ⁷
	Standard T8 to Premium T8 ⁹	1.38	NA ⁷
	Premium T8 Lighting	1.38	NA ⁷
	Integrated Refrigerator Controls & Motor Retro-fits	1.44 ¹⁰	NA ⁷
	Vending Miser – Beverage Case Controls	1.38	NA ⁷
	Vending Miser – Snack Machine Controls	1.38	NA ⁷
	Vending Miser – Reach-in Cooler Controls	1.38	NA ⁷
	Evaporator Fan Controls	1.55 ¹⁰	1.42
	Refrigerated Display Automatic Door Closers	1.38	NA ⁷
	Refrigerated Display Gaskets	1.38	NA ⁷
	Advanced Power Strips - Load	1.38	NA ⁷

¹⁰ Staff's benefit/cost ratio from Commission Decision No. 70524 (September 30, 2008)

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

Re: Governor's Office of Energy Policy Contract

Training and Monitoring for Weatherization

Southwest Building Science Training Center

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

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

Training Center Courses

<http://www.swbstc.org/trainings/>

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

Details on BPI

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

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

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

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

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

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

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

Peer-to-Peer Fiscal and Technical Procedures

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

Agency Personnel Performance Reviews

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

Inspections

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

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

Utility Bill Analysis

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

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

Assumptions

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

Results Summary

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

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

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