ORIGINAL

0000173121

UNS Electric, Inc.

88 East Broadway Blvd., P.O. Box 711
HQE910
Tucson, AZ 85702-1720

Melissa Morales
Regulatory Coordinator

(520) 884-3680
mmorales@tep.com

August 31, 2016

RECEIVED
AZ CORP COMMISSION
DOCKET CONTROL
2016 AUG 31 PM 4 33

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

Re: Notice of Filing –UNS Electric, Inc.'s Annual DSM Status Report Docket No. E-00000U-16-0069

Pursuant to the Electric Energy Efficiency Standards (A.A.C R-14-2-2409. #B), UNS Electric, Inc. ("UNS Electric") hereby submits its annual September 1st Demand-Side Management ("DSM") status report, which includes a tabular summary showing the following for each of its Commission-approved DSM programs for January 1, 2016 through June 30, 2016:

1) Semi-annual expenditures compared to annual budget; and
2) Participation rates.

In addition to the requirements above, UNS Electric is providing tables that show: 1) the DSM energy savings for each program; and 2) the cumulative DSM savings.

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

Sincerely,

Melissa Morales
Regulatory Services

Enclosures: Report

cc: Compliance Section, ACC

Arizona Corporation Commission
DOCKETED
AUG 31 2016
DOCKETED BY

Table of Contents

Definitions ii

DSM PROGRESS REPORT 1

1. An analysis of the Company's progress toward meeting the annual energy efficiency standard 1

1.1 Progress Towards the Standard 1

Table 1 - Cumulative DSM Savings as Compared to the Standard 1

Table 2 - DSM Energy Savings (Planned & Actual) 3

1.2 DSM Expenses Compared to Budget 4

Table 3 - DSM Expenses and Participation by Program 4

1.3 Societal Benefits and Performance Incentives 5

Table 4 - DSM Energy Savings And Societal Benefits 6

1.4 Lifetime Environmental Savings 7

Table 5 –Lifetime Environmental Savings by Program 7

Definitions

The Arizona Administrative Code ("AAC")

Commercial and Industrial ("C&I")

The Arizona Corporation Commission ("Commission")

Demand-Side Management ("DSM")

Energy Efficiency ("EE")

Megawatt ("MW") –equal to 1,000 kilowatts or 1,000,000 watts

MWh – ("Megawatt Hour") – equal to 1,000 kilowatt hours

Program Development, Analysis, and Reporting – Research and development of new DSM program opportunities, analysis of existing and proposed programs and measures, and the tracking and reporting of participation, savings, and benefits. Associated costs are essential to comply with the ACC reporting and rules requirements.

the **Standard** or – the Electric Energy Efficiency Standards as defined in the State of Arizona Administrative Code Article 24.

Therm – equal to 100,000 Btus (British thermal units)

UNS Electric, Inc. ("UNS Electric" or **"Company")**

DSM PROGRESS REPORT

1. An analysis of the Company's progress toward meeting the annual energy efficiency standard

1.1 Progress Towards the Standard

In accordance with the Commission's Decision No. 71819 (August 10, 2010) and Arizona Administrative Code Section R14-2-2409 (effective January 1, 2011), UNS Electric submits this mid-year DSM progress report for the first six months of calendar year 2016. This report includes information for all of TEP's residential, non-residential, and low-income customer programs that were in place during this reporting period.

In the Commission's Decision No. 75297 (October 27, 2015), the Commission approved UNS Electric's 2016 EE Implementation Plan for use in 2016. Decision No. 75297 approved continuation of UNS Electric's existing DSM programs for Program Year 2016 and provided new programs and measures. New programs included measures that were demonstrated to be cost-effective by Staff analysis and measures that had been previously demonstrated to be cost-effect by Staff analysis.

UNS Electric's DSM mid-year savings, expenditures, societal benefits, incentives, and environmental savings are summarized in Table 1 through Table 5 as noted below.

Table 1	Cumulative DSM Savings As Compared to the Standard
Table 2	DSM Energy Savings (Planned and Actual)
Table 3	DSM Expenses and Participation By Program
Table 4	DSM Energy Savings and Societal Benefits
Table 5	Lifetime Environmental Savings By Program

UNS Electric's mid-year cumulative energy savings as compared to the Standard are reported in Table 1 below. As of June 30, 2016 UNS Electric's cumulative annual savings as a percent of previous year retail sales is 10.306 percent while the savings target in the Standard for 2016 is 12.0 percent.

TABLE 1 - CUMULATIVE DSM SAVINGS AS COMPARED TO THE STANDARD

Year	Retail Energy Sales (MWh)	Incremental Annual Energy Savings (MWh)	Cumulative Annual Energy Savings (MWh)	Cumulative Annual Savings as a Percent of previous year Retail Sales	Cumulative EE Standard
2010	1,857,160				
2011	1,852,904	15,005	15,005	0.808%	1.25%
2012	1,755,541	35,032	50,037	2.700%	3.00%
2013	1,699,307	34,764	84,801	4.830%	5.00%
2014	1,677,445	38,829	123,630	7.275%	7.25%
2015	1,628,035	32,318	155,948	9.297%	9.5%
2016		11,840	167,788	10.306%	12.00%

Annual and Lifetime Savings
The DSM portfolio annual and lifetime energy savings are reported in Table 2. Savings are separated into the following categories:

- Capacity Savings (MW)
- Annual MWh Savings
- Annual Therm Savings
- Lifetime MWh Savings
- Lifetime Therm Savings

UNS Electric is including energy savings toward the Standard for changes in energy efficient building codes per AAC R14-2-2404(E). Energy savings from this program are reported in Table 2 below.

TABLE 2[1] - DSM ENERGY SAVINGS (PLANNED & ACTUAL)

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
Residential Programs										
Appliance Recycling	0	0	202	0	NA	0	1,616	0	NA	0
Efficient Products	0.76	0.55	8,718	6,292	NA	0	66,053	47,676	NA	0
Existing Homes Retrofit and Audit Direct Install	3.61	0.65	4,838	875	NA	3,736	91,909	16,629	NA	74,578
Low-Income Weatherization	0.17	0.01	363	13	NA	175	6,356	221	NA	3,063
Multi-Family	0.07	0.	977	14	NA	0	8,406	121	NA	0
Residential New Construction	0.14	0.03	196	42	NA	581	5,880	1,252	NA	17,442
Shade Tree Program	0.03	0.03	78	64	NA	0	3,120	2,576	NA	0
Total for Residential Programs	4.8	1.27	15,371	7,300	NA	4,492	183,341	68,475	NA	95,082
Commercial Programs										
Bid For Efficiency (Pilot)	0.15	0.06	1,200	501	NA	0	12,686	5,298	NA	0
C&I Demand Response Control Program	0	0	3,601	0	NA	0	0	0	NA	0
C&I Facilities/Schools	0.89	0.59	5,000	3,287	NA	0	64,115	42,146	NA	0
Retro-Commissioning	0	0	0	0	NA	0	0	0	NA	0
Total for Commercial Programs	1.04	0.65	9,801	3,788	NA	0	76,801	47,444	NA	0
Behavioral Programs										
Behavioral Comprehensive	0.16	0.07	1,725	751	NA	8,843	12,926	5,629	NA	79,585
Home Energy Reports	0	0	0	0	NA	0	0	0	NA	0
Total for Behavioral Programs	0.16	0.07	1,725	751	NA	8,843	12,926	5,629	NA	79,585
Support Programs										
Consumer Education & Outreach Program	0	0	0	0	NA	0	0	0	NA	0
Energy Codes and Standards	0	0	4,974	0	NA	0	0	0	NA	0
Total for Support Programs	0	0	4,974	0	NA	0	0	0	NA	0
Credits		0								
Pre-Rule Credit for 2016	NA	NA	1,991	EOY	NA	NA	NA	NA	NA	NA
Portfolio Totals	**6.**	**2.**	**31,871**	**11,840**	**0**	**13,335**	**273,067**	**121,548**	**0**	**174,668**

[1] This table is provided to comply with AAC R-14-2-2409 and Commission Decision No. 74262. Planned savings for annual and lifetime are included in each program description. 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 AAC R14-2-2404(C). UNS Electric does not conduct planning for therm savings but does show them when appropriate.

1.2 DSM Expenses Compared to Budget

The mid-year participation and program expenses compared to the program budget are reported in Table 3.

TABLE 3 - DSM EXPENSES AND PARTICIPATION BY PROGRAM

DSM Program	Number of Participants	Number of Measures	Expenses YTD	Budget
Residential Programs				
Appliance Recycling	0	0	-$3,969	$89,765
Efficient Products	41,701	140,945	$487,179	$888,532
Existing Homes Retrofit and Audit Direct Install	83	416	$443,334	$2,119,484
Low-Income Weatherization	5	5	$41,745	$351,817
Multi-Family	18	220	$3,128	$266,930
Residential New Construction	24	24	$32,927	$282,618
Shade Tree Program	420	997	$18,343	$35,343
Total for Residential Programs	42,251	142,607	$1,022,685	$4,034,489
Commercial Programs				
Bid For Efficiency (Pilot)	2	30	$53,077	$292,005
C&I Demand Response Control Program	NA	NA	$32,601	$374,850
C&I Facilities/Schools	48	4,112	$387,665	$911,204
Retro-Commissioning	0	0	$6,262	$205,815
Total for Commercial Programs	50	4,142	$479,604	$1,783,874
Behavioral Programs				
Behavioral Comprehensive	7,793	26,117	$68,269	$261,538
Home Energy Reports	0	0	$205	$250,000
Total for Behavioral Programs	7,793	26,117	$974,400	$511,538
Support Programs				
Consumer Education & Outreach Program	NA	NA	$29,103	$106,050
Energy Codes and Standards	NA	NA	0	$34,020
Total for Support Programs		0	$1,071,977	$140,070
Portfolio Totals	**50,094**	**172,866**	**$2,574,266**	**$6,469,971**

1.3 Societal Benefits and Performance Incentives

The portfolio societal benefit calculations are reported in Table 4. UNS Electric's 2016 mid-year portfolio Societal Cost Test ratio is 1.385 and includes all program costs and labor.

TABLE 4 - DSM ENERGY SAVINGS AND SOCIETAL BENEFITS

DSM Program	Program Cost	Planned Societal Benefit	Actual Societal Benefit	Planned Societal Costs	Actual Societal Costs	Planned Net Benefits	Actual Net Benefit
Residential Programs							
Appliance Recycling	-$3,969	$2,925	0	$2,925	0	0	0
Efficient Products	$487,179	$1,436,307	$1,036,703	$716,971	$517,498	$719,336	$519,205
Existing Homes Retrofit and Audit Direct Install	$443,334	$7,284,489	$1,317,990	$2,431,988	$440,022	$4,852,501	$877,968
Low-Income Weatherization	$41,745	$512,073	$17,782	$340,872	$11,837	$171,201	$5,945
Multi-Family	$3,128	$280,171	$4,028	$173,174	$2,490	$106,997	$1,538
Residential New Construction	$32,927	$329,238	$70,129	$134,813	$28,716	$194,426	$41,413
Shade Tree Program	$18,343	$105,119	$86,795	$58,729	$48,492	$46,390	$38,304
Total for Residential Programs	$1,022,685	$9,950,322	$2,533,428	$3,859,472	$1,049,054	$6,090,850	$1,484,374
Commercial Programs							
Bid For Efficiency (Pilot)	$53,077	$457,539	$191,059	$29,488	$12,314	$428,050	$178,745
C&I Demand Response Control Program	$32,601	$52,150	0	$52,150	0	0	0
C&I Facilities/Schools	$387,665	$1,500,930	$986,642	$792,901	$521,216	$708,029	$465,425
Retro-Commissioning	$6,262	0	0	0	0	0	0
Total for Commercial Programs	$479,604	$2,010,619	$1,177,700	$874,539	$533,530	$1,136,080	$644,171
Behavioral Programs							
Behavioral Comprehensive	$68,269	$909,773	$396,194	$228,811	$99,644	$680,962	$296,550
Home Energy Reports	$205	0	0	0	0	0	0
Total for Behavioral Programs	$68,474	$909,773	$396,194	$228,811	$99,644	$680,962	$296,550
Support Programs							
Consumer Education & Outreach Program	$29,103	0	0	0	0	0	0
Energy Codes and Standards	0	$72,034	0	$72,034	0	0	0
Total for Support Programs	$29,103	$72,034	0	$72,034	0	0	0
Portfolio Totals	$1,599,866	$12,942,748	$4,107,322	$5,034,856	$1,682,228	$7,907,891	$2,425,094
Program Development, Analysis & Reporting	NA	NA	NA	NA	$69,113	NA	NA
Portfolio Totals	**$1,599,866**	**$12,942,748**	**$4,107,322**	**$5,034,856**	**$1,751,341**	**$7,907,891**	**$2,425,094**

1.4 Lifetime Environmental Savings

The annualized environmental savings for each program are reported in Table 5. Savings are separated into the following categories:

- sulphur oxides ("SOX"),
- nitrogen oxides ("NOX"),
- carbon dioxide ("CO2"), and
- water consumption.

TABLE 5 –LIFETIME ENVIRONMENTAL SAVINGS BY PROGRAM

Program	Lifetime SOX Reduction (lbs)	Lifetime NOX Reduction (lbs)	Lifetime CO2 Reduction (lbs)	Lifetime Water Reduction (gallons)
Residential Programs				
Appliance Recycling	0	0	0	0
Efficient Products	262	5,673	56,734,318	12,348,058
Existing Homes Retrofit and Audit Direct Install	91	1,979	19,788,784	4,306,971
Low-Income Weatherization	1	26	262,668	57,169
Multi-Family	1	14	143,827	31,304
Residential New Construction	7	149	1,490,431	324,388
Shade Tree Program	14	307	3,065,618	667,223
Total for Residential Programs	377	8,149	81,485,647	17,735,111
Non-Residential Programs				
Bid For Efficiency (Pilot)	29	630	6,304,118	1,372,073
C&I Demand Response Control Program	0	0	0	0
C&I Facilities/Schools	232	5,015	50,153,909	10,915,851
Retro-Commissioning	0	0	0	0
Total for Commercial Programs	261	5,646	56,458,027	12,287,924
Behavioral Programs				
Behavioral Comprehensive	31	670	6,698,373	1,457,881
Home Energy Reports	0	0	0	0
Total for Behavioral Programs	31	670	6,698,373	1,457,881
Support Programs				
Consumer Education & Outreach Program	0	0	0	0
Energy Codes and Standards	0	0	0	0
Total for Support Programs	0	0	0	0
Portfolio Totals	**669**	**14,464**	**144,642,047**	**31,480,916**