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BEFORE THE ARIZONA CORPORATION COMMISSION

- DOUG LITTLE  
Chairman
- BOB STUMP  
Commissioner
- BOB BURNS  
Commissioner
- TOM FORESE  
Commissioner
- ANDY TOBIN  
Commissioner

IN THE MATTER OF THE APPLICATION )  
 OF ARIZONA PUBLIC SERVICE )  
 COMPANY FOR A RULING RELATING )  
 TO ITS 2016 DEMAND SIDE )  
 MANAGEMENT IMPLEMENTATION )  
 PLAN. )

DOCKET NO. E-01345A-15-0182

DECISION NO. 75679

ORDER

Arizona Corporation Commission  
**DOCKETED**

AUG 05 2016

Open Meeting  
June 14 and 15, 2016  
Phoenix, Arizona

DOCKETED BY	<i>[Signature]</i>
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BY THE COMMISSION:

FINDINGS OF FACT

1. Arizona Public Service Company ("APS" or "Company") is certificated to provide electric service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission ("Commission").

**I. INTRODUCTION**

2. On June 1, 2015, APS filed, with the Arizona Corporation Commission ("Commission"), an application for approval of its 2016 Demand-Side Management ("DSM") Implementation Plan ("2016 DSM Plan") in compliance with the Arizona Administrative Code ("A.A.C.") R14-2-2401 through R14-2-2419, the Electric Energy Efficiency Standards ("EE Rules"). On April 1, 2016, APS filed an amended 2016 DSM Plan. In its amended 2016 DSM Plan, APS proposes to maintain the spending level that was approved as part of the 2015 DSM Plan and keep the

1 Demand-Side Management Adjustment Charge (“DSMAC”) at its current Commission-approved  
2 level.<sup>1</sup>

3 **II. 2016 DSM PLAN**

4 3. In its 2016 DSM Plan, APS proposes to continue its current Commission-approved  
5 DSM portfolio of programs and maintain the Commission-approved budget of \$68.9 million. APS’s  
6 current portfolio includes a combination of programs/measures targeted to multiple customer  
7 segments as detailed below.

8  
9 *Residential Programs*

- |    |                                       |   |
|----|---------------------------------------|---|
| 10 | • Consumer Products                   | • Low Income Weatherization*                |
| 11 | • Existing Homes HVAC                 | • Conservation Behavior                     |
| 12 | • Home Performance with ENERGY STAR®* | • Multi-Family Energy Efficiency*           |
|    | • Residential New Construction*       | • Prepaid Energy Conservation* <sup>2</sup> |

13 *Non-Residential Programs (Solutions for Business)*

- 14 • Large Existing Facilities
- 15 • New Construction and Renovation
- 16 • Small Business
- 17 • Schools
- 18 • Energy Information Services

19 *Demand Response Programs*

- 20 • APS Peak Solutions®\*
- 21 • Super Peak Rate\*
- 22 • Time-of-Use (“TOU”) Rates\*
- 23 • Interruptible Rate\*
- 24 • Critical Peak Pricing Rates\*

25 4. APS is not proposing any changes to the programs marked with an asterisk listed  
26 above. Therefore, Staff is not addressing these programs at this time. The focus of Staff’s review is  
27 the proposed new/expanded measures APS has proposed in its amended 2016 DSM Plan listed  
28 below. APS is proposing the following residential and non-residential measures:

<sup>1</sup> The APS 2015 DSM Plan was approved in Decision No. 75323 dated November 25, 2015.

<sup>2</sup> APS intends to discontinue the Prepaid Energy Conservation Program at the end of 2016 per Decision No. 75323.

- 1       •     Smart Thermostats as a new measure to its Consumer Products Program (residential)
- 2             and Solutions for Business (non-residential);
- 3       •     Western Cooling Control Devices as a new measure to its Existing Homes-Heating
- 4             Ventilating Air Conditioning (“HVAC”) Program (residential) and Solutions for
- 5             Business (non-residential);
- 6       •     Conservation Behavior Program as an expanded measure (residential);
- 7       •     HVAC Electronically Communicated (“EC”) Motors (non-residential); and
- 8       •     Light Emitting Diode (“LED”) Linear Lighting (non-residential)

9   **A.   Smart Thermostats**

10       5.     APS is proposing to include smart thermostats as part of its Consumer Products

11   Program and Solutions for Business Programs. Smart thermostats are internet enabled and have the

12   ability to ‘learn’ from a customer’s behaviors. These thermostats allow customers to remotely control

13   the climate in their home/business from a mobile smart phone or web application. In addition, smart

14   thermostats have the ability to show energy consumption in real-time and can self-adjust based on

15   weather conditions. Smart thermostats improve HVAC operation by learning and adapting to usage

16   patterns over time.

17       6.     As part of the Consumer Products Program, APS will offer incentives for smart

18   thermostats purchased through retailers and/or installed by an HVAC and/or home performance

19   contractor. For each qualifying smart thermostat that is installed and activated, APS is proposing to

20   offer an incentive of up to 75 percent of the installed incremental cost up to a maximum of \$100 per

21   smart thermostat. As part of the Solutions for Business programs, APS is proposing to offer a \$60

22   incentive for each smart thermostat installed and activated.

23   *Cost Effectiveness*

24       7.     Arizona Administrative Code (“A.A.C.”) R14-2-2412.B requires that the Societal Test

25   be used for determining the cost-effectiveness of a DSM program or measure. Under the Societal

26   Test, in order to be cost-effective, the ratio of benefits to costs must be greater than one.

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1           8.       Staff found that smart thermostats have a benefit-cost ratio of 1.72 as part of the  
2 Consumer Products Program. The table below shows the benefit-cost ratios for Smart Thermostats  
3 as part of the individual Solutions for Business programs.

Solutions for Business Programs	Benefit-Cost Ratio
Large Existing Facilities	1.25
Small Business	1.94
Schools	1.29
New Construction	1.45

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10 *Staff Recommendations*

11           9.       Staff has recommended approval of the proposed smart thermostat measure as part of  
12 the Consumer Products Program and Solutions for Business programs.

13 **B.     Western Cooling Control Device**

14           10.      APS is proposing to include Western Cooling Control Device (“WCCD”) as part of its  
15 Existing Homes HVAC Program and Solutions for Business. The WCCD is a device that can be  
16 installed on HVAC equipment and helps improve the cooling performance of the air conditioner by  
17 adjusting the indoor fan run time to reduce the amount of dehumidification of the arid Southwest  
18 climate. The WCCD sets a delay of up to 5 minutes for the air handler fan to continue operating after  
19 the HVAC compressor cycle has shut off. This allows the unit to circulate air over the coil while it is  
20 still cold. APS is proposing to work with contractors to encourage the installation of the WCCDs and  
21 offer an incentive of 75 percent of the installed cost (an average of \$70/unit).

22 *Cost Effectiveness*

23           11.      Staff found that WCCDs have a benefit-cost ratio of 1.13 as part of the Existing  
24 Homes HVAC. The table below shows the benefit-cost ratios for WCCDs as part of the individual  
25 Solutions for Business programs.

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Solutions for Business Programs	Benefit-Cost Ratio
Large Existing Facilities	1.17
Small Business	1.63
Schools	1.63
New Construction	1.17

*Staff Recommendations*

12. Staff has recommended approval of the Western Cooling Control Device measure as part of the Existing Homes HVAC Program and the Solutions for Business programs.

**C. Conservation Behavior Program**

13. The APS Conservation Behavior Program does not promote the purchase and installation of specific energy measures such as lighting or high efficiency appliances. Rather, using Comparative Home Energy Reports, the Conservation Behavior Program promotes changes in behavior and adoption of measures designed to reduce energy usage. The reports are provided periodically throughout the year and compare the energy usage in a customer's home with other homes in the customer's area, educating customers about the norm for comparable homes. The reports also include specific recommendations on how to improve a customer's energy efficiency, such as participating in other APS EE/DSM programs.

14. APS plans to test event-based messaging to approximately 47,000 customers who currently receive reports through the conservation behavior program. The goal is to achieve peak demand reductions and add energy efficiency savings during the highest system peak days of the year, or Behavior Demand Response. APS states that within 24 hours of preceding a day during which system demand is expected to peak, APS will send these customers a communication (email, voice recording, or opt-out options based on customer preference) informing them that demand for energy is likely to peak the following day during certain hours. Customers would then be asked to reduce their usage during the specified hours. Within a few days after the peak event, APS would inform customers how much they reduced their usage compared to their neighbors in similar dwellings.

*Cost Effectiveness*

15. Staff has found the expanded Conservation Behavior Program to be cost effective with a benefit-cost ratio of 6.38.

1 *Staff Recommendations*

2 16. Staff has recommended approval of the expanded Conservation Behavior Program.

3 **D. HVAC EC Motors**

4 17. Traditional fans move air across the evaporator and condenser coils using shaded pole  
 5 of permanent split capacitor motors which can be inefficient because these motors are not  
 6 controllable and don't allow for speed variances. EC motors allow for variable speeds which can  
 7 correspond to the units' need for air flow. EC motors slowly start and gradually increase speed of the  
 8 fan versus starting and coming on completely immediately, thus increasing energy efficiency. APS's  
 9 Solutions for Business programs currently include an EC motor incentive for refrigeration systems but  
 10 not for HVAC systems. APS is proposing to expand this measure to apply to HVAC systems as well  
 11 as refrigeration systems.

12 *Cost Effectiveness*

13 18. Staff previously found the EC motors measure cost-effective as it applied to  
 14 refrigeration systems as part of the Solutions for Business programs. However, because APS is  
 15 proposing to apply this measure differently (to HVAC systems), in these programs, Staff believes that  
 16 it is appropriate to conduct a benefit-cost analysis for the measure as part of each of the individual  
 17 Solutions for Business programs. The table below shows the benefit-cost ratios for WCCDs as part  
 18 of the individual Solutions for Business programs.

Solutions for Business Programs	Benefit-Cost Ratio
Large Existing Facilities	1.32
Small Business	1.67
Schools	1.67
New Construction	1.35

24 *Staff Recommendations*

25 19. Staff has recommended approval of the expansion of the HVAC EC motors measure  
 26 as part of the Solutions for Business programs.

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1 **E. LED Linear Lighting**

2 20. APS currently offers these lighting measures as part of the Solutions for Business  
3 programs on a custom basis which allows customers to bid competitively for program incentives  
4 within kWh savings guidelines. APS has evaluated these custom projects and has paid rebates for  
5 these measures. APS is proposing to add LED lighting measures as prescriptive measures.

6 *Cost-Effectiveness*

7 21. The table below shows the benefit-cost ratios for LED linear lighting measures as part  
8 of the individual Solutions for Business programs.

Solutions for Business Programs	Benefit-Cost Ratio
Large Existing Facilities	1.07
Small Business	1.07
Schools	1.07
New Construction	1.07

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14 *Staff Recommendations*

15 22. Staff has recommended approval of the LED linear lighting measure as a prescriptive  
16 measure as part of the Solutions for Business programs.

17 **F. Other Initiatives**

18 23. **System Savings Projects** – In Decision No. 74406, the Commission approved APS's  
19 Systems Savings Initiative Program which allows APS to count cost-effective energy savings resulting  
20 from generation and delivery system improvements and facilities upgrades toward meeting the EE  
21 standard. APS plans to upgrade selected community streetlights throughout its service territory. In  
22 addition, APS plans to install Conservation Voltage Reduction ("CVR") systems on additional feeders.  
23 Further, APS plans to perform energy efficiency upgrades to APS facilities similar to the projects that  
24 were completed in 2015.

25 24. **Building Codes and Appliance Standards** – The EE Rules allow for utilities to  
26 count up to one third of the energy savings from energy efficiency building codes. The Energy Codes  
27 and Appliance Standards Initiative encourages energy savings by supporting better compliance with  
28 energy codes and appliance standards in jurisdictions throughout APS's service territory. In 2016,

1 APS plans to begin tracking energy savings associated with the new Department of Energy  
2 (“DOE”)14 Seasonal Energy Efficiency Ratio (“SEER”) HVAC Southwest regional appliance  
3 standard.

4 25. According to APS, the new standards increase the minimum cooling efficiency  
5 requirement from SEER 13 to SEER 14 for split system central air conditioning units in the South  
6 and Southwest. In addition, the new standards include Energy Efficiency Ratio (“EER”) requirements  
7 for the Southwest region to ensure efficient operation at high outdoor temperatures. For heat pumps,  
8 the standards raise the cooling efficiency requirement to SEER 14 and increase the heating efficiency  
9 requirements. APS states that it has been working with HVAC contractors, homebuilders, and other  
10 trade allies to educate them on the upcoming standard which is set to take effect July 1, 2016.

#### 11 *Staff Recommendations*

12 26. Staff has recommended approval of the proposed system savings projects and building  
13 codes and appliance standards initiatives.

### 14 **III. ENERGY SAVINGS**

15 27. In its amended application, APS provided a five-year look at the estimated energy  
16 savings that will be needed to meet compliance with the EE Rules by 2020. Based on its current retail  
17 sales forecasts, APS estimates that it will take approximately 3,905,000 MWhs of incremental energy  
18 savings from 2016 through 2020 to comply with the EE Standard based on the goal of achieving 22  
19 percent savings of 2019 retail energy sales by 2020. However, APS states that the path to compliance  
20 is not gradual and consists of large jumps in the required energy savings from 2015 to 2016 which  
21 requires APS to ramp up savings significantly only to then ramp programs back down to meet lower  
22 goals from 2017 through 2020. In addition, APS states that beyond 2016, future annual savings  
23 targets will be addressed in subsequent EE/DSM Plans.

24 28. APS is proposing to even out the annual EE energy savings requirement from 2016  
25 through 2020. While this would allow APS to reach the 22 percent energy savings requirement in  
26 2020, APS would not reach each annual energy savings requirements. APS calculated the estimated  
27 total energy savings requirement for 2020 and divided it by the remaining five-year timeframe (see  
28 Table 1 of the amended application filed on April 1, 2016).



29. APS provided Staff with projected EE/Demand Response ("DR") savings. The savings estimate for 2016 is approximately 562,000 MWh. The table below shows the previous years' actual energy savings (2014 and 2015) compared to the estimated energy savings in 2016 and the estimated five-year savings trajectory which APS proposes to comply with the EE Standard energy savings requirement for 2020.

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Actual/Projected Sales (MWh)*	27,017,353	27,398,270	27,904,566	28,357,791	28,907,142	29,467,496	29,947,215
Required Savings (%)	7.25%	9.50%	12.00%	14.50%	17.00%	19.50%	22.00%
Required Savings from Prior year Sales (MWh)	2,036,351 <sup>3</sup>	2,566,649	3,287,792	4,046,162	4,820,824	5,636,893	6,482,849
EE/DR Program Savings (MWh)**	495,410	552,069	562,129	562,129	562,129	562,129	562,129
Total Cumulative Savings (MWh)	2,025,557 <sup>4</sup>	2,577,626	3,224,748 <sup>5</sup>	3,956,863 <sup>5</sup>	4,745,640 <sup>5</sup>	5,591,079 <sup>5</sup>	6,482,163 <sup>5</sup>
Savings (%)	7.21% <sup>6</sup>	9.54%	11.77%	14.18%	16.74%	19.34%	21.99%
Difference Between Required and Projected/Actual Savings (MWh)	(10,794)	11,332	(63,044)	(89,299)	(75,184)	(45,814)	(686)

\*2014 MWh sales are actual sales from DSM progress report, 2015 MWh sales are reported in response to a Staff data request, and 2016-2020 MWh sales are estimated as provided in the 2016 DSM Plan.

\*\* 2014 MWh savings from annual DSM progress report, 2015 MWh savings from MER report, and 2016-2020 MWh savings are estimated.

#### IV. PERFORMANCE INCENTIVE

30. The current performance incentive structure (which was approved in Decision No. 74406) is a tiered system that is based on a percentage of net benefits that is capped at a dollar amount per kWh of savings. Currently, the performance incentive is capped at \$0.0125 per kWh saved. The performance incentive is earned based on the amount of energy saved and the amount of customer net benefits (total program benefits – total program costs). The performance incentive calculation does not include net benefits from Codes and Appliance Standards or the APS System Savings

<sup>3</sup> The required savings of 7.25% for 2014 is calculated using the 2013 actual kWh sales (excluding resale) of 28,087,605 MWh from APS's annual report filed with the Commission on April 16, 2014.

<sup>4</sup> Based on cumulative savings of 1,530,147 MWh in 2013.

<sup>5</sup> Includes the credit for Pre-EE Standard Savings per A.A.C. R14-2-2404 (D).

<sup>6</sup> Based on the Actual sales from 2013 (see footnote 3 above).

1 Initiative Program per Decision No. 74406. Based on the structure and the estimated kWh savings for  
2 2016, APS estimates that the performance incentive would be approximately \$3,030,000.

3 **V. BUDGET/DEMAND SIDE MANAGEMENT ADJUSTMENT CHARGE**  
4 **(“DSMAC”)**

5 31. APS is proposing to maintain the current budget of approximately \$68.9 million,  
6 approved by the Commission in Decision No. 75323, by reallocating funds in order to accommodate  
7 its proposed additional measures for 2016.<sup>7</sup> APS anticipates collecting approximately \$50.6 million  
8 from the DSMAC in 2016. With the addition of \$10 million collected through base rates, the total  
9 collected for 2016 would be a total of approximately \$60.6 million.

10 32. In addition, as of March 31, 2016, APS currently has a balancing account of  
11 approximately \$25.7 million of unallocated funds which have been collected but unspent. In Decision  
12 No. 75323, APS was ordered to use \$2 million of the funds in the balancing account to fund its  
13 Schools Pilot Program. Further, APS would use funds from the balancing account to cover  
14 Commission-approved budget spending should funds collected from the DSMAC fall short.

15 33. The table below shows what APS spent in 2015 (from the 2015 DSM Progress Report,  
16 filed March 1, 2016) and the proposed budget for 2016.

Energy Efficiency Programs	Actual 2015 Spending	Proposed 2016 Budget
<b>Residential</b>		
Consumer Products	\$8,266,353	\$9,926,000
Existing Homes HVAC	\$7,240,418	\$6,456,000
Home Performance w/ Energy Star	\$2,431,440	\$4,112,000
New Construction	\$5,299,615	\$5,680,000
Appliance Recycling	\$1,059,496	\$100,000
Conservation Behavior	\$1,498,334	\$1,667,000
Multi-Family	\$1,852,755	\$2,009,000
Shade Tree <sup>8</sup>	\$749	\$-
Prepaid	\$57,442	\$73,000
Low/Limited Income Weatherization	\$2,274,342	\$2,726,000
<b>Total Residential</b>	<b>\$29,980,944</b>	<b>\$32,749,000</b>
<b>Non-Residential</b>		
Large Existing Facilities	\$19,263,713	\$21,216,000
New Construction	\$3,247,191	\$2,776,000
Small Business	\$2,248,990	\$1,858,000

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28 <sup>7</sup>The Appliance Recycling Program was terminated due to the vendor APS used for this program ceasing operations. Therefore, the budget for the program was redistributed.

<sup>8</sup> APS discontinued the Shade Tree Program in 2015 because it was no longer cost-effective.

Schools	\$2,282,114	\$2,020,000
Energy Information Services	\$36,885	\$99,000
<b>Total Non-Residential</b>	<b>\$27,078,893</b>	<b>\$27,969,000</b>
<b>Total Energy Efficiency (Res and Non-Res)</b>	<b>\$57,059,837</b>	<b>\$60,718,000</b>
<b>Demand Response</b>	<b>Actual 2015 Spending</b>	<b>Proposed 2016 Budget</b>
APS Peak Solutions-DR Marketing/MER <sup>9</sup>	\$1,790,958	\$2,902,000
<b>Total Demand Response/Load Management</b>	<b>\$1,790,958</b>	<b>\$2,902,000</b>
Codes and Standards	\$172,577	\$150,000
Measurement Evaluation and Research	\$1,835,226	\$2,100,000
Performance Incentive <sup>10</sup>	\$5,275,737	\$3,030,000
<b>Total C&amp;S/MER/PI</b>	<b>\$7,283,540</b>	<b>\$5,280,000</b>
<b>Total EE, DR, and C&amp;S/MER/PI</b>	<b>\$66,134,335</b>	<b>\$68,900,000</b>

34. As part of its 2016 DSM Plan, APS is to develop and propose to the Commission, for approval, within 120 days of the effective date of this Order a residential DR or load management program that facilitates residential energy storage technology. This technology should primarily aid residential customers to reduce their electricity demand during periods of system peak demand. APS should anticipate spending up to \$4 million on this program, which may be funded using the DSMAC overcollection.

35. Residential customers who participate in the program will be placed on advanced, time-differentiated rate plans. Traditional inclining kWh-based rates may be appropriate for non-technology adopters. However, distributed generation technology may require sending more complex price signals not otherwise appropriate for traditional customers. An advanced rate designed for technology adopters may be needed to ensure a successful program implementation that maximizes benefits to participating customers as well as non-participants. This advanced rate would include proper price signals based on the principles of: 1) an On Peak/Off Peak rate with sufficient rate spread between the two time periods, 2) a manageable On Peak window to allow for adequate "peak shaving, and" 3) proper price signals based on seasonality. As such, APS will use rate plans and tariffs deemed appropriate by the Company for participants in this program.

<sup>9</sup> The spending/budget for the Demand Response Marketing/MER includes the Super Peak Rate, Critical Peak Pricing Rates, Interruptible Rate, Peak Time Rebate Programs, and the Time-of-Use Rates.

<sup>10</sup> The proposed PI was calculated in accordance with the revised methodology approved in Decision No. 74406.

1           36.     Given the developing nature of this energy storage technology program, the  
2 Commission will waive its normal benefit-cost threshold and revisit the program and measures in the  
3 Company's 2018 DSM Plan. However, APS will report the benefit-cost results of the program and of  
4 each energy storage measure as part of its regular reporting process for DSM.

5           37.     Given the Commission's intent to support the deployment of DSM technologies and  
6 services, including energy storage, to help ratepayers better manage energy usage and also to ensure  
7 adequate emphasis on reducing peak demand, the Commission's cost effectiveness analysis  
8 methodology should be updated. Consistent with previous Orders (Decision Nos. 72747, 73089, and  
9 73229), Staff shall convene a workshop that includes the Company and interested stakeholders and  
10 report back to the Commission with appropriate recommendations within 120 days of the effective  
11 date of this Order. Staff may retain an independent third-party consultant to assist this Staff-led  
12 workshop. The workshop should address, but is not limited to:

- 13           •     The Commission's current cost-effectiveness test methodologies,
- 14           •     The appropriate treatment of peak demand reductions and demand  
15           response/load management programs, as well as their capacity benefits in cost-  
16           effectiveness tests,
- 17           •     Consideration of the recommendations supported by the DSM collaborative  
18           and RUCO as described in the memo entitled, "Arizona Benefit Cost Analysis  
19           of DSM Programs Memo No. 1," filed on January 31, 2011, in Docket No. E-  
20           04204A-11-0056, and
- 21           •     Modifications to the calculation and contributions of Demand Response and  
22           Load Management Peak Reductions on the Energy Efficiency Standard.

23           38.     Staff notes that APS currently has the flexibility to shift up to 50 percent of budgeted  
24 funds from one program to another within the same sector (Residential or Non-Residential) per  
25 calendar year with the exception that funds cannot be shifted from Low/Limited Income  
26 Weatherization or Schools programs. The Commission concludes that APS should retain this  
27 flexibility to shift budgeted funds, but fund may not be shifted from Low/Limited Income  
28 Weatherization, Energy Storage Technology, or Schools programs. In addition, APS has the ability to  
exceed any DSM program annual budget by up to five percent (5%) without prior Commission  
approval.

1           39.     The DSMAC provides for the recovery of DSM program costs, including energy  
2 efficiency programs, demand response programs, and energy efficiency performance incentives. The  
3 DSMAC approved by the Commission collects funds to pay for the Commission-approved programs  
4 within a DSM Plan. The DSMAC is applied to Standard Offer and Direct Access service schedules as  
5 a monthly per kWh charge (residential and general service customer with non-demand billing service  
6 schedules) or kW demand charges (general service customers with demand billing service schedules).  
7 APS is proposing to maintain the current Commission-approved DSMAC amounts (\$0.001845/kWh  
8 and \$0.696/kW).

9     *Recommendations*

10           40.     Staff has recommended that APS maintain the current Commission-approved total  
11 budget of \$68.9 million including the proposed reallocation of funds and the use of existing  
12 unallocated funds that have been collected, but unspent, for 2016, if necessary. In addition, Staff  
13 recommends that APS maintain the current Commission-approved DSMAC amounts of  
14 \$0.001845/kWh and \$0.696/kW.

15     **VI.    RECOMMENDATIONS**

16           41.     Below are Staff's recommendations regarding the proposed modifications, as discussed  
17 herein, to the APS 2016 DSM Plan.

- 18           •     Staff has recommended approval of the smart thermostat measure as part of the  
19                 Consumer Products Program and the Solutions for Business programs.
- 20           •     Staff has recommended approval of the Western Cooling Control Device measure as  
21                 part of the Existing Homes HVAC Program and the Solutions for Business programs.
- 22           •     Staff has recommended approval of the expanded Conservation Behavior Program.
- 23           •     Staff has recommended approval of the expansion of the HVAC EC motors measure  
24                 as part of the Solutions for Business programs.
- 25           •     Staff has recommended approval of the LED linear lighting measure as a prescriptive  
26                 measure as part of the Solutions for Business programs.
- 27           •     Staff has recommended approval of the proposed system savings projects and building  
28                 codes and appliance standards initiatives.

- 1       • Staff has recommended approval of APS's proposal to even out the annual EE energy  
2 savings requirement from 2016 through 2020 as described above.
- 3       • Staff has recommended that APS maintain the current Commission-approved total  
4 budget of \$68.9 million including the proposed reallocation of funds and the use of  
5 existing unallocated funds that have been collected, but unspent, for 2016, if necessary.
- 6       • Staff has recommended that APS maintain the current Commission-approved  
7 DSMAC amounts of \$0.001845/kWh and \$0.696/kWh.
- 8       • Staff has recommended that the APS 2016 DSM Plan as specified herein remain in  
9 effect until further Order of the Commission.

10       38. It is the intent of this Commission that savings contemplated in DSM Plans submitted  
11 by APS should come increasingly from the period of system peak demand and should increase the  
12 peak demand reductions from DSM. As such, APS' 2016 DSM Plan should increase the focus on EE,  
13 DR, and load management programs that reduce customer energy demand during the period of  
14 system peak demand. Specifically, APS should:

- 15       1. Make its best effort to increase the peak demand reductions (MW) from EE  
16 programs in 2016 by 10 percent compared to the reported 2015 peak demand  
17 reductions from EE programs. Such programs must consider advanced  
18 technologies that can reduce or manage peak demand in addition to reducing  
19 energy use, such as wireless thermostats, energy management systems, and  
20 controls, many of which were highlighted during the Commission's technology  
21 workshops.
- 22       2. Make its best effort to increase the peak demand reduction capability (MW)  
23 from DR and load management programs (not including Time-of-Use or other  
24 rates) in 2016 by 15 percent compared to the reported 2015 peak demand  
25 reductions from DR and load management programs. Such programs must  
26 consider facilitating energy storage technology.
- 27       3. Modify its 2017 DSM Plan, if necessary, within 120 days following the effective  
28 date of this Order to increase the peak demand reductions (MW) from EE  
programs in 2017 by 25 percent compared to the reported 2015 peak demand  
reductions from EE programs, and to increase the peak demand reduction  
capability (MW) from DR and load management programs (not including  
Time-of-Use or other rates) in 2017 by 30 percent compared to the reported  
2015 peak demand reductions from DR and load management programs.  
Such programs must consider facilitating energy storage and other advanced  
technologies.
4. In its 2018 and future DSM Implementation Plans, further increase the focus  
on peak demand reductions (MW) from EE, DR, energy storage, and load  
management programs that reduce customer energy demand during the period  
of system peak demand.

CONCLUSIONS OF LAW

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2           1.       Arizona Public Service Company is an Arizona public service corporation within the  
3 meaning of Article XV, Section 2, of the Arizona Constitution.

4           2.       The Commission has jurisdiction over Arizona Public Service Company and over the  
5 subject matter of the application.

6           3.       The Commission, having reviewed the application and Staff's Memorandum dated  
7 May 31, 2016, concludes that it is in the public interest to approve the Arizona Public Service  
8 Company amended 2016 Demand-Side Management Implementation Plan, as discussed herein.

ORDER

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10           IT IS THEREFORE ORDERED that Arizona Public Service Company's amended 2016  
11 Demand-Side Management Implementation Plan is hereby is approved, as discussed herein.

12           IT IS FURTHER ORDERED that the smart thermostat measure is approved as part of the  
13 Consumer Products Program and the Solutions for Business programs.

14           IT IS FURTHER ORDERED that the Western Cooling Control Device measure is approved  
15 as part of the Existing Homes HVAC Program and the Solutions for Business programs.

16           IT IS FURTHER ORDERED that the expanded Conservation Behavior Program is approved  
17 as discussed herein.

18           IT IS FURTHER ORDERED that the expansion of the HVAC EC motors measure as part  
19 of the Solutions for Business programs is approved.

20           IT IS FURTHER ORDERED that the LED linear lighting measure is approved as a  
21 prescriptive measure as part of the Solutions for Business programs.

22           IT IS FURTHER ORDERED that, as part of its 2016 DSM Plan, Arizona Public Service  
23 Company is to develop and propose to the Commission, for approval, a residential DR or load  
24 management program with a budget of up to \$4 million, which may be funded using the DSMAC  
25 overcollection, that facilitates energy storage technology, as discussed herein, within 120 days of the  
26 effective date of this Order.

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1 IT IS FURTHER ORDERED that Arizona Public Service Company modify its 2017 DSM  
2 Plan within 120 days of the effective date of this order to include the energy storage technology  
3 program, as discussed herein.

4 IT IS FURTHER ORDERED that Arizona Public Service Company report the benefit-cost  
5 results of the energy storage technology program and of each energy storage measure as part of its  
6 regular reporting process for DSM. Given the developing nature of this energy storage technology  
7 program, the Commission will waive its normal benefit-cost threshold and revisit the program and  
8 measures in the Company's 2018 DSM Plan.

9 IT IS FURTHER ORDERED that the Commission's cost-effectiveness analysis methodology  
10 should be updated as mentioned in Finding of Fact 37. Consistent with previous Orders (Decision  
11 Nos. 72747, 73089, and 73299), Staff shall convene a workshop that includes the Company and  
12 interested stakeholders and report back to the Commission with appropriate recommendations within  
13 120 days of the effective date of this Order. Staff may retain an independent third-party consultant to  
14 assist this Staff-led workshop. The workshop should address, but is not limited to:

- 15 • The Commission's current cost-effectiveness test methodologies,
- 16 • The appropriate treatment of peak demand reductions and demand  
17 response/load management programs, as well as their capacity benefits in cost-  
18 effectiveness tests,
- 19 • Consideration of the recommendations supported by the DSM collaborative  
20 and RUCO as described in the Memo entitled, "Arizona Benefit Cost Analysis  
21 of DSM Programs Memo No. 1," filed on January 31, 2011, in Docket No. E-  
22 04204A-11-0056, and
- 23 • Modifications to the calculation and contributions of Demand Response and  
24 Load Management Peak Reductions on the Energy Efficiency Standard.

21 IT IS FURTHER ORDERED that Arizona Public Service may not shift funds from  
22 Low/Limited Income Weatherization, Energy Storage Technology, or Schools programs.

23 IT IS FURTHER ORDERED that the proposed system savings projects and building codes  
24 and appliance standards initiatives are approved as discussed herein.

25 IT IS FURTHER ORDERED that Arizona Public Service Company's proposal to even out  
26 the annual EE energy savings requirement from 2016 through 2020 is approved as described herein.

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1 IT IS FURTHER ORDERED that as Arizona Public Service Company develops its next  
2 DSM Plan it shall evaluate, consider, and propose the DSM strategies and technologies discussed  
3 during the Commission-led technology workshops as long as they are cost-effective and appropriate  
4 for the Arizona Public Service Company territory. Arizona Public Service Company shall include the  
5 finding and results of its analysis in its plan. This information shall also be incorporated in Arizona  
6 Public Service Company's modified 2017 DSM Plan that it is required to file within 120 days of the  
7 effective date of this order. Arizona Public Service Company will also include this information in its  
8 future DSM Plans.

9 IT IS FURTHER ORDERED that Arizona Public Service Company maintain the current  
10 Commission-approved total budget of \$68.9 million including the proposed reallocation of funds and  
11 the use of existing unallocated funds that have been collected, but unspent, for 2016, if necessary.

12 IT IS FURTHER ORDERED that Arizona Public Service Company maintain the current  
13 Commission-approved DSMAC amounts of \$0.001845/kWh and \$0.696/kW.

14 IT IS FURTHER ORDERED that Arizona Public Service Company's 2016 DSM Plan as  
15 specified herein remain in effect until further Order of the Commission.

16 IT IS FURTHER ORDERED that Arizona Public Service Company shall make its best effort  
17 to increase the peak demand reductions (MV) from EE programs in 2016 by 10 percent compared to  
18 the reported 2015 peak demand reductions from EE programs. Such programs must consider  
19 advanced technologies that can reduce or manage peak demand in addition to reducing energy use,  
20 such as wireless thermostats, energy management systems, and controls, many of which were  
21 highlighted during the Commission's technology workshops.

22 IT IS FURTHER ORDERED that Arizona Public Service Company shall make its best effort  
23 to increase the peak demand reduction capability (MV) from DR and load management programs (not  
24 including Time-of-Use or other rates) in 2016 by 15 percent compared to the reported 2015 peak  
25 demand reductions from DR and load management programs. Such programs must consider  
26 facilitating energy storage technology.

27 IT IS FURTHER ORDERED that Arizona Public Service Company modify its 2017 DSM  
28 Plan, if necessary, within 120 days following the effective date of this Order to increase the peak

1 demand reductions (MW) from EE programs in 2017 by 25 percent compared to the reported 2015  
2 peak demand reductions from EE programs, and to increase the peak demand reduction capability  
3 (MW) from DR and load management programs (not including Time-of-Use or other rates) in 2017  
4 by 30 percent compared to the reported 2015 peak demand reductions from DR and load  
5 management programs. Such programs must consider facilitating energy storage and other advanced  
6 technologies.

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1 IT IS FURTHER ORDERED that Arizona Public Service Company, in its 2018 and future  
2 DSM Implementation Plans, further increase the focus on peak demand reductions (MW) from EE,  
3 DR, storage, and load management programs that reduce customer energy demand during the period  
4 of system peak demand.

5 IT IS FURTHER ORDERED that this Order shall become effective immediately.

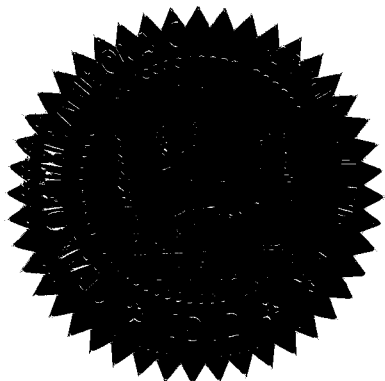
6  
7 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

8  
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10   
CHAIRMAN LITTLE

  
COMMISSIONER STUMP

11 **EXCUSED**  
12 COMM. FORESE

13  COMMISSIONER FORESE  
 COMMISSIONER TOBIN  
 COMMISSIONER BURNS



15 IN WITNESS WHEREOF, I, JODI A. JERICH, Executive  
16 Director of the Arizona Corporation Commission, have  
17 hereunto, set my hand and caused the official seal of this  
18 Commission to be affixed at the Capitol, in the City of  
19 Phoenix, this 5<sup>th</sup> day of August, 2016.

20   
JODI A. JERICH  
EXECUTIVE DIRECTOR

21 DISSENT: \_\_\_\_\_

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23 DISSENT: \_\_\_\_\_

24 TMB:CLA:red\MAS

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1 SERVICE LIST FOR: Arizona Public Service Company  
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