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BEFORE THE ARIZONA CORPORATION COMMISSION

- 1
- 2 DOUG LITTLE
Chairman
- 3 BOB STUMP
Commissioner
- 4 BOB BURNS
Commissioner
- 5 TOM FORESE
Commissioner
- 6 ANDY TOBIN
Commissioner

7
8 IN THE MATTER OF THE APPLICATION)
9 OF TUCSON ELECTRIC POWER)
10 COMPANY FOR APPROVAL OF ITS 2016)
11 ENEGY EFFICIENCY IMPLEMENTATION)
12 PLAN AND FOR WAIVER UNDER)
13 A.A.C. R14-2-2419.)

DOCKET NO. E-01933A-15-0178

DECISION NO. 75450

ORDER

Arizona Corporation Commission

DOCKETED

FEB 11 2016

12 Open Meeting
13 February 2 and 3, 2016
14 Phoenix, Arizona

DOCKETED BY	<i>JK</i>
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14 BY THE COMMISSION:

FINDINGS OF FACT

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17 1. Tucson Electric Power Company ("TEP" or "the Company") is engaged in providing

18 electric power within portions of Arizona, pursuant to authority granted by the Arizona Corporation

19 Commission.

20 2. TEP serves approximately 415,000 electric customers. Of these, approximately

21 374,000 are Residential customers and 37,500 are Commercial customers. TEP also serves a smaller

22 number of Industrial, Public Street and Highway Lighting and Irrigation customers.

Background

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24 3. On June 1, 2015, TEP filed its 2016 Energy Efficiency Implementation Plan. In

25 Decision No. 74885 (December 31, 2014), the Commission approved 19 programs, either initially or

26 for continuation. TEP proposes to add measures to five programs and is modifying several other

27 programs, as discussed below. TEP is also proposing to reinstate the Home Energy Reports Program.

28

1 4. Existing Programs (New Measures Proposed). TEP has proposed new measures for
2 the five programs listed below. These programs and the new measures will be discussed in greater
3 detail herein.

- 4 • **Efficient Products Program;**
- 5 • **Existing Homes Program;**
- 6 • **Multi-Family Housing Efficiency Program;**
- 7 • **C&I Comprehensive Program; and**
- 8 • **Small Business Direct Install Program.**

9
10 5. Existing Programs (Modifications). TEP has proposed to continue the below
11 programs with limited modifications. A new and additional delivery method has been developed for
12 the Shade Tree program, and TEP proposes to continue a pilot program within the Low-Income
13 Weatherization Program that offers lighting and refrigeration measures. (These measures are normally
14 only part of the Health and Safety portion of the Low-Income Weatherization Program.) In addition,
15 TEP is making changes to the Appliance Program because the original implementation contractor has
16 ceased operations. These programs and modifications will be discussed in greater detail herein.

- 17 • **Shade Tree Program;**
- 18 • **Low-Income Weatherization; and**
- 19 • **Appliance Recycling Program.**

20
21 6. Existing Programs (No Modifications). TEP has proposed to continue the below
22 programs without new measures or significant modifications.

- 23 • **Residential New Construction Program;**
- 24 • **Behavioral Comprehensive;**
- 25 • **Consumer Education and Outreach Program;**
- 26 • **Energy Codes and Standards Program;**
- 27 • **Conservation Voltage Reduction Program;**
- 28 • **Generation Improvement and Facilities Upgrade Program;**

- **C&I Direct Load Control Program;**
- **Commercial New Construction**
- **Bid for Efficiency Program;**
- **Retro-Commissioning Program; and**
- **Combined Heat and Power (“CHP”) Program.**

7. Home Energy Reports. In addition to the existing programs listed above, the Company is now proposing to reinstitute the Home Energy Reports Program, which will include a starter kit with four 9 Watt LED lights. A description of the updated Home Energy Reports Program is discussed herein.

8. Existing Measures, All Programs. A list of the existing and new (proposed) is included as Exhibit A, attached.

Efficient Products Program

9. Program Description. The Efficient Products Program is a primarily residential program and has been in existence since 2008. It was most recently approved in Decision No. 74885 (December 31, 2014). The program is designed to make energy efficient products, such as CFL or LED lighting or more efficient pool pumps, more affordable and more readily available.

10. Program Objectives and Rationale. The program promotes the purchase of energy efficient products through buy-downs, retail partnerships, and the training of retail staff. The Company also works with retailers to increase the stocking and selection of efficient retail products.

11. Proposed New Measures. TEP is proposing to add the following measures:

Table 1

Program Measure	Standard Measure	Average Incentive per Unit	Estimated Participation	Staff's Benefit-Cost Ratio
Energy Star® ceiling fan	Conventional fan	\$30	100	0.90
Energy Star® freezer	Conventional freezer	\$10	25	1.63
Energy Star® central air conditioner/ 14.5 SEER	13 SEER	\$300	100	2.29
Energy Star®	Conventional	\$50	200	1.32

1	clothes washer	washer			
2	Energy Star® refrigerator	Conventional refrigerator	\$20	75	1.12
3	Energy Star® room air conditioner	Conventional unit	\$35	100	1.20
4					

5 12. Eligibility. The program targets Residential and Small Commercial customers in TEP's
6 service territory. The existing CFL and LED measures target both Residential and Small Commercial
7 customers, as do the proposed new measures. But the existing pool pump measure targets only
8 Residential customers.

9 13. Budget. See TABLE 6: TEP'S PROPOSED BUDGET, herein, which lists the sector,
10 projected costs per category, and total budget for each program.

11 14. Delivery and Marketing. Delivery will consist of a combination of buy-downs and
12 possibly on-line or mail-in rebates with participating retailers.

13 15. Staff Recommendations. In order to be cost-effective, a measure must achieve a
14 benefit-cost ratio of 1.0, indicating that monetized benefits of a measure at least equal the costs
15 associated with that measure. In cases where a measure is very close to 1.0, Staff sometimes takes into
16 account non-monetized benefits of a measure, such as avoided emissions or generation water savings,
17 because, although the value of these savings has not been determined, they are greater than zero.

18 16. Staff has recommended that the Commission approve all the new measures proposed
19 for the Efficient Products Program, with the exception of the Energy Star® Ceiling Fan, which Staff
20 has not found cost-effective.

21 Existing Homes Program

22 17. Program Description. This Residential program has been in existence since 2008. It
23 was most recently approved in Decision No. 74885 (December 31, 2014). The program is designed to
24 improve energy efficiency in existing homes. The current program offers duct sealing and quality
25 installation of new high-efficiency HVAC equipment.

26 18. Program Objectives and Rationale. The new HVAC measures are designed to achieve
27 energy and demand savings through the early retirement of old, low-efficiency units or by incenting
28

1 quality installation of new units. TEP will continue the duct test and repair measures alone or in
2 conjunction with new units. The Company trains and mentors participating contractors.

3 19. Proposed Changes. TEP proposes to add the following measures (see Table 2) to the
4 Existing Homes Program. With measures designed to improve the efficiency of existing HVAC
5 systems, TEP hopes to impact peak demand by expanding the options for customers wishing to
6 participate in the Existing Homes program. TEP believes there is significant market potential for
7 these measures in the TEP service territory.

8 20. In particular, TEP anticipates a high level of activity for the HVAC Advanced Tune-up
9 measure. HVAC contractors recommend HVAC systems be maintained at least once or twice each
10 year. With thousands of maintenance contracts already in place, the test to determine duct leakage can
11 be incorporated into maintenance calls. In addition, the tune-up measure will appeal to customers
12 who call a contractor because their HVAC system is not working.

13 **Table 2**

14 Program Measure	Standard Measure	Average Incentive per Unit	Estimated Participation	Staff's Benefit- Cost Ratio
15 HVAC Advanced Tune-up	No tune-up	\$150	6,000	1.13
16 Western Cooling Control_Stand alone	No control	\$70	1,000	1.65
17 BPM/ECM + motor ¹	Conventional motor and control	\$300	100	0.60
18 Smart Thermostat	Standard thermostat	\$89	1,500	1.11

20
21 21. Eligibility. In order to be eligible for the Existing Homes Program, a participant must
22 be a TEP customer owning a single-family detached home, town home, manufactured home or other
23 attached residential building of up to four units, even if the building is rented to another party.
24 Participants must receive electric service from TEP.

25 22. Budget. See TABLE 6: TEP'S PROPOSED BUDGET, herein, which lists the sector,
26 projected costs per category, and total budget for each program.

27
28 ¹ Quality Installed Brushless Permanent Magnet motors or Electrically Commutated Motors.

1 23. Delivery and Marketing. TEP manages the program and provides oversight and
2 marketing. With the exception of Smart thermostats, all measures are provided by a third party
3 Implementation Contractor (“IC”) which is responsible for: (i) recruitment, training and mentoring of
4 participating contractors; (ii) data tracking; (iii) rebates processing; and (iv) technical support. Smart
5 thermostats will be delivered by manufacturers, retailers, and approved trade contractors, and should
6 be incentivized in the manner which best promotes program objectives.

7 24. Staff Recommendations. Staff has recommended that the Commission approve all the
8 new measures proposed for the Existing Homes Program, with the exception of the BPM/ECM plus
9 motor, which Staff has not found cost-effective.

10 **Multi-Family Housing Efficiency Program**

11 25. Program Description. The Multi-Family Housing Efficiency Program (“Multi-Family
12 Program”) was originally approved in Decision No. 74885 (December 31, 2014). The purpose of the
13 Multi-Family Program is to promote energy efficiency in the residential multi-family sector for
14 properties with five or more units. Multi-family facility managers would also be encouraged to
15 participate in the C&I Comprehensive Program for installation of energy efficiency improvements to
16 common areas.

17 26. Program Objectives and Rationale. The Multi-Family Program is designed to
18 overcome barriers to energy efficiency in the multi-family housing market. Typically, the multi-family
19 market has been difficult to reach due to capital constraints, lack of awareness, and split incentives.

20 27. “Split incentives” describes a problem that arises in promoting energy efficiency in
21 rental units. Generally, builders and owners do not directly benefit from the lower energy costs arising
22 from investing in efficiency measures, which reduces their incentive to participate in energy efficiency
23 programs. At the same time renters, who would benefit from lower energy bills, have no direct
24 influence over original construction and may not have the authority, the incentive or the means to
25 invest in energy efficiency for housing they do not own.

26 28. The Multi-Family Program would address split incentives, capital constraints and lack
27 of awareness through direct installation of low cost energy efficiency improvements in existing
28 complexes and through energy efficiency improvements to common areas.

29. Proposed Changes. TEP is proposing the following new measures for the Multi-Family Housing Efficiency Program. The Company is proposing Residential LED lamps rather than CFLs for this program, as being more efficient, while remaining cost-effective.

Table 3

Program Measure	Standard Measure	Average Incentive per Unit	Estimated Participation	Staff's Benefit-Cost Ratio
HVAC Advanced Tune-up	No tune-up	\$125	1,100	1.00
Western Cooling Control_Stand alone	No control	\$50	400	1.53
Duct Test & Repair	No Duct Test & Repair	\$175	800	1.59
Residential LED	Incandescent	\$4.50	6,000	1.19

30. Eligibility. The Multi-Family Program is available to owners of multi-family buildings with five dwelling units or more. Program participants must currently receive electric service from TEP.

31. Budget. See TABLE 6: TEP'S PROPOSED BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

32. Delivery and Marketing. Program delivery for existing measures is provided by TEP Staff. If the proposed HVAC Advanced Tune up measures are approved by the Commission, a third party implementation contractor will be responsible for the tune-up portion of the program.

33. Staff Recommendations. Staff has recommended that the Commission approve all the new measures proposed for the Multi-Family Program, because each of the four measures has a benefit-cost ratio at or above 1.0.

Small Business Direct Install Program

34. Program Description. The Small Business Direct Install ("SBDI") Program is an existing TEP Non-residential Program. In Decision No. 74885 (December 2014), the SBDI program was revised to make schools eligible for participation. The Program provides incentives directly to contractors for the installation of high efficiency measures at existing small business facilities and

1 schools. These measures include lighting, HVAC, programmable thermostats, and refrigeration
2 measures for smaller Non-residential customers.

3 35. Program Objectives and Rationale. The primary purpose of the existing component
4 of the Program is to promote the installation of energy efficiency at existing small businesses and at
5 schools.

6 36. Proposed Changes. TEP is proposing the following new measures.

Table 4

Program Measure	Standard Measure	Average Incentive per Unit	Estimated Participation	Staff's Benefit-Cost Ratio
LED Outdoor Lighting	15-100 Watt Incandescent lamps or 70 watt to 1,000 watt metal halide or high pressure sodium lamps.	\$27	500	1.54
LED Tubes replacing fluorescent Indoor	34-40 Watt T12 or T8	\$10	250	1.10
LED Tubes replacing fluorescent Outdoor	34-40 Watt T12 or T8	\$10	250	1.04
Economizers	No economizer	\$139	5	1.40
EMS_HVAC Delivery	No controls	\$0.26/sq. ft.	5,000	1.07
Evaporative fan controls	No controls	\$75	5	0.94
Pulse Start MH_Interior	565 Fixture Watts	\$109	25	0.85
Pulse Start MH_Exterior	472 Fixture Watts	\$94	20	0.77
PTAC	10.2 EER Base Unit	\$294	250	2.97
PTHP	10.0 EER Base Unit	\$407	250	2.91
Variable Refrigerant Flow	Standard refrigerant flow	\$3.76/kBtuh	400	1.38
Window Films	No film	\$1.16/sq. ft.	500	0.79
Induction Lighting_Outdoor	67 to 1180 W MH or HPS wtd average	\$118	25	1.03
HVAC System Test and Repair	No test and repair	\$300	300	1.23

