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BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

Arizona Corporation Commission

DOCKETED

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IN THE MATTER OF THE APPLICATION
OF TUCSON ELECTRIC POWER
COMPANY FOR APPROVAL OF ITS
RENEWABLE ENERGY STANDARD,
INCLUDING ITS DISTRIBUTED
RENEWABLE ENERGY PLAN AND
RENEWABLE ENERGY STANDARD
TARIFF

DOCKET NO. E-01933A-07-0594

DECISION NO. 70314

ORDER

Open Meeting
April 8 and 9, 2008
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Tucson Electric Power Company ("TEP") is engaged in providing electric service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission ("Commission").

Background

2. On October 12, 2007, TEP filed its application for approval of its Renewable Energy Standard and Tariff ("REST") Plan.

3. TEP includes the following in its application:

A. Proposed Implementation Plan,

B. Proposed REST Tariff and Proposed Customer Self-Directed Tariff,

C. Proposed REST Adjustor Mechanism,

- D. Renewable Energy Credit Purchase Program,
- E. Customer Self-Directed Renewable Energy Option Tariff,
- F. Request for release from the Environmental Portfolio Standard and authority to apply EPS funding to REST programs, and
- G. Request for consolidation of reporting requirements.

A. Proposed Implementation Plan

4. TEP includes two proposed Implementation Plans for consideration by the Commission. For each, TEP includes the resource technology employed, the cost, and a line item budget.

Full Compliance Opportunity Plan

5. The Full Compliance Opportunity Plan ("Option 1") includes activities and costs that TEP believes are required to meet the renewable and distributed energy ("DE") goals set forth in the REST. The REST renewable energy requirement is 1.75 percent of retail kWh sales in 2008, with 10 percent of that from DE, and half of DE from residential sources.

6. TEP estimates the cost of Option 1 to be \$23.6 Million in 2008. The REST Sample Tariff is estimated to collect \$10.5 Million. The additional required revenue would come from increasing the caps in the Sample Tariff for residential and large non-residential customers. This additional revenue results in a total of \$22.1 million for TEP's Option 1. The Option 1 proposed revenue effects are shown in Table 1.

Table 1 – Option 1 Customer Impact, Year 2008

Customer Class	Total \$	Pct of \$	Avg. Bill	Monthly Cap	Pct of Customers at Cap
Residential	\$14,761,000	66.6%	\$3.32	\$5.20	29%
Non-Residential	\$5,858,000	26.4%	\$13.95	\$39.00	13%
Non-Residential \geq 3 MW	\$1,538,000	6.9%	\$1,500.00	\$1,500.00	100%
Total	\$22,157,000	100.0%			

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Sample Tariff Plan

7. The Sample Tariff Plan ("Option 2") proposes activities and costs that TEP believes could be funded with the REST rates and caps remaining at the Sample Tariff level. The major difference between Option 1 and TEP's Sample Tariff Plan is the amount of residential DE.

8. According to the Company, the REST Sample Tariff revenue is insufficient to allow TEP to be in compliance with the REST requirements to secure 1.75 percent of retail kWh sales in 2008 from renewable resources with 10 percent of that from DE, and half of DE from residential sources. The Option 2 targets 34.5 percent of DE from residential sources, rather than 50 percent. Therefore, TEP's Option 2 falls short of meeting the REST residential DE requirements, although the total renewable energy requirement is accomplished.

9. TEP estimates the cost of Option 2 to be \$11.9 Million in 2008. TEP would not change the rates or caps from the Sample Tariff. The REST Sample Tariff is estimated to collect \$10.5 million. The Option 2 proposed revenue effects are shown in Table 2.

Table 2 – Option 2 Customer Impact, Year 2008

Customer Class	Total \$	Pct of \$	Avg. Bill	Monthly Cap	Pct of Customers at Cap
Residential	\$4,455,000	42.5%	\$1.03	\$1.05	89%
Non-Residential	\$5,858,000	55.9%	\$13.95	\$39.00	13%
Non-Residential \geq 3 MW	\$174,000	1.7%	\$117.00	\$117.00	100%
Total	\$10,487,000	100.0%			

Staff's Proposed Plan

10. Staff has recommended rejecting TEP's Option 1 as too expensive and burdensome for customers. Staff's opinion is that Option 2 is more reasonable, and if the Commission approves Option 2, Staff has recommended requiring TEP to implement this Plan more efficiently, so as to increase the amount of residential DE produced at the Sample Tariff rate.

11. Staff is providing an alternate plan, the cost of which falls between the two TEP Plans. Staff proposes a plan with a cost of \$15.58 million. Staff's Plan uses TEP's Option 2 conditions, with the \$3.00 per Watt Solar rebate, but with greater monthly customer bill caps.

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12. Staff sets the residential distributed energy target at 5 percent of total kWh (50 percent of required DE) and meets REST requirements at a lower cost, as shown in Attachment 1. Staff's Plan accomplishes this through substantially lower DE administration and DE integration program costs in addition to the lower rebate per Watt. The customer impact of Staff's Plan is shown in Table 3.

Table 3 – Staff Proposed Plan Customer Impact, Year 2008

Customer Class	Total \$	Pct of \$	Avg. Bill	Monthly Cap	Pct of Customers at Cap
Residential	\$8,513,000	56.6%	\$1.61	\$2.00	77%
Non-Residential	\$5,858,000	39.0%	\$13.95	\$39.00	13%
Non-Residential \geq 3 MW	\$665,000	4.4%	\$500.00	\$500.00	100%
Total	\$15,036,000	100.0%			

B. Tariffs

13. TEP has proposed REST tariffs modeled after the Sample Tariff contained in the REST Rules. TEP proposes tariffs corresponding to its two proposed Implementation Plans. TEP points out that the approved Implementation Plan and the associated tariff should become effective simultaneously.

14. The REST Tariff for TEP's Option 1 increases the caps from those given in the REST Sample Tariff, and collects approximately \$22.2 million of the Plan's \$23.6 million cost.

15. The REST Tariff for TEP's Option 2 maintains the caps given in the REST Sample Tariff, and collects approximately \$10.5 million of the Plan's \$11.9 million cost.

16. The REST Tariff for Staff's Plan would include the same \$0.004988 per kWh rate as in the REST Sample Tariff, with a monthly cap for residential customers of \$2.00 rather than \$1.05, and \$500 for non-residential customers with demands of 3 MW or greater instead of \$117.00.

17. None of the proposed tariffs recover the full costs of the associated plan. The difference in each case is recovered through EPS carryover revenue and other revenue sources. Table 4 gives a summary of the proposed rates and caps for the three proposals discussed above.

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18. Table 5 shows the cost per month for various customer types based on typical monthly energy use for the three proposals discussed above.

Table 4
TEP Renewable Energy Programs
EPS and REST - Customer Rates and Caps

	<u>TEP Proposed Plans</u>			
	<u>Present EPS</u>	<u>Sample Tariff</u>	<u>Full Compliance</u>	<u>Staff Proposed Plan</u>
Rate per kWh	\$0.000875	\$0.004988\$	\$0.004988\$	\$0.004988
Residential Cap	\$0.35	\$1.05	\$5.20	\$2.00
Non-Residential Cap	\$13.00	\$39.00	\$39.00	\$39.00
Non-Residential \geq 3 MW Cap	\$39.00	\$117	\$1,500	\$500.00

Table 5
TEP Renewable Energy Programs
EPS and REST - Customer Type
Monthly Surcharge Comparison

<u>Customer Types</u>	<u>Typical kWh / mo.</u>	<u>TEP Proposed Plans</u>			<u>Staff Proposed Plan</u>
		<u>EPS</u>	<u>Sample Tariff</u>	<u>Full Compliance</u>	
Low Consuming Residence	400	\$0.35	\$1.05	\$2.00	\$2.00
Avg. Consuming Residence	960	\$0.35	\$1.05	\$4.79	\$2.00
High Use Residence	2,000	\$0.35	\$1.05	\$5.20	\$2.00
Dentist Office	2,000	\$1.75	\$9.98	\$9.98	\$9.98
Hairstylist	3,900	\$3.41	\$19.45	\$19.45	\$19.45
Department Store	170,000	\$13.00	\$39.00	\$39.00	\$39.00
Mall	1,627,100	\$13.00	\$39.00	\$39.00	\$39.00
Retail Video Store	14,400	\$12.60	\$39.00	\$39.00	\$39.00
Large Hotel	1,067,100	\$13.00	\$39.00	\$39.00	\$39.00
Large Building Supply	346,500	\$13.00	\$39.00	\$39.00	\$39.00
Hotel/Motel	27,960	\$13.00	\$39.00	\$39.00	\$39.00
Fast Food	60,160	\$13.00	\$39.00	\$39.00	\$39.00
Large High Rise Office Bldg	1,476,100	\$13.00	\$39.00	\$39.00	\$39.00
Hospital (< 3 MW)	1,509,600	\$13.00	\$39.00	\$39.00	\$39.00
Supermarket	233,600	\$13.00	\$39.00	\$39.00	\$39.00
Convenience Store	20,160	\$13.00	\$39.00	\$39.00	\$39.00
Hospital (> 3 MW)	2,700,000	\$39.00	\$117.00	\$1,500.00	\$500.00
Copper Mine	72,000,000	\$39.00	\$117.00	\$1,500.00	\$500.00

19. The Company is required by A.A.C. R14-2-1809.A to file a tariff under which a customer may apply to TEP for funds to install renewable distributed energy facilities. TEP has developed a Customer Self-Directed Renewable Energy Option Tariff ("REST-TS2") and has

1 included it in the filing made herein. The REST-TS2 applies to either REST Implementation Plan
2 Option. Staff has recommended that REST-TS2 be approved.

3 **C. Release from Environmental Portfolio Standard**

4 20. According to TEP, the REST is meant to supplant the current Environmental
5 Portfolio Standard ("EPS"), A.A.C. R14-2-1618. TEP also recognizes that there is no specific
6 provision in the REST rules or Decision No. 69217 that releases affected utilities from the EPS
7 obligations or addresses the disposition of EPS surcharge funding. For this reason, TEP requests
8 that it be formally released from the requirements of the EPS and that it be permitted to apply all
9 unused EPS surcharge funding to REST program expenses.

10 21. It is Staff's understanding, as well, that the REST is meant to supplant the EPS.
11 Accordingly, Staff has recommended that TEP be released from the requirements of the EPS and
12 that any remaining EPS funding be applied to the REST program in order to make use of the EPS
13 funding for the purpose of developing renewable generation as it was originally intended. Staff
14 further recommends that the Renewable Energy Standard Rules (A.A.C. R14-2-1801 through -
15 1806) supersede the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618) and any other
16 reporting requirements related to renewable energy resources. Staff further recommends that TEP
17 no longer charge customers the current EPS surcharge.

18 **D. Renewable Energy Credit Purchase Program**

19 22. TEP currently has a SunShare program that provides incentives for solar
20 photovoltaic facilities ("PV") of 10 kW or less. This program provides only up-front incentives.
21 TEP proposes a new Renewable Energy Credit Purchase Program ("RECPP") that is different
22 from SunShare in several ways:

- 23 A. added other solar technologies,
24 B. added other renewable technologies,
25 C. added performance-based incentives, and
26 D. added larger facilities.

27 23. TEP provided Attachment D in its filing, "Conforming Project Incentive Matrix," a
28 table showing incentive payments per kWh as they are reduced over time.

24. The difference between the program under Option 1 and the program under Option 2 is the rebate amounts for PV and solar water heating. The rebates are higher for PV under Option 1 (\$4.50/watt v. \$3/watt in years 2008 and 2009). The incentive for solar water heating under Option 1 is \$1,500 plus \$0.50 per kWh up to a maximum of \$3,500. Under Option 2, it is \$750 plus \$0.25 per kWh up to a maximum of \$1,750.

25. Staff objects to one TEP's installation guidelines for photovoltaic systems. TEP's requirement states that eligible PV systems must be installed with a horizontal tilt angle between 10 degrees and 60 degrees. A 0 degree tilt is not allowed. This may seem like a small difference, but it is important to recognize that a 0 degree tilt may make the difference between an economically viable system and one that does not "pencil out." The reason is that, even though the 0 degree tilt will provide a less than optimal annual system performance, on a large flat-roof commercial building, the option of installing the system without a rack can make or break the economics of a system.

26. Staff has recommended that the TEP photovoltaic installation requirements allow for a 0 degree horizontal tilt angle option. Further, Staff has recommended that TEP be directed to either modify its SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a 0 degree tilt or, at TEP's option, merely allow the same rating for 0 degrees as is calculated for a 10 degree horizontal tilt.

27. In its RECPP, TEP has proposed an exception to the requirements in REST Rule 14-2-1803.B, which defines how energy production will be calculated. Staff realizes that TEP offered its proposed calculation method during the REST Rule approval process, but TEP did not prevail, and the Commission approved the wording in R14-2-1803.B.

28. With regard to the proposed Renewable Energy Credit Purchase Program ("RECPP") installation guidelines for photovoltaic systems, TEP shall adopt those guidelines set forth in Option 3 of TEP's current SunShare program. These installation guidelines shall be modified to conform to changes suggested by Staff in Findings of Fact Nos. 25 and 26.

29. Staff believes that it is only fair to all utilities and customers that a uniform set of requirements be used to determine the calculation of Renewable Energy Credits. Staff has

1 recommended that the Commission deny TEP's request for an exception to the wording in R14-2-
2 1803.B

3 30. Staff notes that the work of the Uniform Credit Purchase Program ("UCPP")
4 Working Group, which commenced in 2006, should be completed prior to development of
5 reasonable uniform incentives for each renewable generation technology. Staff anticipates that the
6 work of the UCPP Working Group should be completed in 2008. Staff has recommended that, if
7 the Commission approves a UCPP, TEP should be required to develop a mechanism to incorporate
8 UCPP procedures and incentive levels for all eligible technologies in its proposed REST Plan for
9 2009 and later years.

10 **E. Fair Value**

11 31. Staff has analyzed TEP's application in terms of whether there are fair value
12 implications. In Decision No. 59594, issued on March 29, 1996, the Commission determined
13 TEP's fair value rate base to be \$1,359,085,000. Staff considered this figure for purposes of this
14 analysis. The proposed 2008 Renewable Energy Standard Implementation Plan, Customer Self-
15 Directed Tariff, and REST Tariff would have no impact on the Company's fair value rate base or
16 rate of return because plant developed pursuant to the REST program is not added to the rate base.

17 **F. REST Adjustor Mechanism**

18 32. TEP has requested establishment of an adjustor mechanism for recovery of REST
19 program expenses. Establishment of a new adjustor mechanism is best addressed in a general rate
20 case. Therefore, Staff has addressed TEP's proposed adjustor mechanism in the currently ongoing
21 TEP rate case, Docket Nos. E-01933-07-0402 and E-01933-05-0650. While the adjustor
22 mechanism is addressed by Staff in the rate case, the REST rates are properly addressed in this
23 Implementation Plan proceeding.

24 **G. Consolidation**

25 33. TEP requests that the reporting requirements set forth for the Green Watts SunShare
26 Program in Decision No. 63362 (February 8, 2001) and as modified in Decision No. 66786
27 (February 13, 2004) be consolidated with the reporting requirements set forth in A.C.C. R14-2-
28 1812. Staff finds this request to be reasonable.

H. Staff Recommendations Summary

34. Staff has recommended that TEP's Option 1 be rejected, and that Staff's proposed 2008 Renewable Energy Standard Implementation Plan be approved, as discussed herein. In the event that the Commission does not adopt Staff's proposed REST Plan for TEP, Staff has recommended that TEP's Option 2 be approved.

35. Staff has recommended that a REST Tariff be approved that includes the rate of \$0.004988 per kWh and monthly caps of \$2.00 for residential customers, \$39.00 for non-residential customers, and \$500.00 for non-residential customers with demands of 3 MW or greater.

36. Staff has recommended that TEP's Customer Self-Directed Renewable Energy Option tariff be approved.

37. Staff has recommended that TEP make a compliance filing within 15 days of the effective date of the Commission Decision in this case. This filing should include a revised TEP 2008 Renewable Energy Standard Implementation Plan, a REST Tariff, and a Customer Self-Directed Renewable Energy Option tariff consistent with this Decision.

38. Staff has recommended that the proposed 2008 Renewable Energy Standard Implementation Plan, Customer Self-Directed Renewable Energy Option tariff, and REST Tariff remain in effect until further order of the Commission.

39. Staff has recommended that the Commission approve TEP's Renewable Energy Credit Purchase Program, as modified by Staff, as a replacement for its SunShare program. Staff has recommended that, if the Commission approves a Uniform Credit Purchase Program, TEP develop a mechanism to incorporate Uniform Credit Purchase Program procedures and incentive levels for all eligible technologies in its proposed REST Plan for 2009 and later years, including Staff's recommendations shown herein.

40. Staff has recommended that TEP be released from the requirements of the Environmental Portfolio Standard and that any remaining Environmental Portfolio Surcharge funding be applied to the REST program.

41. Staff has recommended that the Renewable Energy Standard Rules (A.A.C. R14-2-1801 through -1806) supersede the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618) and any other reporting requirements related to renewable energy resources.

42. Staff has recommended that TEP no longer charge customers the current Environmental Portfolio Standard surcharge.

43. Staff has recommended that the reporting requirements for TEP set forth for the Green Watts SunShare Program in Decision No. 63362 (February 8, 2001) and as modified in Decision No. 66786 (February 13, 2004) be consolidated with the reporting requirements set forth in A.C.C. R14-2-1812.

44. Staff has recommended that the request for establishment of an adjustor mechanism for recovery of REST Program expenses not be approved in this docket.

45. Staff has recommended that the Commission deny TEP's request for an exception to the wording in R14-2-1803.B.

46. Staff has recommended that TEP be directed to either modify its SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a 0 degree tilt or, at TEP's option, merely allow the same rating for 0 degrees as is calculated for a 10 degree horizontal tilt.

47. TEP shall modify its RECPP as included in Exhibit 1, Attachment 8, of its application by deleting items 6 through 9 on pages 33-34.

CONCLUSIONS OF LAW

1. Tucson Electric Power Company is an Arizona public service corporation within the meaning of Article XV, Section 2, of the Arizona Constitution.

2. The Commission has jurisdiction over TEP and over the subject matter of the application.

3. The Commission, having reviewed the application and Staff's Memorandum dated March 25, 2008, concludes that it is in the public interest to approve the 2008 Renewable Energy Standard Implementation Plan as recommended by Staff.

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1 4. The Commission further concludes that it is in the public interest to approve the
2 Renewable Energy Credit Purchase Program, Customer Self-Directed Renewable Energy Option
3 tariff, REST Tariff, and Staff recommendations in this matter.

4 ORDER

5 IT IS THEREFORE ORDERED that Staff's proposed 2008 Renewable Energy Standard
6 Implementation Plan for Tucson Electric Power Company be and hereby is approved, as discussed
7 herein.

8 IT IS FURTHER ORDERED that the Renewable Energy Credit Purchase Program,
9 Customer Self-Directed Renewable Energy Option tariff, and REST tariff be approved, as
10 discussed herein.

11 IT IS FURTHER ORDERED that, if the Commission approves a Uniform Credit Purchase
12 Program, Tucson Electric Power Company shall develop a mechanism to incorporate Uniform
13 Credit Purchase Program procedures and incentive levels for all eligible technologies in its
14 proposed REST plan for 2009 and later years.

15 IT IS FURTHER ORDERED that the proposed 2008 Renewable Energy Standard
16 Implementation Plan, Customer Self-Directed Renewable Energy Option tariff, and REST Tariff
17 remain in effect until further order of the Commission.

18 IT IS FURTHER ORDERED that Tucson Electric Power Company's Renewable Energy
19 Credit Purchase Program, as modified by Staff, is approved as a replacement for Tucson Electric
20 Power Company's SunShare program.

21 IT IS FURTHER ORDERED that the Commission deny Tucson Electric Power
22 Company's request for an exception to the wording in R14-2-1803.B.

23 IT IS FURTHER ORDERED that Tucson Electric Power Company be directed to either
24 modify its SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a 0 degree
25 tilt or, at Tucson Electric Power Company's option, merely allow the same rating for 0 degrees as
26 is calculated for a 10 degree horizontal tilt.

27 IT IS FURTHER ORDERED that the annual reporting requirements for Tucson Electric
28 Power Company set forth for the Green Watts SunShare Program in Decision No. 63362

1 (February 8, 2001) and as modified in Decision No. 66786 (February 13, 2004) be consolidated
2 with the reporting requirements set forth in A.C.C. R14-2-1812.

3 IT IS FURTHER ORDERED that the request for establishment of an adjustor mechanism
4 for recovery of REST Program expenses not be approved in this docket.

5 IT IS FURTHER ORDERED that Tucson Electric Power Company is released from the
6 requirements of the Environmental Portfolio Standard and that any remaining Environmental
7 Portfolio Surcharge funding be applied to the REST program.

8 IT IS FURTHER ORDERED that, for Tucson Electric Power Company, the Renewable
9 Energy Standard Rules (A.A.C. R14-2-1801 through -1816) supersede the Environmental Portfolio
10 Standard Rules (A.A.C. R14-2-1618) and any other reporting requirements related to renewable
11 energy resources.

12 IT IS FURTHER ORDERED that Tucson Electric Power Company shall no longer charge
13 customers the current Environmental Portfolio Standard surcharge and shall no longer file the
14 Annual Environmental Portfolio Surcharge Report ordered by Decision No. 63353.

15 IT IS FURTHER ORDERED that Tucson Electric Power Company shall make a
16 compliance filing within 15 days of the effective date of the Commission Decision in this case.
17 This filing should include a revised Tucson Electric Power Company 2008 Renewable Energy
18 Standard Implementation Plan, a REST Tariff, and a Customer Self-Directed Renewable Energy
19 Option tariff consistent with this Decision.

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1 IT IS FURTHER ORDERED that Tucson Electric Power Company shall modify its
2 RECPP as included in Exhibit 1, Attachment 8, of its application by deleting items 6 through 9 on
3 pages 33-34 and all other places those items appear and submit the revised document to Docket
4 Control for Staff verification.

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

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

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10 CHAIRMAN


COMMISSIONER

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COMMISSIONER


COMMISSIONER

COMMISSIONER

14 IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive
15 Director of the Arizona Corporation Commission, have
16 hereunto, set my hand and caused the official seal of this
17 Commission to be affixed at the Capitol, in the City of
18 Phoenix, this 28th day of April, 2008.

19 
20 BRIAN C. McNEIL
Executive Director

21 DISSENT: 

22
23 DISSENT: 

24 EGJ:JJP:lhmfJFW
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1 Commissioner Pierce *dissenting*:

2 I dissent from the Commission's approval of Staff's Proposed REST
3 Implementation plan. The Commission should have approved Tucson Electric Power's
4 Sample Tariff Plan, which would have provided the same amount of renewable energy
5 and the same amount (maybe more) of distributed generation for nearly five million
6 dollars less than Staff's Proposed Plan. Aside from the cost savings entailed in TEP's
7 Sample Tariff Plan, the only difference between the two plans is that the Sample Tariff
8 Plan relaxes the requirement found in A.A.C. R14-2-1805.D that 50% of distributed
9 generation ("DG") come from residential rooftops and 50% come from commercial
10 rooftops. Because there is no public policy basis for distinguishing between residential
11 DG and commercial DG, I cannot support Staff's Proposed Plan.

12 The cost of residential DG¹ is staggering. Staff's Proposed Plan costs \$15.9
13 million. Sixty-two percent of that cost (\$9.7 million) is for residential and commercial
14 DG. Of that number, approximately ninety percent (\$8.7 million) is for residential DG.
15 In other words, more than half of the cost of Staff's Proposed Plan is for residential DG,
16 which will produce less than 5% of TEP's renewable energy in 2008. A stubborn
17 insistence by this Commission that 50% of DG come from residential facilities is an
18 albatross around the neck of our REST rules.

19 Given the negative externalities associated with generating electricity using fossil
20 fuels, I believe the Commission is justified in requiring utilities to acquire a portion of

21 _____
22 ¹ It is difficult to make an apples-to-apples comparison of the cost of residential DG with
23 the cost of commercial DG because residential facilities receive an up-front incentive,
24 whereas commercial facilities receive a performance-based incentive. This results in
25 residential DG looking relatively more expensive in early years than commercial DG. It
26 also results in the risk of underperformance of the facility being shifted from residential
customers to all ratepayers. There is no doubt, however, that residential DG is more
expensive than commercial DG; the very reason residential customers receive an up-front
incentive is because, unlike commercial customers, they are difficult to entice with
performance-based incentives. The only uncertainty is the magnitude of the cost premium
of residential DG over commercial DG.

1 their electricity—at premium prices—from renewable and DG sources. We cannot afford,
2 however, to require utilities to pay super-premium prices for residential DG for no
3 discernable reason.

4 So far, I have spoken only of the direct costs of residential DG, but I'm equally
5 concerned about the opportunity costs. In other words, what did the Commission give up
6 when it required TEP to devote \$8.7 million towards residential DG in 2008? TEP's
7 application indicates that TEP can generate or purchase 170,000 MWh of renewable
8 energy for \$5.9 million. Assuming linear pricing, TEP could more than double the
9 amount of renewable energy it acquires in 2008 if the Commission would relax its
10 residential DG requirement. In other words, for the same cost, TEP could have enjoyed
11 more than twice the amount of reductions in NO_x, SO_x, and Carbon Dioxide emissions in
12 2008 than it will experience under Staff's Proposed Plan.

13 Inquiring into the opportunity costs of 50% residential DG mandate begs the
14 question: what are we trying to achieve in our REST rules? Are we trying to increase the
15 number of DG facilities installed on residential rooftops, or are we trying to promote and
16 increase the use of renewable energy generally? The name of the rules—i.e., the
17 *Renewable Energy* Standard and Tariff—suggests that their purpose is to promote
18 renewable energy generally, and that is certainly how the rules are perceived by the
19 general public. Given this, it occurs to me that there is a certain amount of mislabeling
20 associated with approving a REST implementation plan that spends more money on
21 installing residential DG than it does on generating and acquiring renewable energy.

22 If the Commission continues to use the REST rules to prop up residential DG,² it
23 will sour me on the entire enterprise. I dissent.

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25
26 ² I hold no animus towards residential DG. I'd be happy to see residential DG flourish so
long as it does so on the same terms that are being offered to commercial DG customers.

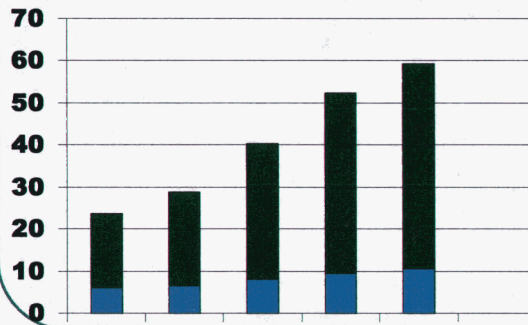
Note: Following are some tables and graphs that visually describe what I've tried to explain here.

TEP's REST Targets & Budget

	2008	2009	2010	2011	2012
TARGETS:					
Renewable Target	1.75%	2.00%	2.50%	3.00%	3.50%
DG Target	.175%	.3%	.5%	.75%	1.05%
BUDGET: (millions)					
Renewable Budget	\$5.9	\$6.5	\$8.0	\$9.6	\$10.7
DG Budget	\$17.7	\$22.4	\$32.4	\$42.9	\$48.8
Total Budget	\$23.6	\$28.9	\$40.4	\$52.5	\$59.5

TEP's Forecasted REST Costs

	2008	2009	2010	2011	2012
Total Cost (millions)	\$23.6	\$28.9	\$40.4	\$52.3	\$59.3
Renewable Cost	\$6.0	\$6.5	\$8.0	\$9.5	\$10.6
DG Cost	\$17.6	\$22.4	\$32.4	\$42.8	\$48.7

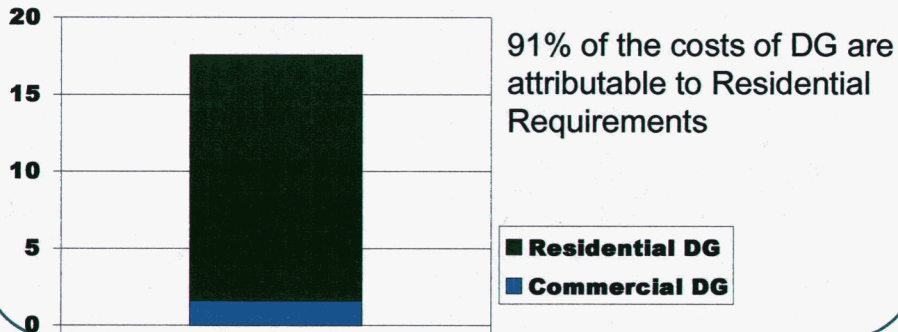


79% of the costs of RES rules are attributable to DG Requirements

2008 2009 2010 2011 2012

TEP's 2008 DG Budget

Total 2008 DG Budget	\$17.6
Residential DG Component	\$16.0
Commercial DG Component	\$1.6



SERVICE LIST FOR: Tucson Electric Power Company
DOCKET NO. E-01933A-07-0594

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