

ORIGINAL
OPEN MEETING



MEMORANDUM

410

TO: THE COMMISSION
FROM: Utilities Division
DATE: March 25, 2008
RE: TUCSON ELECTRIC POWER COMPANY - APPLICATION FOR APPROVAL OF ITS RENEWABLE ENERGY STANDARD AND TARIFF IMPLEMENTATION PLAN (DOCKET NO. E-01933A-07-0594)

2008 MAR 25 P 3: 33

AZ CORP COMMISSION
DOCKET CONTROL

Background

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

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.

Arizona Corporation Commission
DOCKETED

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A. Proposed Implementation Plan

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

1. Full Compliance Opportunity Plan

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.

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%			

2. Sample Tariff Plan

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 Option 2 is the amount of residential DE.

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.

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%			

3. Staff Proposed Plan

Staff recommends 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 recommends requiring TEP to implement this Plan more efficiently, so as to increase the amount of residential DE produced at the Sample Tariff rate.

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.

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

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.

1. 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.
2. 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.
3. 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.

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.

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>Staff Proposed Plan</u>
	<u>Present EPS</u>	<u>Sample Tariff</u>	<u>Full Compliance</u>	
Per kWh Rate	\$0.000875	\$0.004988	\$0.004988	\$0.004988
Residential Cap	\$0.35	\$1.05	\$5.20	\$2.00
Small Non-Res	\$13.00	\$39.00	\$39.00	\$39.00
Large Non-Res	\$39.00	\$117.00	\$1,500.00	\$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

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

C. Release from Environmental Portfolio Standard

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

It is Staff's understanding, as well, that the REST is meant to supplant the EPS. Accordingly, Staff recommends that TEP be released from the requirements of the EPS and that any remaining EPS funding be applied to the REST program in order to make use of the EPS funding for the purpose of developing renewable generation as it was originally intended. Staff further recommends 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. Staff further recommends that TEP no longer charge customers the current EPS surcharge and shall no longer file the Annual Environmental Portfolio Surcharge Report ordered by Decision No. 63353.

D. Renewable Energy Credit Purchase Program

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

1. added other solar technologies,
2. added other renewable technologies,
3. added performance-based incentives, and
4. added larger facilities.

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

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.

Staff objects to one of 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.

Staff recommends that the TEP photovoltaic installation requirements allow for a 0 degree horizontal tilt angle option. Further, Staff recommends 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.

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.

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

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

E. Fair Value

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

F. REST Adjustor Mechanism

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

G. Consolidation

TEP requests that the annual reporting requirements set forth for the GreenWatts 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. Staff finds this request to be reasonable.

H. Staff Recommendations

1. Staff recommends 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 recommends that TEP's Option 2 be approved.
2. Staff recommends 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.
3. Staff recommends that TEP's Customer Self-Directed Renewable Energy Option tariff be approved.
4. Staff recommends 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 the Decision in this case.
5. Staff recommends 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.
6. Staff recommends that the Commission approve TEP's Renewable Energy Credit Purchase Program, as modified by Staff, as a replacement for its SunShare program. Staff recommends 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.

7. Staff recommends that the Commission deny TEP's request for an exception to the wording in R14-2-1803.B.
8. Staff recommends 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.
9. Staff recommends 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.
10. Staff recommends 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.
11. Staff recommends that TEP no longer charge customers the current Environmental Portfolio Standard surcharge and shall no longer file the annual Environmental Portfolio Report ordered by Decision No. 63353.
12. Staff recommends that the reporting requirements for TEP set forth for the GreenWatts 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.
13. Staff recommends that the request for establishment of an adjustor mechanism for recovery of REST Program expenses not be approved in this docket.


Ernest G. Johnson
Director
Utilities Division

EGJ:JJP:lhm\JFW

ORIGINATOR: Jeffrey Pasquinelli

	<u>TEP Sample Tariff</u>	<u>Staff Proposal</u>	<u>TEP Full Compliance</u>
TEP & REST Program Factors			
RES Annual Renewable Energy Percentage	1.75%	1.75%	1.75%
Energy Sales - MWh Growth @ 1.52%/yr	9,739,903	9,739,903	9,739,903
Expected DSM Program Annual Energy Reductions	31,384	31,384	31,384
Expected DG Program Annual Energy Reductions	0	0	0
Net Retail Energy Sales in MWh per Year	9,708,519	9,708,519	9,708,519
Renewable Energy - MWh	169,899	169,899	169,899
Minimum Distributed Energy %	10.00%	10.00%	10.00%
Minimum Distributed Energy MWh	16,990	16,990	16,990
Minimum Residential Distributed Energy %	3.45%	5.00%	5.00%
Minimum Residential Distributed Energy MWh	5,862	8,495	8,495
Maximum Commercial Distributed Energy %	6.55%	5.00%	5.00%
Maximum Commercial Distributed Energy MWh	11,128	8,495	8,495
Renewable Resource Energy and Power Conversion			
Residential Distributed Generation - MWp Total New 60% Solar PV	0.844	2.014	2.014
Residential Distributed Energy - MWp Total New 40% Solar Hot Water/Space Heating & Wind	2.345	3.398	3.398
Commercial Distributed Generation - MWp Total New 25% Solar Electric PV	1.637	1.249	1.249
Commercial Distributed Generation - MWp Total New 75% Non Solar Electric @ ave 50% CF	1.906	1.455	1.455
Distributed Solar Elect MWp Old With Multipliers	1.76	1.76	1.76
Utility Solar Elect MWp Old With Multipliers	11.11	11.11	11.11
Utility Fueled Generation - MWp Old With Multipliers	3.938	3.938	3.938
Utility Generated @ 80% NonDispatchable Energy - MWp New No Multipliers - Wind	41.360	41.360	41.360
Utility Generated @ 20% Fueled - MWp New No Multipliers	2.272	2.272	2.272
Resulting Total Solar Electric Capacity in MW	8.630	9.414	9.414
Resulting Total Solar Electric Annual Energy in MWh	13,991	14,913	14,913
Incremental Solar Capacity Watts Installed per Year per Person	3.101	4.079	4.079
Resulting Total Distributed Solar Water Heating Capacity in MW	5.127	5.522	5.522
Resulting Total Distributed Solar Water Heating Annual Energy in MWh	5,127	5,522	5,522
Resulting Total Distributed Non Solar Electric Dispatchable or Displaced Generation Capacity in MW	1.270	0.970	0.970
Resulting Total Distributed Non Solar Electric Dispatchable or Displaced Generation Annual Energy in MWh	5,564	4,247	4,247
Resulting Total MW Wind Generation Capacity	41,360	41,360	41,360
Resulting Total Wind Annual MWh	79,618	79,618	79,618
Resulting Total MW Biomass Generation Capacity	5.697	5.697	5.697
Resulting Total MWh Biomass Energy	49,904	49,904	49,904
Total Renewable Generating Annual Energy in MWh	154,204	154,204	154,204
Total Renewable Generating Capacity in MW	62.084	62.962	62.962
Annual Credit Balances MWh			
Residential Distributed Electric Credit Balance	0	3,484	0
Commercial Distributed Energy Credit Balance	0	0	0
Utility Generated Electric Credit Balance	118,600	118,600	118,600
Assumption Residential Distributed Generation Solar Electric %	60.00%	60.00%	60.00%
Residential Solar Electric Up Front Subsidy Payment UCPP Plan			
Residential Distributed Generation Up Front Solar Electric Subsidy Program \$/Watt DC	\$3.00	\$3.00	\$4.50
Additional Residential Distributed Solar Electric Capacity Needed in MWp this given Year	0.844	2.014	2.014
Subtotal Cost of Residential Distributed Solar Electric Subsidies	\$2,531,758	\$6,043,006	\$9,064,508

	<u>TEP Sample Tariff</u>	<u>Staff Proposal</u>	<u>TEP Full Compliance</u>
Distributed Solar Hot Water & Wind Up Front Subsidy Payment UCPP Plan			
Residential Distributed Solar Hot Water & Wind Up Front Subsidy Program \$/Watt AC Equivalent	\$0.5000	\$0.5000	\$1.0000
Additional Residential Distributed Solar Hot Water & Wind Capacity Needed in MWp This given Year	2.345	3.398	3.398
Subtotal Cost of Residential Distributed Solar Hot Water & Wind Subsidies	\$1,172,304	\$1,698,991	\$3,397,982
SubTotal Cost of Distributed Solar Electric Generation			
Feed In Tariff	\$0	\$0	\$382,273
Unit Built in 2008 to 2020	\$0	\$0	\$382,273
Feed In Tariff Rate for 20 years \$/kWh	\$0.1800	\$0.1800	\$0.1800
SubTotal Cost of Non Solar Electric Distributed Energy	\$556,419	\$424,748	\$318,561
Feed In Tariff	\$556,419	\$424,748	\$318,561
Unit Built in 2008	\$556,419	\$424,748	\$318,561
Unit Built in 2009 to 2020	\$556,419	\$424,748	\$318,561
Feed In Tariff Rate for 20 years \$/kWh	\$0.0500	\$0.0500	\$0.0500
TEP Generated Renewable Power			
Above Market Premium of Self-Generated or Purchased Renewable Power Including Transmission After 2009	\$0.0455	\$0.0455	\$0.0455
Cost of Self-Generated or Purchased Renewable Power	\$5,893,259	\$5,893,259	\$5,893,259
Other RES Program Costs			
Grid Integration Rate in \$/MWh	\$0.00	\$0.00	\$0.00
Large Scale Grid Integration Costs in \$	\$0.00	\$0.00	\$0.00
Administrative Costs & Integration Costs & Outreach and Advertising & Net Metering costs	\$1,365,925	\$1,524,063	\$4,529,958
Distributed Generation & DG Admin and DG Integration Program Costs	\$5,626,406	\$9,690,807	\$17,693,281
DG Pct of Total REST Program Costs	48.84%	62.18%	75.01%
Total REST Program Cost	\$11,519,665	\$15,584,066	\$23,586,540
Program Revenue Streams			
Credit Sales MWh	0	0	0
Green Sales MWh	1,400	1,400	1,400
Credit Sales \$/MWh	\$0	\$0	\$0
Green Sales \$/MWh	\$85	\$85	\$85
Renewable Product Sales Income	\$118,577	\$118,577	\$118,577
EPS Carryover Revenue	\$900,000	\$900,000	\$920,000
REST Surcharge/Sample Tariff Income	\$10,486,838	\$15,036,000	\$22,156,176
Value of TEP PV Energy at \$50/MWh (incl SGSSS)	\$429,250	\$429,250	\$429,250
PV O&M Exp @ \$50/MWh	-40,000	-40,000	-40,000
Investment Tax Credit	0	0	0
Finance Cost @ 10% or Investment @ 5%	0	0	0
Total Program Revenue	\$11,894,665	\$16,443,827	\$23,584,003
Annual Program Total EPS Program Annual Balance (Subsidy Program -- Balance Revenue minus Cost)	\$375,000	\$859,761	-\$2,537
Cumulative Progr Cumulative Gain (Loss) (Subsidy Program)	\$375,000	\$859,761	-\$2,537
Cumulative Progr Cumulative REST Program Expenditures	\$11,519,665	\$15,584,066	\$23,586,540
Variable Assumptions			
Landfill Gas MWp	5	5	5
Central Solar Conversion Rate	1,700	1,700	1,700
Distributed Solar Conversion Rate	1,350	1,350	1,350
Distributed Renewable Conversion Rate	1,000	1,000	1,000
Solar Thermal Conversion	2,840	2,840	2,840
Dispatchable Conversion Rate	8,760	8,760	8,760
Wind Conversion Rate	1,925	1,925	1,925

Assumptions:

TEP manages the Distributed Generation Program
60% of residential distributed is solar electric. The other 40% is solar hot water and wind. Paid for with up front subsidy through 2012.
25% of Commercial distributed is solar electric.

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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

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. _____
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.

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16 Tariff is estimated to collect \$10.5 Million. The additional required revenue would come from

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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.

...

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.

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

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1 24. The difference between the program under Option 1 and the program under Option
2 2 is the rebate amounts for PV and solar water heating. The rebates are higher for PV under
3 Option 1 (\$4.50/watt v. \$3/watt in years 2008 and 2009). The incentive for solar water heating
4 under Option 1 is \$1,500 plus \$0.50 per kWh up to a maximum of \$3,500. Under Option 2, it is
5 \$750 plus \$0.25 per kWh up to a maximum of \$1,750.

6 25. Staff objects to one TEP's installation guidelines for photovoltaic systems. TEP's
7 requirement states that eligible PV systems must be installed with a horizontal tilt angle between
8 10 degrees and 60 degrees. A 0 degree tilt is not allowed. This may seem like a small difference,
9 but it is important to recognize that a 0 degree tilt may make the difference between an
10 economically viable system and one that does not "pencil out." The reason is that, even though the
11 0 degree tilt will provide a less than optimal annual system performance, on a large flat-roof
12 commercial building, the option of installing the system without a rack can make or break the
13 economics of a system.

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

19 27. In its RECPP, TEP has proposed an exception to the requirements in REST Rule
20 14-2-1803.B, which defines how energy production will be calculated. Staff realizes that TEP
21 offered its proposed calculation method during the REST Rule approval process, but TEP did not
22 prevail, and the Commission approved the working in R14-2-1803.B.

23 28. Staff believes that it is only fair to all utilities and customers that a uniform set of
24 requirements be used to determine the calculation of Renewable Energy Credits. Staff has
25 recommended that the Commission deny TEP's request for an exception to the wording in R14-2-
26 1803.B

27 29. Staff notes that the work of the Uniform Credit Purchase Program ("UCPP")
28 Working Group, which commenced in 2006, should be completed prior to development of

1 reasonable uniform incentives for each renewable generation technology. Staff anticipates that the
2 work of the UCPP Working Group should be completed in 2008. Staff has recommended that, if
3 the Commission approves a UCPP, TEP should be required to develop a mechanism to incorporate
4 UCPP procedures and incentive levels for all eligible technologies in its proposed REST Plan for
5 2009 and later years.

6 **E. Fair Value**

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

13 **F. REST Adjustor Mechanism**

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

20 **G. Consolidation**

21 32. TEP requests that the reporting requirements set forth for the Green Watts SunShare
22 Program in Decision No. 63362 (February 8, 2001) and as modified in Decision No. 66786
23 (February 13, 2004) be consolidated with the reporting requirements set forth in A.C.C. R14-2-
24 1812. Staff finds this request to be reasonable.

25 **H. Staff Recommendations Summary**

26 33. Staff has recommended that TEP's Option 1 be rejected, and that Staff's proposed
27 2008 Renewable Energy Standard Implementation Plan be approved, as discussed herein. In the

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1 event that the Commission does not adopt Staff's proposed REST Plan for TEP, Staff has
2 recommended that TEP's Option 2 be approved.

3 34. Staff has recommended that a REST Tariff be approved that includes the rate of
4 \$0.004988 per kWh and monthly caps of \$2.00 for residential customers, \$39.00 for non-
5 residential customers, and \$500.00 for non-residential customers with demands of 3 MW or
6 greater.

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

9 36. Staff has recommended that TEP make a compliance filing within 15 days of the
10 effective date of the Commission Decision in this case. This filing should include a revised TEP
11 2008 Renewable Energy Standard Implementation Plan, a REST Tariff, and a Customer Self-
12 Directed Renewable Energy Option tariff consistent with this Decision.

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

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

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

25 40. Staff has recommended that the Renewable Energy Standard Rules (A.A.C. R14-2-
26 1801 through -1806) supersede the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618)
27 and any other reporting requirements related to renewable energy resources.

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

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

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

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

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

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

20 IT IS FURTHER ORDERED that the annual reporting requirements for Tucson Electric
21 Power Company set forth for the Green Watts SunShare Program in Decision No. 63362
22 (February 8, 2001) and as modified in Decision No. 66786 (February 13, 2004) be consolidated
23 with the reporting requirements set forth in A.C.C. R14-2-1812.

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

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

1 IT IS FURTHER ORDERED that, for Tucson Electric Power Company, the Renewable
2 Energy Standard Rules (A.A.C. R14-2-1801 through -1806) supersede the Environmental Portfolio
3 Standard Rules (A.A.C. R14-2-1618) and any other reporting requirements related to renewable
4 energy resources.

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

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

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

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

CHAIRMAN

COMMISSIONER

COMMISSIONER

COMMISSIONER

COMMISSIONER

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

BRIAN C. McNEIL
Executive Director

DISSENT: _____

DISSENT: _____

EGJ:JJP:lm\JFW

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