OPEN MEETING

MEMORANDUM

TO: THE COMMISSION

FROM: Utilities Division

DATE: January 5, 2010

RE: TUCSON ELECTRIC POWER COMPANY - APPLICATION FOR APPROVAL OF ITS RENEWABLE ENERGY STANDARD AND TARIFF IMPLEMENTATION PLAN (DOCKET NO. E-01933A-09-0340)

On July 1, 2009, Tucson Electric Power Company ("TEP" or "Company") filed for Commission approval of its 2010 Renewable Energy Standard and Tariff ("REST") Implementation Plan. As part of its application, TEP is seeking variances from REST rules regarding funding flexibility for distributed energy ("DE") funds and the allocation of DE between the residential and commercial sectors. TEP is also seeking approval of research and development ("R&D") spending and is requesting the ability to recover lost fixed revenue from DE projects.

On July 9, 2009, Freeport-McMoran Sierrita, Inc. ("Freeport") and Arizonans for Electric Choice and Competition ("AECC") filed for intervention, which was granted by a July 24, 2009 procedural order. On October 1, 2009, the United States Department of Defense ("DoD") filed for intervention, which was granted by an October 23, 2009 procedural order. On November 5, 2009, Pima County filed comments in this proceeding. On December 2, 2009, the Solar Alliance filed for intervention. On December 8, 2009, Green Choice Solar filed comments in this proceeding. On December 16, 2009, the Vote Solar Initiative filed for intervention. Additionally, several individuals have filed comments in the docket. Staff believes that the issues raised by parties in their comments should be addressed during the process of considering TEP's 2011 REST plan, which is scheduled to be filed with the Commission in the summer of 2010, as well as through the processing of other TEP filings and in other appropriate forums.

On September 18, 2009, TEP filed a supplement to its REST implementation plan ("supplement"), presenting several new budget options as well as requesting Commission approval of a number of projects and other items. The supplement contains a number of corrections to the initial application, and also seeks approval of a variety of purchase contracts, programs, and individual projects. TEP is seeking approval of purchased power agreements, including agreements with a 5 megawatt ("MW") concentrated solar power project with thermal salt storage, a 20 MW single axis photovoltaic array, and 1.5 MW landfill gas project. TEP is also seeking approval of individual projects, including a biodiesel pilot project, a 1.6 MW single axis solar tracker at the Tucson Airport, and a 1.8 MW expansion of the photovoltaic facility at Springerville. TEP is further seeking approval of a Community Solar Program or at least initially a Community Solar Pilot Program.

In addition to seeking approval of the REST plan, TEP is also requesting approval of the following:

- Three purchased power contracts
- Biodiesel Pilot Program
- Springerville Photovoltaic Expansion
- Single-axis Tracker at Tucson Airport
- Bright Tucson Community Solar Program
- Recovery of Lost Fixed Revenue from DE projects
- Approval of research and development spending
- Approval of the use of REST funds from the previous year
- Waiver of certain REST rules

Given the wide variety of approvals sought by TEP, many of which were requested by the Company in its late September 2009 supplemental filing, Staff is only addressing in this memorandum some of these matters, that are directly related to approval of the 2010 REST plan, and will address other matters at a later time. Based on the number and complexity of the proposed projects, Staff is recommending that the application be bifurcated.

Staff recommends that the following issues be addressed in this memorandum: the 2010 REST plan, the use of short-term Renewable Energy Credits ("REC") purchases to meet non-DE compliance, use of funds from past years to help fund the 2010 REST plan, R&D funding, and the variances requested by TEP to the REST rules.

TEP's original filing identifies a number of specific changes to various aspects of the REST plan, including:

1. Reducing Commercial performance-based incentives ("PBI") from $0.18 per kWh (20 year contract) to $0.162 per kWh

2. Increase the threshold between small and large commercial projects from 20 kWac to 100kWac[1]

3. Clarify the process for allocating funds to PBI projects

4. Change specifications for day lighting projects to better reflect industry standards

5. Develop a specific incentive program for ground source heat pumps

[1] kWac refers to kilowatt alternating current. Photovoltaic panels produce direct current ("dc") which is then converted to alternating current.

6. Alter incentives for residential and small commercial ground source heat pump cooling technology to be an up-front incentive ("UFI") set at $500/ton, not to exceed 30% of the system cost (commercial cap only)

7. Incentives for commercial pool-heating PBI (including useful heat/square foot of pool surface) to be at $0.010 - $0.011 per kWh (currently $.011 - $0.012 per kWh)

8. Add a small commercial solar hot water UFI

9. Award all commercial off-grid incentives at a UFI

Staff does not object to these specific changes.

Project Descriptions

This section of the memorandum provides a brief description of the projects identified by TEP in its supplemental filing. As noted above, approval of these projects is not addressed in this memorandum, but will be at a later date.

Purchased Power Contracts

TEP has entered into three purchased power contracts for renewable resources. One is a 20-year agreement for a 5 MW parabolic trough concentrator with a thermal salt storage facility, known as the Bell Energy Storage Technology system. It is expected to produce approximately 11,500 MWH per year. The second contract is a 20-year contract for 20 MW of single-axis photovoltaic panels that are expected to produce approximately 55,000 MWH per year. The third is a 15-year agreement to use landfill gas from the Tangerine Landfill Facility north of Tucson. This project is expected to produce 12,000 MWH per year and is subject to Pima County's competitive bid process. TEP has provided further information on these projects under a confidentiality agreement. This additional information will be discussed when TEP's requests for pre-approval of these contracts are addressed at a later date.

Biodiesel Pilot Project

TEP has entered into an agreement to purchase one million gallons of B99.99 biodiesel, meaning it consists of 99.99 percent pure biofuel. TEP intends to burn the biodiesel in its steam generation units at the Sundt Generation Facility. The biodiesel originates from waste grease created in cooking animal products.

Springerville Photovoltaic Expansion

This project entails a further buildout of TEP's photovoltaic system at its Springerville facility. The project includes four blocks of thin film modules providing 1 MW at a cost of $4 million. The project also includes six blocks of crystalline panels providing 0.81 MW at a cost of $3.3 million.

Single-axis Tracker at Tucson Airport

TEP is seeking approval of the construction of a 1.6 MW single-axis tracker, consisting of 4,267,375 watt Solon modules. TEP has indicated that the cost of this facility would be $6.7 million. TEP anticipates that this project will be built in conjunction with a storage facility that TEP and partners, including the Arizona Research Institute for Solar Energy ("AzRISE"), Solon, Raytheon, and the Tucson Airport Authority, are seeking to build under the American Recovery and Reinvestment Act ("ARRA"). TEP has indicated that it wishes to build the single-axis tracker facility regardless of whether it is ultimately successful in receiving ARRA funds.

Bright Tucson Community Solar Tariff

This is a proposed new optional tariff that would allow residential customers to purchase blocks of solar energy for a fixed price, without incurring the high up-front cost of paying to install equipment. TEP would own and operate 1-4 MW solar arrays around the Tucson area or enter into a purchased power agreement for a project developer. TEP anticipates that energy sold under this tariff would count toward TEP's Distributed Renewable Energy requirements.

Variances from REST Rules

TEP is requesting a number of variances from the REST rules. Some confusion in this docket exists regarding these matters, as in some places TEP has indicated it either wants the Commission to change the REST rules, or grant waivers to the REST rules. However, Staff has determined in discussions with TEP that the Company is seeking waivers regarding certain provisions.

Regulatory Contract Approval

TEP is requesting that the Commission specifically approve purchased power and other REST-related contracts, and the full stream of payments over the lifetime of such contracts. In TEP's supplemental filing, the Company further requested creation of an expedited and streamlined approval process for contracts and purchased power agreements ("PPA") related to the REST rules. Under the streamlined process proposed by the Company, TEP would need to demonstrate that the contract was selected via competitive bidding, meets REST rules and requirements, is an appropriate part of TEP's energy portfolio, and is of reasonable cost compared to other renewable resources.

Staff is cognizant of TEP's desire for quick regulatory approval of a variety of contracts, but also recognizes that such approval constitutes a significant commitment of future ratepayer dollars to pay for these projects over the coming decades. While a quick process would certainly make it easier to process pre-approval filings at the Commission, particularly in cases such as this where many contracts are before the Commission for approval, Staff believes that further consideration must be given to such a process before it is implemented by the Commission and that sufficient safeguards would need to be in place to ensure that projects are carefully analyzed and in the public interest. This issue may be explored further as Staff considers TEP's requests for approval of various contracts and projects in this application that are not being addressed in the current memorandum.

REST Funding Flexibility

TEP is seeking REST funding flexibility in a number of forms, including a shift from the 50/50 split between residential and commercial customers for distributed energy to a 25/75 residential/commercial split, the flexibility to move funding between the residential and commercial segments for distributed energy, and a possible removal of the cost recovery caps for customers in each customer class, per customer.

Regarding the cost recovery caps for each customer class, per customer, past TEP REST plans have included a cap on how much any individual customer in a customer class can pay via the REST charge on customer bills. TEP's initial filing in this case requested approval of a REST plan with no caps in any customer class, but rather all customer classes pay the same per kilowatt-hour ("kwh") REST charge. Past TEP REST plans have had proportionately much lower caps for larger users, such as industrial users, than for smaller users, such as residential customers. Thus, TEP's initial proposal represented a significantly different, though more balanced, cost recovery allocation than TEP's past REST plans and their caps. In TEP's supplemental filing, they include two more options, one which moderates the shift contained in the original option but still has no caps, and the other that takes the caps contained in TEP's 2009 REST plan and increases them all by the same percentage. TEP is not proposing adoption of any one plan, with the supplemental filing proposing that the Commission consider either of the two new options contained in the supplemental filing.

Use of caps has been widespread in REST plans in Arizona, as they limit the exposure any one customer has to paying REST charges. However, by having caps, low use customers and those customers in classes, such as the residential class, with proportionately higher caps inevitably end up paying proportionately more in REST charges, and high use customers and those customers in classes, such as the industrial class, with proportionately lower caps end up paying proportionately less in REST charges. While Staff, as discussed later in this memorandum, is recommending increasing the caps in a roughly equal basis in this matter, Staff believes that some movement toward a more equal payment of REST charges between and within customer classes warrants further consideration in the future by the Commission.

Regarding TEP's original proposal and the two options contained in the supplemental filing, they all are based upon a 25/75 split in DE funding between residential and commercial customers, rather than the 50/50 split contained in the REST rules. While it may be challenging to meet the residential DE portion of the REST rules, Staff believes that a REST plan should be approved that attempts to meet the REST rules. TEP has sought a lower residential DE percentage in the past, and the Commission has rejected lowering the residential DE percentage. Staff has had TEP provide the three options contained in TEP's filings, but meeting the 50/50 residential/commercial split. Moving from the 25/75 split proposed by TEP to the 50/50 split required by the REST rules increases TEP's 2010 REST plan cost by roughly $10 million. Staff recommends against granting any waiver of the 50/50 DE split requirement.

TEP is also requesting funding flexibility to move funds between the residential and commercial segments for DE. The Company has indicated that this would allow it to shift funds from one segment, where it is not using some of the funds, to another segment, where they could use more funds. While Staff supports some level of flexibility in concept, a significant problem with TEP's proposal is that it would likely result in shifting of funds from the residential segment to the commercial segment. Given the higher cost of residential DE projects than commercial DE projects, TEP would likely end up collecting significantly more funds through the REST charge than they actually need if funds were shifted to do commercial, rather than residential plans. Further, as discussed in the previous paragraph regarding the 50/50 DE split, allowing movement of funds would raise the likelihood of TEP not meeting its residential DE requirements and could even lessen the impetus to meet that requirement. Additionally, TEP has not identified when such shifting could take place, how much could be shifted, and other details. Rather, TEP appears to be seeking broad discretion as to how any shifting would take place between the residential and commercial DE segments. Thus, Staff recommends against granting TEP funding flexibility to move funds between the commercial and residential DE segments.

Use of Previous Years' Funds to Pay for 2010 REST plan

TEP is proposing to use REST funds it has collected, but not used, in past years, to help fund the 2010 REST plan. Specifically, TEP is proposing to use $6,448,727 of funds from the 2008 REST plan, and an estimated $5,600,000 of funds from the 2009 REST plan, or a total of just over $12 million in funds from previous years, to help pay for the 2010 REST plan. TEP is also requesting that the $5.6 million of 2009 funds be specifically allocated to two projects, the 1.6 MW single-axis tracker at the Tucson airport, and the Springerville PV expansion. Staff believes it is reasonable to use funds from previous years to pay for the 2010 REST plan, as they are funds that were collected to pay for renewable projects under the REST rules. The only possible concern would be that such a large carryover of funds from year to year indicates either an overfunding in previous years, or a failure to fully utilize necessary funds to meet REST rules requirements in previous years. Thus, the Commission may wish to track the size of carryovers in the future. Staff recommends approval of TEP's request to use 2008 and 2009 REST funds to help pay for the 2010 REST plan. Staff does not believe there is a need to allocate specific funds to pay for specific projects and thus does not recommend approval of TEP's request to specifically allocate the $5.6 million of 2009 REST funds to the two projects the Company identified.

Recovery of Lost Net Fixed Revenue for DE Projects

TEP is requesting Commission approval for the recovery of lost net revenue resulting from lower energy purchases from the Company by customers who have deployed DE systems. The Commission has not granted lost net revenues as a result of DE deployments to any utility in Arizona. A variety of factors can cause consumption to increase and decrease. Granting this request would in essence create a form of revenue decoupling for TEP, without taking into consideration a variety of issues that revenue decoupling entails, including other factors that might increase consumption by some TEP customers or TEP overall. Staff believes that this issue is more appropriately addressed in utility rate proceedings.

Use of Short-term REC Purchases to Meet Non-DE Compliance

TEP's application requests acknowledgement by the Commission that TEP can use short-term REC purchases to meet its REST requirements. Staff believes this acknowledgement is not necessary, but does not oppose providing such acknowledgement if the Commission wishes to do so, consistent with existing REST rules requirements.

TEP REST Experience Under 2009 REST Plan

The Commission-approved implementation plan for 2009 contemplated a budget of $29.7 million. TEP projects spending $16.6 million in 2009.

Regarding installations and reservations, the table below summarizes installations through September 2009 and reservations for future installations.

Residential	Photovoltaics		Solar Hot Water	
	Number of Systems	kW	Number of Systems	kW
2009 Installations	202	939	367	370
Reservations	330	2518	244	246

Commercial	Photovoltaics		Solar Hot Water	
	Number of Systems	kW	Number of Systems	kW
2009 Installations	7	1069	0	0
Reservations	5	5277	0	0

The table below shows TEP's estimates of required MWh and Produced/Banked MWh under the 2009 REST requirements. TEP provided Staff with three different numbers for the produced/banked MWh for meeting the Company's REST requirements. Staff believes that the metered number corresponds to the actual REST requirements, but has included the other two numbers for informational purposes. The metered number is the actual amount of MWh that was metered in 2009. "Installed-annualized" reflects the assumption that every system expected to be installed by the end of 2009 actually operated for the full year in 2009. "Installed-annualized/reserved" reflects the installed-annualized number, plus an annualized number for all systems that have been reserved, but have not been installed as of the end of 2009.

	Required (MWH)	Produced/Banked (MWH)
Residential DE	14,011	6,125 (metered) 7,224 (installed – annualized) 8,878 (installed – annualized/reserved)
Commercial DE	14,011	1,610 (metered) 13,118 (installed – annualized) 20,509 (installed – annualized/reserved)
Non-DE	186,667	230,942

Research and Development

TEP is requesting approval of funding for five research and development ("R&D) projects. The projects include a grid stability analysis project, research in coordination with the Electric Power Research Institute on local impacts of renewables on transmission and distribution circuits, a Davis Monthan Air Force Base Distributed energy Circuit Analysis, a grid management DE impact analysis, and a number of projects through TEP's partnership with AZRise. AZRise projects include various projects at the TEP Solar Test Yard, development of control systems, investigation of Tucson Valley geology for possible use for compressed air storage, and work on the community solar program and related smart metering and storage. Funding for these projects is as shown in the following table.

Project	2010 R&D Project Funding Level
Grid Stability Analysis Project	$100,000
EPRI Studies	$100,000
Davis Monthan DE Circuit Analysis	$60,000
Grid Management DE Impact Analysis	$500,000
AZRise Research	$250,000

Proposed 2010 REST Budgets

TEP's supplemental filing contains a budget request of approximately $37.1 million for its 2010 REST plan, but it must be recognized that to achieve TEP's proposed spending in 2010, TEP is also relying on the use of approximately $6.4 million in carryover 2008 REST funds and $5.6 million in carryover 2009 REST funds. This would result in total projected spending in 2010 of approximately $49.1 million. However, only the $37.1 million would have to be recovered through the 2010 REST charge. And, as noted previously, TEP's proposed budgets all rely on use of a 25/75 split in DE, rather than the 50/50 split required by the REST rules.

TEP provided Staff with comparable budget numbers, but employing the 50/50 DE split required by the REST rules. This results in a base budget of approximately $47.5 million for the 2010 REST plan, plus the $12 million of carryover 2008 and 2009 REST funds. This would result in total projected spending in 2010 of approximately $59.5 million. However, only the $47.5 million would have to be recovered through the 2010 REST charge.

Staff's proposed budget works off of the 50/50 DE split budget of $47.5 million, but removes approximately $3.4 million for lost revenue costs that Staff is recommending not be approved as well as somewhat lower administrative costs. Thus, Staff's proposed budget would require recovery of approximately $45.4 million through the 2010 REST charge. As with the proposed TEP plans, Staff would include the roughly $12 million in funding from 2008 and 2009 carryover funds to help pay for total spending in 2010 of approximately $57.4 million under Staff's proposal. The table below summarizes the proposed budgets.

	TEP Proposed Budget (25/75 DE Split)	TEP Budget (50/50 DE Split)	Staff Proposed Budget (50/50 DE Split)
Amount To Be Recovered Through 2010 REST Charge	$37,139,897	$47,497,140	$45,404,243
2008 REST Funding Carried Forward	$6,448,727	$6,448,727	$6,448,727
2009 REST Funding Carried Forward	$5,600,000	$5,600,000	$5,600,000
Total 2010 Projected Spending	$49,188,624	$59,545,868	$57,452,970

The table below shows proposed spending levels by area for each of the three budget options discussed herein.

Budget Components	2009 Approved REST Plan	TEP Proposed Budget (25/75 DE Split)	TEP Budget (50/50 DE Split)	Staff Proposed Budget (50/50 DE Split)
Purchased Renewable Energy				
Above market cost of conventional generation	$6,214,977	$11,331,633	$11,331,633	$11,331,633
Transmission direct use cost	$480,000	$480,000	$480,000	$480,000
Grid management ancillary services		$200,000	$200,000	$200,000
Other	$95,000	$120,000	$120,000	$120,000
Subtotal	*$6,789,977*	*$12,131,633*	*$12,131,633*	*$12,131,633*
Customer Sites Distributed Renewable Energy				
Up-front payments to customers	$15,059,712	$10,279,825	$21,988,706	$21,988,706

Production based payments to customers	$3,728,026	$7,220,479	$5,369,553	$5,369,000
Builder credit purchase program	$300,000	$750,000	$750,000	$700,000
Grid management cost study	$0	$500,000	$500,000	$500,000
Lost net revenue and performance incentive	$0	$1,490,398	$1,490,398	$0
Outreach efforts	$1,000,000	$500,000	$1,000,000	$750,000
Other	$1,792,000	$1,447,000	$1,447,000	$1,342,000
Subtotal	*$21,879,739*	*$22,187,702*	*$32,545,657*	*$30,650,259*
Information Systems				
Subtotal	*$375,000*	*$400,000*	*$400,000*	*$375,000*
Net Metering				
Subtotal	*$120,340*	*$144,789*	*$144,078*	*$144,078*
Reporting				
Subtotal	*$137,500*	*$250,000*	*$250,000*	*$175,000*
Outside Coordination and Support				
Support to university research	$200,000	$250,000	$250,000	$250,000
Other	$83,500	$274,500	$274,500	$177,000
Subtotal	*$283,500*	*$524,500*	*$524,500*	*$427,000*
Renewable Energy Hardware Development				
Technology Development Projects	$0	$400,000	$400,000	$400,000
Springerville 1MW Addition	$0	$4,000,000	$4,000,000	$4,000,000
Portion of Airport Single-Tracker Project	$0	$3,500,000	$3,500,000	$3,500,000
Other	$100,000	$50,000	$50,000	$50,000
Subtotal	*$100,000*	*$7,950,000*	*$7,950,000*	*$7,950,000*
Balance of Airport and Springerville Projects				
Subtotal	*$0*	*$5,600,000*	*$5,600,000*	*$5,600,000*
Total Budget	*$29,686,056*	*$49,188,624*	*$59,545,868*	*$57,452,970*

Recovery of Funds Through 2010 REST Charge

As noted in the previous section, there are three different amounts to be recovered through the 2010 REST charge, depending upon which budget above is chosen, either $37.1 million, $47.5 million, or $45.4 million.

25/75 Residential/Commercial DE Split Options

TEP's supplemental filing puts forth three recovery options. The first two eliminate any caps, and rely on a per kWh charge on all kWh to recover the necessary funds. The third option ("Proportional Option") takes the existing 2009 caps on each customer class and increases them all by the same percentage. The first option ("Originally Filed Option") to eliminate the cap, which is also contained in TEP's initial filing, is the simplest, as it charges all kWh the same charge, regardless of customer class or level of usage. The second option ("Modified Option") to eliminate the cap, contained in the supplemental filing, eliminates all caps, and has lower per kWh charges for customer classes that in previous years had paid a lower total effective per kWh rate due to their relatively low caps. Thus, the second option moves part way from the current structure toward the first option.

For TEP's proposals to recover the $37.1 million reflecting TEP's proposed 25/75 DE split, the following table summarizes the charge per kWh for each class under each option.

	2009 Approved REST Charge (per kWh)	Originally Filed Option REST Charge (per kWh)	Modified Option REST Charge (per kWh)	Proportional Option REST Charge (per kWh)	2009 Approved Cap	Proportional Option Cap for 2010 REST Plan
Residential	$0.008	$0.003847	$0.004926	$0.00829	$4.50	$6.75
Small Commercial	$0.008	$0.003847	$0.004375	$0.00829	$75.00	$112.50
Large Commercial	$0.008	$0.003847	$0.002900	$0.00829	$350.00	$525.00
Industrial and Mining	$0.008	$0.003847	$0.001924	$0.00829	$1,600.00	$2,400.00
Public Authority	$0.008	$0.003847	$0.004375	$0.00829	$75.00	$112.50
Lighting	$0.008	$0.003847	$0.004375	$0.00829	$75.00	$112.50

The cost recovery by customer class and average bill by customer class for all three options, as well as the percentage of customers at the cap for each customer class for the proportional option, are shown in the table below.

	Originally Filed Option	Modified Option	Proportional Option
Residential	$14,921,312 (40.2%)	$19,106,416 (51.4%)	$21,352,391 (57.5%)
Small Commercial	$7,890,126 (21.2%)	$8,973,044 (24.2%)	$10,383,018 (28.0%)
Large Commercial	$4,997,496 (13.5%)	$3,767,283 (10.1%)	$3,690,719 (9.9%)
Industrial and Mining	$8,345,183 (22.5%)	$4,173,676 (11.2%)	$819,151 (2.2%)
Public Authority	$853,108 (2.3%)	$970,197 (2.6%)	$614,842 (1.7%)
Lighting	$131,021 (0.4%)	$149,004 (0.4%)	$278,353 (0.7%)

Total	$37,139,245	$37,139,620	$37,138,473
Residential - Average Bill	$3.38	$4.33	$4.84
Small Commercial - Average Bill	$18.42	$20.95	$24.24
Large Commercial - Average Bill	$671.53	$506.22	$495.93
Industrial and Mining - Average Bill	$23,641	$11,823	$2,321
Public Authority - Average Bill	$64.40	$73.24	$46.41
Lighting - Average Bill	$6.09	$6.93	$12.94
Residential – Percent at Cap	-	-	42.1%
Small Commercial – Percent at Cap	-	-	6.6%
Large Commercial – Percent at Cap	-	-	79.4%
Industrial and Mining – Percent at Cap	-	-	93.2%
Public Authority – Percent at Cap	-	-	25.3%
Lighting – Percent at Cap	-	-	0.44%

Customer bill impacts for various types of customers under the 2009 plan and the three TEP 25/75 DE split options are shown in the table below.

			TEP Proposed Plans		
Customer Types	**kWh / mo.**	**2009 Approved Plan**	**Original Plan**	**Modified Plan**	**Proportional Plan**
Low Consuming Residence	400	$3.20	$1.54	$1.97	$3.32
Avg. Consuming Residence	880	$4.50	$3.38	$4.33	$6.75
High Use Residence	2,000	$4.50	$7.69	$9.85	$6.75
Dentist Office	2,000	$16.00	$7.69	$8.75	$16.58
Hairstylist	3,900	$31.20	$15.00	$17.06	$32.33
Department Store	170,000	$75.00	$653.99	$743.75	$112.50
Mall	1,627,100	$75.00	$6,259.45	$4,718.59	$525.00
Retail Video Store	14,400	$75.00	$55.40	$63.00	$112.50
Large Hotel	1,067,100	$350.00	$4,105.13	$3,094.59	$525.00
Large Building Supply	346,500	$350.00	$1,332.99	$1,004.85	$525.00

Hotel/Motel	27,960	$75.00	$107.56	$122.33	$112.50
Fast Food	60,160	$75.00	$231.44	$263.20	$112.50
Large High Rise Office Bldg	1,476,100	$350.00	$5,678.56	$4,280.69	$525.00
Hospital (< 3 MW)	1,509,600	$350.00	$5,807.43	$4,377.84	$525.00
Supermarket	233,600	$350.00	$898.66	$677.44	$525.00
Convenience Store	20,160	$75.00	$77.56	$88.20	$112.50
Hospital (> 3 MW)	2,700,000	$1,600.00	$10,387.00	$5,195.00	$2,400.00
Copper Mine	72,000,000	$1,600.00	$276,984.00	$138,528.00	$2,400.00

50/50 Residential/Commercial DE Split Options

The following tables and text show the three options that TEP put forth in its supplemental filing, Original Plan, Modified Plan, and Proportional Plan, with the one change that the DE split is set at 50/50 between residential and commercial customers, as required by the REST rules. These three scenarios were provided by TEP at Staff's request. The following tables also show Staff's proposed plan, which uses the 50/50 split and proportional plan approach, but with a lower total amount to be recovered, as discussed in the budget section of this memorandum. In comparison to past years, the cap escalates significantly in either the proportional plan proposed by TEP or by the Staff proposal. The tradeoffs are that a lower percentage of customers are at the cap, having a higher cap provides a larger pool of kWh to spread costs over, and a higher cap places more relative financial burden on high use customers and less on low use customers than if a lower cap were used. Thus, a higher cap more evenly spreads costs over usage throughout the TEP system, encourages high use customers to conserve, and reduces the relative burden on lower use customers.

For TEP's three options, reflecting a 50/50 DE split, as well as the Staff proposed plan, the following table summarizes the charge per kWh for each class under each option.

	2009 Approved REST Charge (per kWh)	Originally Filed Option REST Charge (per kWh)	Modified Option REST Charge (per kWh)	Proportional Option REST Charge (per kWh)	Staff Proposal REST Charge (per kWh)	2009 Approved Cap	Proportional Option Cap for 2010 REST Plan	Staff Proposal Cap for 2010 REST Plan
Residential	$0.008	$0.004920	$0.006300	$0.008924	$.008636	$4.50	$10.00	$9.50
Small Commercial	$0.008	$0.004920	$0.005595	$0.008924	$.008636	$75.00	$175.00	$160.00
Large Commercial	$0.008	$0.004920	$0.003709	$0.008924	$.008636	$350.00	$815.00	$760.00
Industrial and Mining	$0.008	$0.004920	$0.002460	$0.008924	$.008636	$1,600.00	$3,725.00	$3,600.00
Public Authority	$0.008	$0.004920	$0.005595	$0.008924	$.008636	$75.00	$175.00	$160.00
Lighting	$0.008	$0.004920	$0.005595	$0.008924	$.008636	$75.00	$175.00	$160.00

The cost recovery by customer class and average bill by customer class for all three 50/50 DE split options and the Staff proposal, as well as the percentage of customers at the cap for each customer class for the proportional option and the Staff proposal, are shown in the table below.

	Originally Filed Option	Modified Option	Proportional Option	Staff Proposal
Residential	$19,083,144 (40.2%)	$24,435,733 (51.4%)	$27,155,396 (57.2%)	$26,095,403 (57.5%)
Small Commercial	$10,090,829 (21.2%)	$11,475,241 (24.2%)	$12,636,358 (26.6%)	$12,020,670 (26.5%)
Large Commercial	$6,391,391 (13.5%)	$4,818,225 (10.1%)	$5,326,636 (11.2%)	$5,014,431 (11.0%)
Industrial and Mining	$10,672,810 (22.5%)	$5,336,405 (11.2%)	$1,253,869 (2.6%)	$1,211,862 (2.7%)
Public Authority	$1,091,056 (2.3%)	$1,240,743 (2.6%)	$821,921 (1.7%)	$770,320 (1.7%)
Lighting	$167,565 (0.4%)	$190,554 (0.4%)	$302,116 (0.6%)	$292,138 (0.6%)
Total	$47,496,794	$47,496,902	$47,496,296	$45,405,238
Residential - Average Bill	$4.33	$5.54	$7.85	$7.60
Small Commercial - Average Bill	$23.56	$26.79	$29.50	$28.07
Large Commercial - Average Bill	$858.83	$647.44	$715.75	$673.80
Industrial and Mining - Average Bill	$30,234.59	$15,117.29	$3,552.04	$3433.04
Public Authority - Average Bill	$82.36	$93.66	$62.05	$58.15
Lighting - Average Bill	$7.79	$8.86	$14.04	$13.58
Residential – Percent at Cap	-	-	23.5%	23.5%
Small Commercial – Percent at Cap	-	-	4.9%	6.6%
Large Commercial – Percent at Cap	-	-	65.3%	67.9%
Industrial and Mining – Percent at Cap	-	-	91.22%	91.22%
Public Authority – Percent at Cap	-	-	19.9%	20.6%
Lighting – Percent at Cap	-	-	0.08%	0.13%

Customer bill impacts for various types of customers under the 2009 plan, the three TEP 50/50 DE split options, and the Staff proposal are shown in the table below.

			TEP Plans			
Customer Types	kWh / mo.	2009 Approved Plan	Original Plan	Modified Plan	Proportional Plan	Staff Plan
Low Consuming Residence	400	$3.20	$1.97	$2.52	$3.57	$3.45
Avg. Consuming Residence	880	$4.50	$4.33	$5.54	$7.85	$7.60
High Use Residence	2,000	$4.50	$9.84	$12.60	$10.00	$9.50
Dentist Office	2,000	$16.00	$9.84	$11.19	$17.85	$17.27
Hairstylist	3,900	$31.20	$19.19	$21.82	$34.80	$33.68
Department Store	170,000	$75.00	$836.40	$951.15	$175.00	$160.00
Mall	1,627,100	$75.00	$8,005.33	$6,034.91	$815.00	$760.00
Retail Video Store	14,400	$75.00	$70.85	$80.57	$128.51	$124.36
Large Hotel	1,067,100	$350.00	$5,250.13	$3,957.87	$815.00	$760.00
Large Building Supply	346,500	$350.00	$1,704.78	$1,285.17	$815.00	$760.00
Hotel/Motel	27,960	$75.00	$137.56	$156.44	$175.00	$160.00
Fast Food	60,160	$75.00	$295.99	$336.60	$175.00	$160.00
Large High Rise Office Bldg	1,476,100	$350.00	$7,262.41	$5,474.85	$815.00	$760.00
Hospital (< 3 MW)	1,509,600	$350.00	$7,427.23	$5,599.11	$815.00	$760.00
Supermarket	233,600	$350.00	$1,149.31	$866.42	$815.00	$760.00
Convenience Store	20,160	$75.00	$99.19	$112.80	$175.00	$160.00
Hospital (> 3 MW)	2,700,000	$1,600.00	$13,284.00	$6,642.00	$3,725.00	$3,600.00
Copper Mine	72,000,000	$1,600.00	$354,240.00	$177,120.00	$3,725.00	$3,600.00

REST Adjustor Mechanism

The Commission established a REST adjustor mechanism for TEP in Decision No. 70628 (December 1, 2008). The REST adjustor rate is reset as part of the approval of each year's new REST implementation plan.

Staff Recommendations

1. Staff recommends that the Commission approve the Staff proposed 2010 REST plan, reflecting the 50/50 DE split between residential and commercial customers, REST charge of $0.008636 per kWh, and related caps reflected in the Staff proposal. This includes a total budget of $57,452,970, the carry forward of $6,448,727 of 2008 REST funds, $5,600,000 of 2009 REST funds, and the recovery of $45,404,243 through the proposed REST charge and related caps.

2. Staff recommends approval of TEP's proposed research and development projects and funding.

3. Staff recommends against approval of TEP's request for a 25/75 split on the residential and commercial DE as well as the flexibility to move funds between the residential and commercial segments.

4. Staff recommends that the Commission not approve TEP's request for an expedited and streamlined pre-approval process for contracts and projects.

5. Staff recommends approval of the use of $5.6 million in 2009 REST funds to help fund the 2010 REST plan, but recommends against specifically approving use of these funds for certain projects, as requested by TEP.

6. Staff recommends that the Commission not approve TEP's request for lost net revenue resulting from DE deployments and related costs at this time, but that the Commission review and address lost net revenue resulting from DE deployments and related costs if requested to do so by the affected utility in its rate case and the affected utility provides documentation/records supporting its request in the rate application.

7. Staff further recommends that TEP may, at its own initiative, submit to the Commission, as part of its annual REST reports, documentation of any lost net revenue resulting from DE deployments.

8. Staff recommends that the Commission not act at this time on requests for pre-approval of the three purchased power contracts, the Springerville expansion, the single-axis tracker at the Tucson airport, the biodiesel pilot project, and the Community Solar Program.

9. Staff recommends that in future annual REST plan filings, TEP be required to file one or more options that would meet the requirements of the REST rules.

Steven M. Olea
Director
Utilities Division

SMO:RGG:lhm\JMA

ORIGINATOR: Robert Gray

BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES
Chairman
GARY PIERCE
Commissioner
PAUL NEWMAN
Commissioner
SANDRA D. KENNEDY
Commissioner
BOB STUMP
Commissioner

IN THE MATTER OF THE APPLICATION OF TUCSON ELECTRIC POWER COMPANY FOR APPROVAL OF ITS RENEWABLE ENERGY STANDARD AND TARIFF IMPLEMENTATION PLAN	DOCKET NO. E-01933A-09-0340 DECISION NO. __________ ORDER

Open Meeting
January 12 and 13, 2010
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

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

2. On July 1, 2009, TEP filed for Commission approval of its 2010 Renewable Energy Standard and Tariff ("REST") Implementation Plan. As part of its application, TEP is seeking variances from REST rules regarding funding flexibility for distributed energy ("DE") funds and the allocation of DE between the residential and commercial sectors. TEP is also seeking approval of research and development ("R&D") spending and is requesting the ability to recover lost fixed revenue from DE projects.

3. On July 9, 2009, Freeport-McMoran Sierrita, Inc. ("Freeport") and Arizonans for Electric Choice and Competition ("AECC") filed for intervention, which was granted by a July 24, 2009 procedural order. On October 1, 2009, the United States Department of Defense ("DoD")

filed for intervention, which was granted by an October 23, 2009 procedural order. On November 5, 2009, Pima County filed comments in this proceeding. On December 2, 2009, the Solar Alliance filed for intervention. On December 8, 2009, Green Choice Solar filed comments in this proceeding. On December 16, 2009, the Vote Solar Initiative filed for intervention. Additionally, several individuals have filed comments in the docket.

4. Staff believes that the issues raised by parties in their comments should be addressed during the process of considering TEP's 2011 REST plan, which is scheduled to be filed with the Commission in the summer of 2010.

5. On September 18, 2009, TEP filed a supplement to its REST implementation plan ("supplement"), presenting several new budget options as well as requesting Commission approval of a number of projects and other items. The supplement contains a number of corrections to the initial application, and also seeks approval of a variety of purchase contracts, programs, and individual projects. TEP is seeking approval of purchased power agreements, including agreements with a 5 megawatt ("MW") concentrated solar power project with thermal salt storage, a 20 MW single axis photovoltaic array, and 1.5 MW landfill gas project. TEP is also seeking approval of individual projects, including a biodiesel pilot project, a 1.6 MW single axis solar tracker at the Tucson Airport, and a 1.8 MW expansion of the photovoltaic facility at Springerville. TEP is further seeking approval of a Community Solar Program or at least initially a Community Solar Pilot Program.

6. In addition to seeking approval of the REST plan, TEP is also requesting approval of the following:

- Three purchased power contracts
- Biodiesel Pilot Program
- Springerville Photovoltaic Expansion
- Single-axis Tracker at Tucson Airport
- Bright Tucson Community Solar Program
- Recovery of Lost Fixed Revenue from DE projects
- Approval of research and development spending
- Approval of the use of funds from the previous year
- Waiver of certain REST rules

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7. Given the wide variety of approvals sought by TEP, many of which were requested by the Company in its late September 2009 supplemental filing, Staff is only addressing in this memorandum some of these matters, that are directly related to approval of the 2010 REST plan, and will address other matters at a later time. Based on the number and complexity of the proposed projects, Staff is recommending that the application be bifurcated.

8. Staff recommends that the following issues be addressed: the 2010 REST plan, the use of the short-term Renewable Energy Credits ("REC") purchases to meet non-DE compliance, the use of funds from past years to help fund the 2010 REST plan, R&D funding, and the variances requested by TEP to the REST rules.

9. TEP's original filing identifies a number of specific changes to various aspects of the REST plan, including:

- Reducing Commercial performance-based incentives ("PBI") from $0.18 per kWh (20 year contract) to $0.162 per kWh
- Increase the threshold between small and large commercial projects from 20 kWac to 100kWac[1]
- Clarify the process for allocating funds to PBI projects
- Change specifications for day lighting projects to better reflect industry standards
- Develop a specific incentive program for ground source heat pumps
- Alter incentives for residential and small commercial ground source heat pump cooling technology to be an up-front incentive ("UFI") set at $500/ton, not to exceed 30% of the system cost (commercial cap only)
- Incentives for commercial pool-heating PBI (including useful heat/square foot of pool surface) to be at $0.010 - $0.011 per kWh (currently $.011 - $0.012 per kWh)
- Add a small commercial solar hot water UFI
- Award all commercial off-grid incentives at a UFI

[1] kWac refers to kilowatt alternating current. Photovoltaic panels produce direct current ("dc" which is then converted to alternating current.

10. Staff does not object to these specific changes.

Project Descriptions

11. This section of the memorandum provides a brief description of the projects identified by TEP in its supplemental filing. As noted above, approval of these projects is not addressed in this memorandum, but will be at a later date.

Purchased Power Contracts

12. TEP has entered into three purchased power contracts for renewable resources. One is a 20-year agreement for a 5 MW parabolic trough concentrator with a thermal salt storage facility, known as the Bell Energy Storage Technology system. It is expected to produce approximately 11,500 MWH per year. The second contract is a 20-year contract for 20 MW of single-axis photovoltaic panels that are expected to produce approximately 55,000 MWH per year. The third is a 15-year agreement to use landfill gas from the Tangerine Landfill Facility north of Tucson. This project is expected to produce 12,000 MWH per year and is subject to Pima County's competitive bid process. TEP has provided further information on these projects under a confidentiality agreement. This additional information will be discussed when TEP's requests for pre-approval of these contracts are addressed at a later date.

Biodiesel Pilot Project

13. TEP has entered into an agreement to purchase one million gallons of B99.99 biodiesel, meaning it consists of 99.99 percent pure biofuel. TEP intends to burn the biodiesel in its steam generation units at the Sundt Generation Facility. The biodiesel originates from waste grease created in cooking animal products.

Springerville Photovoltaic Expansion

14. This project entails a further buildout of TEP's photovoltaic system at its Springerville facility. The project includes four blocks of thin film modules providing 1 MW at a cost of $4 million. The project also includes six blocks of crystalline panels providing 0.81 MW at a cost of $3.3 million.

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Single-axis Tracker at Tucson Airport

15. TEP is seeking approval of the construction of a 1.6 MW single-axis tracker, consisting of 4,267,375 watt Solon modules. TEP has indicated that the cost of this facility would be $6.7 million. TEP anticipates that this project will be built in conjunction with a storage facility that TEP and partners, including the Arizona Research Institute for Solar Energy ("AzRISE"), Solon, Raytheon, and the Tucson Airport Authority, are seeking to build under the American Recovery and Reinvestment Act ("ARRA"). TEP has indicated that it wishes to build the single-axis tracker facility regardless of whether it is ultimately successful in receiving ARRA funds.

Bright Tucson Community Solar Tariff

16. This is a proposed new optional tariff that would allow residential customers to purchase blocks of solar energy for a fixed price, without incurring the high up-front cost of paying to install equipment. TEP would own and operate 1-4 MW solar arrays around the Tucson area or enter into a purchased power agreement for a project developer. TEP anticipates that energy sold under this tariff would count toward TEP's DE requirements.

Variances from REST Rules

17. TEP is requesting a number of variances from the REST rules. Some confusion in this docket exists regarding these matters, as in some places TEP has indicated it either wants the Commission to change the REST rules, or grant waivers to the REST rules. However, Staff has determined in discussions with TEP that the Company is seeking waivers regarding certain provisions.

Regulatory Contract Approval

18. TEP is requesting that the Commission specifically approve purchased power and other REST-related contracts, and the full stream of payments over the lifetime of such contracts. In TEP's supplemental filing, the Company further requested creation of an expedited and streamlined approval process for contracts and purchased power agreements ("PPA") related to the REST rules. Under the streamlined process proposed by the Company, TEP would need to demonstrate that the contract was selected via competitive bidding, meets REST rules and

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requirements, is an appropriate part of TEP's energy portfolio, and is of reasonable cost compared to other renewable resources.

19. Staff is cognizant of TEP's desire for quick regulatory approval of a variety of contracts, but also recognizes that such approval constitutes a significant commitment of future ratepayer dollars to pay for these projects over the coming decades. While a quick process would certainly make it easier to process pre-approval filings at the Commission, particularly in case such as this where many contracts are before the Commission for approval, Staff believes that further consideration must be given to such a process before it is implemented by the Commission and that sufficient safeguards would need to be in place to ensure that projects are carefully analyzed and in the public interest. This issue may be explored further as Staff considers TEP's requests for approval of various contracts and projects in this application that are not being addressed in the current memorandum.

<u>REST Funding Flexibility</u>

20. TEP is seeking REST funding flexibility in a number of forms, including a shift from the 50/50 split between residential and commercial customers for distributed energy to a 25/75 residential/commercial split, the flexibility to move funding between the residential and commercial segments for distributed energy, and a possible removal of the cost recovery caps for customers in each customer class, per customer.

21. Regarding the cost recovery caps for each customer class, per customer, past TEP REST plans have included a cap on how much any individual customer in a customer class can pay via the REST charge on customer bills. TEP's initial filing in this case requested approval of a REST plan with no caps in any customer class, but rather all customer classes pay the same per kilowatt-hour ("kWh") REST charge. Past TEP REST plans have had proportionately much lower caps for larger users, such as industrial users, than for smaller users, such as residential customers. Thus, TEP's initial proposal represented a significantly different, though more balanced, cost recovery allocation than TEP's past REST plans and their caps. In TEP's supplemental filing, they include two more options, one which moderates the shift contained in the original option but still has no caps, and the other that takes the caps contained in TEP's 2009 REST plan and increases

them all by the same percentage. TEP is not proposing adoption of any one plan, with the supplemental filing proposing that the Commission consider either of the two new options contained in the supplemental filing.

22. Use of caps has been widespread in REST plans in Arizona, as they limit the exposure any one customer has to paying REST charges. However, by having caps, low use customers and those customers in classes, such as the residential class, with proportionately higher caps inevitably end up paying proportionately more in REST charges, and high use customers and those customers in classes, such as the industrial class, with proportionately lower caps end up paying proportionately less in REST charges. While Staff, as discussed later in this Memorandum, is recommending increasing the caps in a roughly equal basis in this matter, Staff believes that some movement toward a more equal payment of REST charges between and within customer classes warrants further consideration in the future by the Commission.

23. Regarding TEP's original proposal and the two options contained in the supplemental filing, they all are based upon a 25/75 split in DE funding between residential and commercial customers, rather than the 50/50 split contained in the REST rules. While it may be challenging to meet the residential DE portion of the REST rules, Staff believes that a REST plan should be approved that attempts to meet the REST rules. TEP has sought a lower residential DE percentage in the past, and the Commission has rejected lowering the residential DE percentage. Staff has had TEP provide the three options contained in TEP's filings, but meeting the 50/50 residential/commercial split. Moving from the 25/75 split proposed by TEP to the 50/50 split required by the REST rules increases TEP's 2010 REST plan cost by roughly $10 million. Staff recommends against granting any waiver of the 50/50 DE split requirement.

24. TEP is also requesting funding flexibility to move funds between the residential and commercial segments for DE. The Company has indicated that this would allow it to shift funds from one segment, where it is not using some of the funds to another segment, where it could use more funds. While Staff supports some level of flexibility in concept, a significant problem with TEP's proposal is that it would likely result in shifting of funds from the residential segment to the commercial segment. Given the higher cost of residential DE projects than commercial DE

projects, TEP would likely end up collecting significantly more funds through the REST charge than they actually need if funds were shifted to do commercial, rather than residential plans. Further, as discussed in the previous paragraph regarding the 50/50 DE split, allowing movement of funds would raise the likelihood of TEP not meeting its residential DE requirements and could even lessen the impetus to meet that requirement. Additionally, TEP has not identified the details of when such shifting could take place, how much could be shifted, and other details. Rather, TEP appears to be seeking broad discretion as to how any shifting would take place between the residential and commercial DE segments. Thus, Staff recommends against granting TEP funding flexibility to move funds between the commercial and residential DE segments.

<u>Use of Previous Years' Funds to Pay for 2010 REST Plan</u>

25. TEP is proposing to use REST funds it has collected, but not used, in past years, to help fund the 2010 REST plan. Specifically, TEP is proposing to use $6,448,727 of funds from the 2008 REST plan, and an estimated $5,600,000 of funds from the 2009 REST plan, or a total of just over $12 million in funds from previous years, to help pay for the 2010 REST plan. TEP is also requesting that the $5.6 million of 2009 funds be specifically allocated to two projects, the 1.6 MW single-axis tracker at the Tucson airport, and the Springerville PV expansion. Staff believes it is reasonable to use funds from previous years to pay for the 2010 REST plan, as they are funds that were collected to pay for renewable projects under the REST rules. The only possible concern would be that such a large carryover of funds from year to year indicates either an overfunding in previous years, or a failure to fully utilize necessary funds to meet REST rules requirements in previous years. Thus, the Commission may wish to track the size of carryovers in the future. Staff recommends approval of TEP's request to use 2008 and 2009 REST funds to help pay for the 2010 REST plan. Staff does not believe there is a need to allocate specific funds to pay for specific projects and thus does not recommend approval of TEP's request to specifically allocate the $5.6 million of 2009 REST funds to the two projects the Company identified.

<u>Recovery of Lost Net Fixed Revenue for DE Projects</u>

26. TEP is requesting Commission approval for the recovery of lost net revenue resulting from lower energy purchases from the Company by customers who have deployed DE

systems. The Commission has not granted lost net revenues as a result of DE deployments to any utility in Arizona. A variety of factors can cause consumption to increase and decrease. Granting this request would in essence create a form of revenue decoupling for TEP, without taking into consideration a variety of issues that revenue decoupling entails, including other factors that might increase consumption by some TEP customers or TEP overall. Staff believes that this issue is more appropriately addressed in utility rate proceedings.

Use of Short-term REC Purchases to Meet Non-DE Compliance

27. TEP's application requests acknowledgement by the Commission that TEP can use short-term REC purchases to meet its REST requirements. Staff believes this acknowledgement is not necessary, but does not oppose providing such acknowledgement if the Commission wishes to do so, consistent with existing REST rules requirements.

TEP REST Experience Under 2008 REST Plan

28. The Commission-approved implementation plan for 2009 contemplated a budget of $29.7 million. TEP projects spending $16.6 million in 2009.

29. Regarding installations and reservations, the table below summarizes installations through September 2009 and reservations for future installations.

Residential	Photovoltaics		Solar Hot Water	
	Number of Systems	kW	Number of Systems	kW
2009 Installations	202	939	367	370
Reservations	330	2518	244	246

Commercial	Photovoltaics		Solar Hot Water	
	Number of Systems	kW	Number of Systems	kW
2009 Installations	7	1069	0	0
Reservations	5	5277	0	0

30. The table below shows TEP's estimates of required MWH and Produced/Banked MWH under the 2009 REST requirements. TEP provided Staff with three different numbers for the produced/banked MWH for meeting the Company's REST requirements. Staff believes that the metered number corresponds to the actual REST requirements, but has included the other two

numbers for informational purposes. The metered number is the actual amount of kWh that was metered in 2009. "Installed-annualized" reflects if the assumption that every system expected to be installed by the end of 2009 actually operated for the full year in 2009. "Installed-annualized/reserved" reflects the installed-annualized number, plus an annualized number for all systems that have been reserved, but have not been installed as of the end of 2009.

	Required (MWH)	Produced/Banked (MWH)
Residential DE	14,011	6,125 (metered) 7,224 (installed – annualized) 8,878 (installed – annualized/reserved)
Commercial DE	14,011	1,610 (metered) 13,118 (installed – annualized) 20,509 (installed – annualized/reserved)
Non-DE	186,667	230,942

Research and Development

31. TEP is requesting approval of funding for five research and development ("R&D) projects. The projects include a grid stability analysis project, research in coordination with the Electric Power Research Institute on local impacts of renewables on transmission and distribution circuits, a Davis Monthan Air Force Base Distributed energy Circuit Analysis, a grid management DE impact analysis, and a number of projects through TEP's partnership with AZRise. AZRise projects include various projects at the TEP Solar Test Yard, development of control systems, investigation of Tucson Valley geology for possible use for compressed air storage, and work on the community solar program and related smart metering and storage. Funding for these projects is as shown in the following table.

Project	2010 R&D Project Funding Level
Grid Stability Analysis Project	$100,000
EPRI Studies	$100,000
Davis Monthan DE Circuit Analysis	$60,000
Grid Management DE Impact Analysis	$500,000
AZRise Research	$250,000

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Proposed 2010 REST Budgets

32. TEP's supplemental filing contains a budget request of approximately $37.1 million for its 2010 REST plan, but it must be recognized that to achieve TEP's proposed spending in 2010, TEP is also relying on the use of approximately $6.4 million in carryover 2008 REST funds and $5.6 million in carryover 2009 REST funds. This would result in total projected spending in 2010 of approximately $49.1 million. However, only the $37.1 million would have to be recovered through the 2010 REST charge. And, as noted previously, TEP's proposed budgets all rely on use of a 25/75 split in DE, rather than the 50/50 split required by the REST rules.

33. TEP provided Staff with comparable budget numbers, but employing the 50/50 DE split required by the REST rules. This results in a base budget of approximately $47.5 million for the 2010 REST plan, plus the $12 million of carryover 2008 and 2009 REST funds. This would result in total projected spending in 2010 of approximately $59.5 million. However, only the $47.5 million would have to be recovered through the 2010 REST charge.

34. Staff's proposed budget works off of the 50/50 DE split budget of $47.5 million, but removes approximately $3.4 million for lost revenue costs that Staff is recommending not be approved as well as somewhat lower administrative costs. Thus, Staff's proposed budget would require recovery of approximately $45.4 million through the 2010 REST charge. As with the proposed TEP plans, Staff would include the roughly $12 million in funding from 2008 and 2009 carryover funds to help pay for total spending in 2010 of approximately $57.4 million under Staff's proposal. The table below summarizes the proposed budgets.

	TEP Proposed Budget (25/75 DE Split)	TEP Budget (50/50 DE Split)	Staff Proposed Budget (50/50 DE Split)
Amount To Be Recovered Through 2010 REST Charge	$37,139,897	$47,497,140	$45,404,243
2008 REST Funding Carried Forward	$6,448,727	$6,448,727	$6,448,727
2009 REST Funding Carried Forward	$5,600,000	$5,600,000	$5,600,000
Total 2010 Projected Spending	$49,188,624	$59,545,868	$57,452,970

35. The table below shows proposed spending levels by area for each of the three budget options discussed herein.

Budget Components	2009 Approved REST Plan	TEP Proposed Budget (25/75 DE Split)	TEP Budget (50/50 DE Split)	Staff Proposed Budget (50/50 DE Split)
Purchased Renewable Energy				
Above market cost of conventional generation	$6,214,977	$11,331,633	$11,331,633	$11,331,633
Transmission direct use cost	$480,000	$480,000	$480,000	$480,000
Grid management ancillary services		$200,000	$200,000	$200,000
Other	$95,000	$120,000	$120,000	$120,000
Subtotal	*$6,789,977*	*$12,131,633*	*$12,131,633*	*$12,131,633*
Customer Sites Distributed Renewable Energy				
Up-front payments to customers	$15,059,712	$10,279,825	$21,988,706	$21,988,706
Production based payments to customers	$3,728,026	$7,220,479	$5,369,553	$5,369,000
Builder credit purchase program	$300,000	$750,000	$750,000	$700,000
Grid management cost study	$0	$500,000	$500,000	$500,000
Lost net revenue and performance incentive	$0	$1,490,398	$1,490,398	$0
Outreach efforts	$1,000,000	$500,000	$1,000,000	$750,000
Other	$1,792,000	$1,447,000	$1,447,000	$1,342,000
Subtotal	*$21,879,739*	*$22,187,702*	*$32,545,657*	*$30,650,259*
Information Systems				
Subtotal	*$375,000*	*$400,000*	*$400,000*	*$375,000*
Net Metering				
Subtotal	*$120,340*	*$144,789*	*$144,078*	*$144,078*
Reporting				
Subtotal	*$137,500*	*$250,000*	*$250,000*	*$175,000*
Outside Coordination and Support				
Support to university research	$200,000	$250,000	$250,000	$250,000
Other	$83,500	$274,500	$274,500	$177,000
Subtotal	*$283,500*	*$524,500*	*$524,500*	*$427,000*
Renewable Energy Hardware Development				
Technology Development Projects	$0	$400,000	$400,000	$400,000
Springerville 1MW Addition	$0	$4,000,000	$4,000,000	$4,000,000
Portion of Airport Single-Tracker Project	$0	$3,500,000	$3,500,000	$3,500,000
Other	$100,000	$50,000	$50,000	$50,000
Subtotal	*$100,000*	*$7,950,000*	*$7,950,000*	*$7,950,000*
Balance of Airport and Springerville Projects				
Subtotal	*$0*	*$5,600,000*	*$5,600,000*	*$5,600,000*
Total Budget	*$29,686,056*	*$49,188,624*	*$59,545,868*	*$57,452,970*

Recovery of Funds Through 2010 REST Charge

36. As noted in the previous section, there are three different amounts to be recovered through the 2010 REST charge, depending upon which budget above is chosen, either $37.1 million, $47.5 million, or $45.4 million.

25/75 Residential/Commercial DE Split Options

37. TEP's supplemental filing puts forth three recovery options. The first two eliminate any caps, and rely on a per kWh charge on all kWh to recover the necessary funds. The third option ("Proportional Option") takes the existing 2009 caps on each customer class and increases them all by the same percentage. The first option ("Originally Filed Option") to eliminate the cap, which is also contained in TEP's initial filing, is the simplest, as it charges all kWh the same charge, regardless of customer class or level of usage. The second option ("Modified Option") to eliminate the cap, contained in the supplemental filing, eliminates all caps, and has lower per kWh charges for customer classes that in previous years had paid a lower total effective per kWh rate due to their relatively low caps. Thus, the second option moves part way from the current structure toward the first option.

38. For TEP's proposals to recover the $37.1 million reflecting TEP's proposed 25/75 DE split, the following table summarizes the charge per kWh for each class under each option.

	2009 Approved REST Charge (per kWh)	Originally Filed Option REST Charge (per kWh)	Modified Option REST Charge (per kWh)	Proportional Option REST Charge (per kWh)	2009 Approved Cap	Proportional Option Cap for 2010 REST Plan
Residential	$0.008	$0.003847	$0.004926	$0.00829	$4.50	$6.75
Small Commercial	$0.008	$0.003847	$0.004375	$0.00829	$75.00	$112.50
Large Commercial	$0.008	$0.003847	$0.002900	$0.00829	$350.00	$525.00
Industrial and Mining	$0.008	$0.003847	$0.001924	$0.00829	$1,600.00	$2,400.00
Public Authority	$0.008	$0.003847	$0.004375	$0.00829	$75.00	$112.50
Lighting	$0.008	$0.003847	$0.004375	$0.00829	$75.00	$112.50

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39. The cost recovery by customer class and average bill by customer class for all three options, as well as the percentage of customers at the cap for each customer class for the proportional option, are shown in the table below.

	Originally Filed Option	Modified Option	Proportional Option
Residential	$14,921,312 (40.2%)	$19,106,416 (51.4%)	$21,352,391 (57.5%)
Small Commercial	$7,890,126 (21.2%)	$8,973,044 (24.2%)	$10,383,018 (28.0%)
Large Commercial	$4,997,496 (13.5%)	$3,767,283 (10.1%)	$3,690,719 (9.9%)
Industrial and Mining	$8,345,183 (22.5%)	$4,173,676 (11.2%)	$819,151 (2.2%)
Public Authority	$853,108 (2.3%)	$970,197 (2.6%)	$614,842 (1.7%)
Lighting	$131,021 (0.4%)	$149,004 (0.4%)	$278,353 (0.7%)
Total	$37,139,245	$37,139,620	$37,138,473
Residential - Average Bill	$3.38	$4.33	$4.84
Small Commercial - Average Bill	$18.42	$20.95	$24.24
Large Commercial - Average Bill	$671.53	$506.22	$495.93
Industrial and Mining - Average Bill	$23,641	$11,823	$2,321
Public Authority - Average Bill	$64.40	$73.24	$46.41
Lighting - Average Bill	$6.09	$6.93	$12.94
Residential – Percent at Cap	-	-	42.1%
Small Commercial – Percent at Cap	-	-	6.6%
Large Commercial – Percent at Cap	-	-	79.4%
Industrial and Mining – Percent at Cap	-	-	93.2%
Public Authority – Percent at Cap	-	-	25.3%
Lighting – Percent at Cap	-	-	0.44%

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40. Customer bill impacts for various types of customers under the 2009 plan and the three TEP 25/75 DE split options are shown in the table below.

			TEP Proposed Plans		
Customer Types	kWh / mo.	2009 Approved Plan	Original Plan	Modified Plan	Proportional Plan
Low Consuming Residence	400	$3.20	$1.54	$1.97	$3.32
Avg. Consuming Residence	880	$4.50	$3.38	$4.33	$6.75
High Use Residence	2,000	$4.50	$7.69	$9.85	$6.75
Dentist Office	2,000	$16.00	$7.69	$8.75	$16.58
Hairstylist	3,900	$31.20	$15.00	$17.06	$32.33
Department Store	170,000	$75.00	$653.99	$743.75	$112.50
Mall	1,627,100	$75.00	$6,259.45	$4,718.59	$525.00
Retail Video Store	14,400	$75.00	$55.40	$63.00	$112.50
Large Hotel	1,067,100	$350.00	$4,105.13	$3,094.59	$525.00
Large Building Supply	346,500	$350.00	$1,332.99	$1,004.85	$525.00
Hotel/Motel	27,960	$75.00	$107.56	$122.33	$112.50
Fast Food	60,160	$75.00	$231.44	$263.20	$112.50
Large High Rise Office Bldg	1,476,100	$350.00	$5,678.56	$4,280.69	$525.00
Hospital (< 3 MW)	1,509,600	$350.00	$5,807.43	$4,377.84	$525.00
Supermarket	233,600	$350.00	$898.66	$677.44	$525.00
Convenience Store	20,160	$75.00	$77.56	$88.20	$112.50
Hospital (> 3 MW)	2,700,000	$1,600.00	$10,387.00	$5,195.00	$2,400.00
Copper Mine	72,000,000	$1,600.00	$276,984.00	$138,528.00	$2,400.00

<u>50/50 Residential/Commercial DE Split Options</u>

41. The following tables and text show the three options that TEP put forth in its supplemental filing, Original Plan, Modified Plan, and Proportional Plan, with the one change that the DE split is set at 50/50 between residential and commercial customers, as required by the REST rules. These three scenarios were provided by TEP at Staff's request. The following tables also show Staff's proposed plan, which uses the 50/50 split and proportional plan approach, but with a lower total amount to be recovered, as discussed in the budget section of this memorandum. In comparison to past years, the cap escalates significantly in either the proportional plan proposed by TEP or by the Staff proposal. The tradeoffs are that a lower percentage of customers are at the cap, having a higher cap provides a larger pool of kWh to spread costs over, and a higher cap places more relative financial burden on high use customers and less on low use customers than if

a lower cap were used. Thus, a higher cap more evenly spreads costs over usage throughout the TEP system, encourages high use customers to conserve, and reduces the relative burden on lower use customers.

42. For TEP's three options, reflecting a 50/50 DE split, as well as the Staff proposed plan, the following table summarizes the charge per kWh for each class under each option.

	2009 Approved REST Charge (per kWh)	Originally Filed Option REST Charge (per kWh)	Modified Option REST Charge (per kWh)	Proportional Option REST Charge (per kWh)	Staff Proposal REST Charge (per kWh)	2009 Approved Cap	Proportional Option Cap for 2010 REST Plan	Staff Proposal Cap for 2010 REST Plan
Residential	$0.008	$0.004920	$0.006300	$0.008924	$.008636	$4.50	$10.00	$9.50
Small Commercial	$0.008	$0.004920	$0.005595	$0.008924	$.008636	$75.00	$175.00	$160.00
Large Commercial	$0.008	$0.004920	$0.003709	$0.008924	$.008636	$350.00	$815.00	$760.00
Industrial and Mining	$0.008	$0.004920	$0.002460	$0.008924	$.008636	$1,600.00	$3,725.00	$3,600.00
Public Authority	$0.008	$0.004920	$0.005595	$0.008924	$.008636	$75.00	$175.00	$160.00
Lighting	$0.008	$0.004920	$0.005595	$0.008924	$.008636	$75.00	$175.00	$160.00

43. The cost recovery by customer class and average bill by customer class for all three 50/50 DE split options and the Staff proposal, as well as the percentage of customers at the cap for each customer class for the proportional option and the Staff proposal, are shown in the table below.

	Originally Filed Option	Modified Option	Proportional Option	Staff Proposal
Residential	$19,083,144 (40.2%)	$24,435,733 (51.4%)	$27,155,396 (57.2%)	$26,095,403 (57.5%)
Small Commercial	$10,090,829 (21.2%)	$11,475,241 (24.2%)	$12,636,358 (26.6%)	$12,020,670 (26.5%)
Large Commercial	$6,391,391 (13.5%)	$4,818,225 (10.1%)	$5,326,636 (11.2%)	$5,014,431 (11.0%)
Industrial and Mining	$10,672,810 (22.5%)	$5,336,405 (11.2%)	$1,253,869 (2.6%)	$1,211,862 (2.7%)
Public Authority	$1,091,056 (2.3%)	$1,240,743 (2.6%)	$821,921 (1.7%)	$770,320 (1.7%)
Lighting	$167,565 (0.4%)	$190,554 (0.4%)	$302,116 (0.6%)	$292,138 (0.6%)
Total	$47,496,794	$47,496,902	$47,496,296	$45,405,238
Residential - Average Bill	$4.33	$5.54	$7.85	$7.60
Small Commercial - Average Bill	$23.56	$26.79	$29.50	$28.07
Large Commercial - Average Bill	$858.83	$647.44	$715.75	$673.80
Industrial and Mining - Average Bill	$30,234.59	$15,117.29	$3,552.04	$3433.04
Public Authority - Average Bill	$82.36	$93.66	$62.05	$58.15
Lighting - Average Bill	$7.79	$8.86	$14.04	$13.58

Residential – Percent at Cap	-	-	23.5%	23.5%
Small Commercial – Percent at Cap	-	-	4.9%	6.6%
Large Commercial – Percent at Cap	-	-	65.3%	67.9%
Industrial and Mining – Percent at Cap	-	-	91.22%	91.22%
Public Authority – Percent at Cap	-	-	19.9%	20.6%
Lighting – Percent at Cap	-	-	0.08%	0.13%

44. Customer bill impacts for various types of customers under the 2009 plan, the three TEP 50/50 DE split options, and the Staff proposal are shown in the table below.

			TEP Plans			
Customer Types	**kWh / mo.**	**2009 Approved Plan**	**Original Plan**	**Modified Plan**	**Proportional Plan**	**Staff Plan**
Low Consuming Residence	400	$3.20	$1.97	$2.52	$3.57	$3.45
Avg. Consuming Residence	880	$4.50	$4.33	$5.54	$7.85	$7.60
High Use Residence	2,000	$4.50	$9.84	$12.60	$10.00	$9.50
Dentist Office	2,000	$16.00	$9.84	$11.19	$17.85	$17.27
Hairstylist	3,900	$31.20	$19.19	$21.82	$34.80	$33.68
Department Store	170,000	$75.00	$836.40	$951.15	$175.00	$160.00
Mall	1,627,100	$75.00	$8,005.33	$6,034.91	$815.00	$760.00
Retail Video Store	14,400	$75.00	$70.85	$80.57	$128.51	$124.36
Large Hotel	1,067,100	$350.00	$5,250.13	$3,957.87	$815.00	$760.00
Large Building Supply	346,500	$350.00	$1,704.78	$1,285.17	$815.00	$760.00
Hotel/Motel	27,960	$75.00	$137.56	$156.44	$175.00	$160.00
Fast Food	60,160	$75.00	$295.99	$336.60	$175.00	$160.00
Large High Rise Office Bldg	1,476,100	$350.00	$7,262.41	$5,474.85	$815.00	$760.00
Hospital (< 3 MW)	1,509,600	$350.00	$7,427.23	$5,599.11	$815.00	$760.00
Supermarket	233,600	$350.00	$1,149.31	$866.42	$815.00	$760.00
Convenience Store	20,160	$75.00	$99.19	$112.80	$175.00	$160.00
Hospital (> 3 MW)	2,700,000	$1,600.00	$13,284.00	$6,642.00	$3,725.00	$3,600.00
Copper Mine	72,000,000	$1,600.00	$354,240.00	$177,120.00	$3,725.00	$3,600.00

REST Adjustor Mechanism

45. The Commission established a REST adjustor mechanism for TEP in Decision No. 70628 (December 1, 2008). The REST adjustor rate is reset as part of the approval of each year's new REST implementation plan.

Staff Recommendations

46. Staff recommends that the Commission approve the Staff proposed 2010 REST plan, reflecting the 50/50 DE split between residential and commercial customers, REST charge of

$0.008636 per kWh, and related caps reflected in the Staff proposal. This includes a total budget of $57,452,970, the carry forward of $6,448,727 of 2008 REST funds, $5,600,000 of 2009 REST funds, and the recovery of $45,404,243 through the proposed REST charge and related caps.

47. Staff recommends approval of TEP's proposed research and development projects and funding.

48. Staff recommends against approval of TEP's request for a 25/75 split on the residential and commercial DE as well as the flexibility to move funds between the residential and commercial segments.

49. Staff recommends that the Commission not approve TEP's request for an expedited and streamlined pre-approval process for contracts and projects.

50. Staff recommends approval of the use of $5.6 million in 2009 REST funds to help fund the 2010 REST plan, but recommends against specifically approving use of these funds for certain projects, as requested by TEP.

51. Staff recommends that the Commission not approve TEP's request for lost net revenue resulting from DE deployments and related costs at this time, but that the Commission review and address lost net revenue resulting from DE deployments and related costs if requested to do so by the affected utility in its rate case and the affected utility provides documentation/records supporting its request in the rate application.

52. Staff recommends that TEP may, at its own initiative, submit to the Commission, as part of its annual REST reports, documentation of any lost net revenue resulting from DE deployments.

53. Staff recommends that the Commission acknowledge that TEP can use short-term REC purchases to meet non-DE compliance, consistent with existing REST rules, while recognizing such acknowledgement is not necessary.

54. Staff recommends that the Commission not act at this time on requests for pre-approval of the three purchased power contracts, the Springerville expansion, the single-axis tracker at the Tucson airport, the biodiesel pilot project, and the Community Solar Program.

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55. Staff recommends that in future annual REST plan filings, TEP be required to file one or more options that would meet the requirements of the REST rules.

CONCLUSIONS OF LAW

1. TEP 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 January 5, 2010, concludes that it is in the public interest to approve the 2009 Renewable Energy Standard Implementation Plan and REST Tariff, as modified by Staff.

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ORDER

IT IS THEREFORE ORDERED that the 2009 Renewable Energy Standard Implementation Plan and REST Tariff for Tucson Electric Power Company, as modified by Staff, be and hereby is approved, as discussed herein.

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

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

CHAIRMAN COMMISSIONER

COMMISSIONER COMMISSIONER COMMISSIONER

IN WITNESS WHEREOF, I, ERNEST G. JOHNSON, 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 ___________________, 2010.

ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

DISSENT: ____________________________

DISSENT: ____________________________

SMO:RGG:lhm\JMA

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