

ORIGINAL

NEW APPLICATION



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BEFORE THE ARIZONA CORPORATION COMMISSION

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E-01933A-13-0224

IN THE MATTER OF THE APPLICATION OF)
TUCSON ELECTRIC POWER COMPANY FOR)
APPROVAL OF ITS 2014 RENEWABLE)
ENERGY STANDARD IMPLEMENTATION)
PLAN AND DISTRIBUTED ENERGY)
ADMINSITRATIVE PLAN AND REQUEST FOR)
RESET OF ITS RENEWABLE ENERGY)
ADJUSTOR.)

DOCKET NO.

APPLICATION

Tucson Electric Power Company ("TEP" or the "Company"), through undersigned-counsel, hereby submits its 2014 Renewable Energy Standard and Tariff ("REST") Implementation Plan ("Plan") for Arizona Corporation Commission ("Commission") approval, in compliance with Arizona Administrative Code ("A.A.C.") R14-2-1801 *et seq.*

TEP's Plan is designed to achieve 2014 REST compliance as cost-effectively as possible. The key components of the Plan include new renewable energy resources intended to be added through 2018, proposed and existing Company programs and budgets for those programs, and customer funding and REST tariff. The estimated cost for 2014 related projects and programs is \$40.7 million. TEP proposes to recover \$34.2 million through the REST tariff; \$6.5 million less than the overall budget as a result of applying carryover funds from 2012 to the 2014 budget. In order to implement this Plan, TEP requests approval of its 2014 REST surcharge of \$0.008000 per kWh, the same as the 2013 REST surcharge.

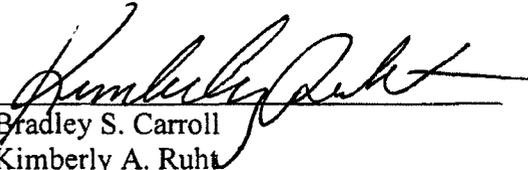
TEP remains solidly committed to the REST and its Plan provides for renewable generation to meet the 2014 compliance requirement of four and a half (4.5) percent of retail sales (or 418,294 megawatt hours ("MWh")). The Company has entered into new agreements with developers for the construction of renewable generation and is moving forward with plans to construct its own renewable generation.

1 TEP believes that its Plan provides a cost-effective strategy for complying with the REST
2 requirements. Therefore, TEP requests that the Commission approve:

- 3 1. TEP's 2014 Renewable Energy Implementation Plan prior to December 31, 2013; and
4 2. The proposed REST surcharge of \$.008000 per kWh.

5 RESPECTFULLY SUBMITTED this 1st day of July 2013.

6 TUCSON ELECTRIC POWER COMPANY

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Tucson Electric Power

Tucson Electric Power Company

**2014 Renewable Energy Standard
Implementation Plan**

TABLE OF CONTENTS

I.	Executive Summary	1
II.	TEP 2014 Implementation Plan Components	2
	A. Utility Scale Renewable Generation	2
	B. Bright Tucson Solar Buildout Plan	5
	C. Distributed Generation Incentive Programs.....	7
	D. Market Cost of Comparable Conventional Generation	10
III.	The Plan Budget.....	11
IV.	The 2014 REST Tariff.....	11
V.	Renewable Energy Balancing, Integration and Field Testing	12
	A. PV Panel Lab Degradation Testing.....	13
	B. Solar Test yard Maintenance Equipment.....	13
	C. Field PV Component Degradation Analysis.....	14
	D. Solar and Wind Forecast Integration Portal.....	14
	E. UVIG, SEPA, AWEA.....	15
VI.	Additional Compliance Issues and Information.....	15
	A. Compliance with Decision No. 72033.....	15
VII.	Conclusion.....	16

LIST OF EXHIBITS

- Exhibit 1 Line Item Budget
- Exhibit 2 Definition of Market Cost of Comparable Conventional Generation
- Exhibit 3 Above Market Cost of Comparable Conventional Generation (Confidential)
- Exhibit 4 Implementation Plan New Resources Costs (Confidential)
- Exhibit 5 Implementation Plan New Resources
- Exhibit 6 TEP Statement of Charges
- Exhibit 7 REST- TS1 and REST –TS2
- Exhibit 8 Customer Load Percentage Analysis
- Exhibit 9 Renewable Energy Credit Purchase Program

I. EXECUTIVE SUMMARY

Tucson Electric Power Company (“TEP” or “Company”) has prepared its 2014 Implementation Plan (“Plan”) in compliance with the Arizona Corporation Commission’s (“Commission”) Renewable Energy Standard (“REST”) Rules pursuant to Arizona Administrative Code (“A.A.C”) R14-2-1813. The Plan’s cost-effective strategy demonstrates TEP’s commitment to fulfilling the REST Renewable Energy Requirements for 2014 and beyond. The key components of the Plan include: new renewable energy resources intended to be added through 2018; proposed and existing Company programs and budgets for each of those programs; and customer funding tariff and REST tariff. TEP requests that the Commission approve the Plan, as well as the associated budget and tariff, prior to December 31, 2013 to be effective January 1, 2014.

Pursuant to A.A.C. R14-2-1804 and R14-2-1805, TEP must obtain four and one-half (4.5) percent of its 2013 annual retail sales from renewable resources; thirty (30) percent of that 4.5 percent must come from Distributed Generation (“DG”). In order to meet this requirement, TEP proposes utilizing existing utility scale renewable generation and credits; Power Purchase Agreements (“PPA”) with renewable developers; new utility-owned renewable generation; and DG incentive programs.

In addition to proposed utility scale renewable generation and PPAs, the Plan also provides three options for DG incentive programs. Plan A proposes to keep the residential DG up-front incentives at 2013 levels (\$0.10 for photovoltaic (“PV”) and \$0.40 for solar water heating) and proposes to reinstitute a small commercial incentive that would be at the same level as residential incentives. Plan B proposes to maintain only residential DG up-front incentives. Plan C proposes to remove DG up-front incentives entirely. The estimated cost for 2014 REST related projects and programs for Plan A is \$40.7 million, Plan B is \$40.4 million, and Plan C is \$40.1 million. Based on the proposed incentive levels and the anticipated renewable generation requirements, the cost of projects and programs is expected to have a moderate annual increase each year through 2018, adding up to a five year combined total of \$226 million. (See Exhibit 1

for estimated projected budgets through 2018) The REST funding is necessary to cover the cost of utility scale renewable generation, make incentive payments for DG resources, implement the programs, create education and outreach programs, and cover administration costs. For 2014, TEP proposes to recover approximately \$34.2 million through the REST tariff if Plan A is adopted (it would be a slightly smaller recovery under Plan B or C); this is \$6.5 million less than the overall budget because there is a carryover of funds from 2012 budget.

TEP requests the Commission approve the Plan and find that it is in the public interest because it is a realistic and cost-effective plan for complying with the REST requirements.

II. TEP 2014 IMPLEMENTATION PLAN COMPONENTS

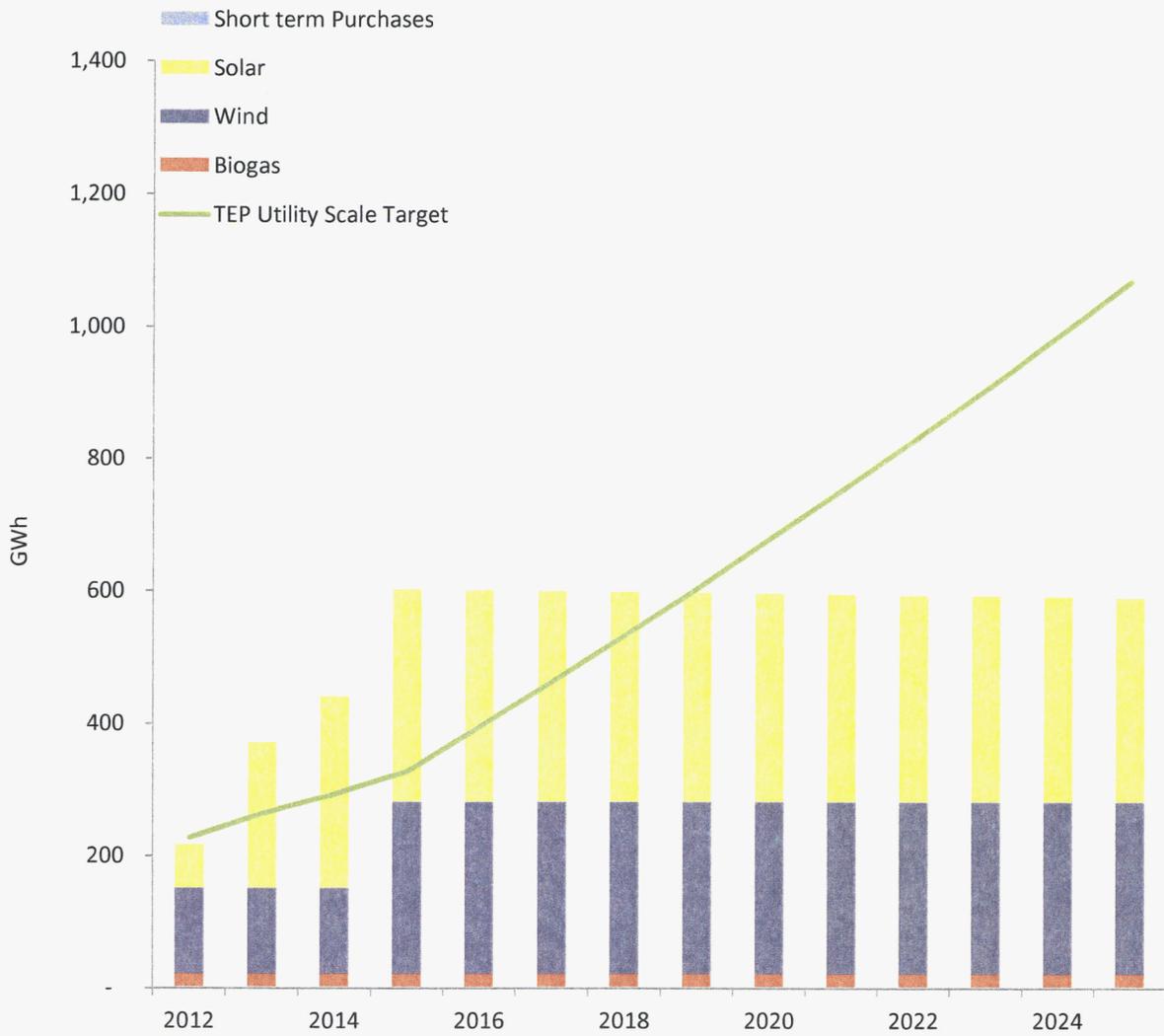
In 2014, TEP's total expected renewable generation requirement is four and one-half (4.5) percent of retail sales, or 418,294 megawatt hours ("MWh"). The REST targets two resource categories to meet this requirement: utility-scale generation and DG.

A. Utility-Scale Renewable Generation

TEP will meet the 2014 utility-scale requirement by having renewable generation capacity of 212 megawatts ("MW") direct current ("DC") in place by the end of 2014. 178.5 MW of the 212 MW will come from renewable PPAs currently in effect or with anticipated completion dates of early 2014. The remaining 33.5 MW will come from TEP-owned renewable facilities.

The combination of TEP-owned generation facilities and PPAs will allow the Company to continue to meet its renewable energy requirements for the next five years. Chart 1 below depicts TEP's utility-scale target and how TEP will meet that requirement through 2019 with the current expected generation portfolio.

Chart 1. Renewable Energy Standard Targets



Note: Chart 1 does not include carryover credits

Table 1, below depicts TEP's utility-scale projects. The projects are separated by those already in operation and those planned for the future.

Table 1. Utility Scale Generation

Project	Capacity MW (DC)	Annual MWh	Technology	Expected In-Service Date	TEP Owned
Existing Renewable Generation					
Sundt –Los Reales	4	21,100	Biogas	Operational	Yes
SGS	6.4	7,573	Fixed PV	Operational	Yes
UASTP I - Solon	1.6	3,041	SAT PV	Operational	Yes
UASTP II - Amonix	2	4,111	CPV	Operational	No
UASTP III - Solon	5	7,914	Fixed PV	Operational	Yes
UASTP IV - AstroSol	6	10,407	Fixed PV	Operational	No
SunPower	0.5	875	Fixed PV	Operational	Yes
Prairie Fire	5	7,954	Fixed PV	Operational	Yes
NRG Solar	35	78,010	Fixed PV	Operational	No
SunEdison	25	57,950	SAT PV	Operational	No
E.ON	6.2	14,518	SAT PV	Operational	No
E.ON	14	32,782	SAT PV	Operational	No
Macho Springs	50.4	130,244	Wind	Operational	No
Total Existing	161	376,480			
Project	Capacity MW (DC)	Annual MWh	Technology	Expected In-Service Date	TEP Owned
Bright Tucson Solar Buildout Plan					
SunPower	10	19,947	Fixed/LCPV	1-Jan-14	Yes
Areva	5	14,310	PV/Thermal	1-Feb-14	Yes
TBD	20	14,016	TBD	2015	Yes
Total Future - BTSBP	35	48,273			
Future Renewable Generation					
Cogenra	1	1,968	LCPV	1-Jun-14	No
Avalon Solar	35	66,532	Fixed PV	1-Jul-14	No
Red Horse Wind	50	129,560	Wind	2015	No
Total Future – Pending (Contracts)	86	198,061			
Total Planned Generation (Contracts)	282	622,814			
Total Planned Generation through 2014	212	479,237			

B. Bright Tucson Solar Buildout Plan

TEP's solar ownership plan (the "Bright Tucson Solar Buildout Plan") represents a small portion of the utility-scale requirement that can be met through a utility-owned program. TEP's 2011 proposed investment of \$28 million in this program was approved by the Commission in Decision No. 72033 and subsequently affirmed in Decision No. 72736.

Continuing in accordance with previous decisions, TEP's Plan is requesting approval to invest an additional \$28 million in the Bright Tucson Solar Buildout Plan. This program remains an essential component of the Company's renewable strategy, providing balance to TEP's renewable portfolio, as well as creating a level of certainty for the continued development of renewable energy. Through the Bright Tucson Solar Buildout Plan, and previously built Company owned projects, TEP expects to own approximately 16 percent of its renewable energy portfolio by the end of 2014.

Fort Huachuca Solar Proposal

The United States Army and its Energy Initiative Task Force have identified Fort Huachuca as one of several locations where the Army intends to procure the output of a 20 MW solar facility. Fort Huachuca while located in Sierra Vista, is within TEP's certificated service territory. Because the Army does not intend to own, operate, or maintain the 20 MW solar facility, at the time this Plan is submitted to the Commission, the Army will be going through the source selection process. Tucson Electric Power is participating in the source selection process and has proposed utilizing the Company's current solar buildout program to meet the United States Army's energy security goal, while at the same time, meeting TEP's goal of continuing its own solar development program. Currently, the Army intends to release a Request for Proposal ("RFP") in October of 2013 seeking an entity to build, own, and operate the 20 MW solar facility in the 2014 – 2015 timeframe.

To accomplish its utility scale renewable generation goals, the Company is specifically requesting the approval of the \$28 million for 2014 Bright Tucson Solar Buildout Plan, and additionally, up to \$12 million in 2015 to ensure the Company has the ability to provide a

competitive bid for the Fort Huachuca 20 MW solar facility. The Company is unsure whether or not the Army's RFP process will be completed before the end of 2013 and the approval of the Company's REST Plan. Therefore, the Company requests conditional approval of the additional \$12 million funding in 2015, should the Company be awarded the Army contract.

The annual revenue requirement for the requested investment is detailed in Table 2, below. The revenue requirement encompasses recurring costs related to capital investment, including return on investment, depreciation, property taxes, and operations and maintenance ("O&M") expenses. TEP is proposing to continue to recover these costs through the REST adjustor approved by the Commission, until the investment can be included in rate base in a subsequent TEP rate case. Each column shown in Table 2 represents the expected revenue requirement for TEP's capital investment from the prior year. For example, the 2014 revenue requirement relates to the capital invested in 2013 for the Bright Tucson Solar Buildout Plan. It should be noted that the property tax revenue requirement for each investment is recovered in year two (2) of each project (*i.e.*, property tax collected in 2014 is from 2012 capital investment). Please refer to Table 3 for estimated annual REST budget.

Table 2. Revenue Requirement for the Bright Tucson Solar Buildout Plan

Revenue Requirement	2014	2015	2016	2017
Carrying Costs	\$ 2,979,874	\$ 5,252,994	\$ 5,519,344	\$ 1,715,825
Book Depreciation	\$ 1,845,677	\$ 4,589,376	\$ 5,281,043	\$ 1,458,333
Property Tax Expense	\$ 225,908	\$ 213,534	\$ 399,788	\$ -
O&M	\$ 108,864	\$ 312,880	\$ 388,016	\$ 140,000
Lease Expense	\$ 69,800	\$ 40,000	\$ 40,000	\$ -
Gross Revenue Requirement	\$ 5,230,122	\$ 10,408,784	\$ 11,628,191	\$ 3,314,158

Table 3. Estimated Annual REST Budget for the Bright Tucson Solar Buildout Plan

Utility Owned Solar Projects by Year	2014	2015	2016	2017	2018
2012 - HQ Rooftop 0.05 MW	\$32,817	\$31,799	\$31,494		
2014 - TO Mine Tailings 10 MW	\$4,327,269	\$4,181,249	\$4,088,067		
2014 - AREVA 5 MW	\$811,704	\$1,169,432	\$1,086,204		
2014 - Ft Huachuca 10 MW	\$58,333	\$3,210,485	\$3,151,720		
2015 - Ft Huachuca 10 MW		\$1,799,153	\$2,282,901		
2015 - 4 MW built in 2015		\$16,667	\$929,472		
2016 - 14 MW built in 2016			\$58,333	\$3,255,825	\$3,192,920
2017 - 14 MW built in 2017				\$58,333	\$3,259,025
2018 - 14 MW built in 2018					\$58,333
Annual Revenue Requirement	\$5,230,122	\$10,408,784	\$11,628,191	\$3,314,158	\$6,510,278

C. Distributed Generation Incentive Program.

The Plan proposes three options for a DG incentive program. The Company understands there are a number of outstanding issues that may affect incentive levels, such as: potential changes to the value of distributed generation and net metering policies; federal tax incentives; and the Commission’s own energy policy objectives. The Company also recognizes the Commission’s previous efforts and continued desire to find the level at which distributed generation remains viable. As such, the Company is supportive of all three proposed options.

Plan A maintains the compliance floor levels of temporary residential DG over compliance as approved in the 2013 program and adds an equivalent small commercial incentive program. This option has been included at the request of those in the stakeholder community with the objective to re-establish a modest, non-residential program. Although the Company is still several years ahead of the minimum requirement for non-residential distributed generation, it does recognize that there are some local economic benefits that come with an incentivized non-residential market. The \$300,000 budget, as proposed, would generate approximately 3 MW of additional non-residential distributed generation using the small commercial limitation of 70 KW (“dc”) at \$0.10 per watt incentive level. It would also reestablish the small commercial solar hot water (“SHW”) program at the 2012 incentive level of \$0.40 per watt equivalent. The Company

expects to exhaust all 2013 funding by the end of the year. The associated DG incentives under the proposed Plan A budget is \$8.54 million to fund the incentive programs.

Plan B, like Plan A, also maintains the compliance floor levels for residential DG, but does not include any new small commercial project incentives. This proposal recognizes that the Company is over-compliant with regards to the non-residential requirement, but maintains the current residential incentive of \$0.10 per watt for PV and \$0.40 per watt for SHW. The Company expects to exhaust all 2013 funding by the end of the year. The associated DG incentives under the Plan B proposed budget is \$8.24 million.

Plan C proposes no new incentives for residential or non-residential projects, and maintains the existing performance based incentives (PBI) from prior years. The budget for the associated DG incentives to pay for the previously entered PBI contracts, under the proposed Plan C is \$7.94 million for 2014.

Plan A – Residential and Non-residential incentives in 2014 will be paid at the following levels:

- UFI PV – \$0.10 per DC Watt (max 30 or 70 kW DC for residential and non-residential);
- UFI SHW – \$0.40 per annual estimated kWh saved.

Plan B – Residential incentives in 2014 will be paid at the following levels:

- UFI PV – \$0.10 per DC Watt (max 30 kW DC);
- UFI SHW – \$0.40 per annual estimated kWh saved.

Plan C – There are no new additional incentives.

The residential and/or non-residential UFI for each plan and existing PBI allocations are shown in Table 4. Also included are the relative MWh and MW achieved.

Table 4. UFI/PBI Budget and Forecast

Plan Option	Customer Segment	2014 Budget	Annual MWh	Annual MW
A	Residential UFI	\$ 300,000	5,250	3.0
A	Small Commercial UFI	\$ 300,000	5,250	3.0
A	Existing PBI	\$ 7,944,363	73,419	42.0
B	Residential UFI	\$ 300,000	5,250	3.0
B	Small Commercial UFI	\$ -	-	-
B	Existing PBI	\$ 7,944,363	73,419	42.0
C	Residential UFI	\$ -	-	-
C	Small Commercial UFI	\$ -	-	-
C	Existing PBI	\$ 7,944,363	73,419	42.0

Not included in the above Distributed Generation budget plans, are two customer self-directed funding requests, one from the City of Tucson and the other from Pima County¹. AAC R14-2-1809 provides for eligible customers, defined as an entity that pays at least \$25,000 annually under the REST Tariff, to apply to receive a portion or all of the funds the eligible customer has paid under REST, to fund the installation of distributed renewable energy resources. Previous self-directed funding requests have been fulfilled because there has been sufficient funding for the request under the non-residential program budget and the eligible customers were paid at either the existing incentive level or won a competitive solicitation through the Performance Based Incentive (PBI) program.

For 2014, TEP has received requests from both Pima County and the City of Tucson to take advantage of the customer self-directed funded option. However, the Company currently has no budget for non-residential programs and even the budget amount requested for 2014 in Plan A is insufficient to fund these projects. Additionally, both Pima County and the City of Tucson's requests are for projects that are in excess of the 70 kW-dc limit that currently applies

¹ The City of Tucson is requesting self-directed funding in the amount of \$200,000 for a 100kW project and Pima County is requesting self-directed funding in the amount of \$300,000 for an 800kW project.

to non-residential up-front incentives (the City project is 100kW and the County project is 800 kW), and the Company is not proposing to have any new performance based incentives for 2014. The Company's self-directed funding tariff requires TEP to respond within 60 days of such request. Therefore, because of the above stated issues, TEP is denying both Pima County and the City of Tucson's self-funding requests.

Because TEP has not dealt with the unusual circumstance presented above, it is requesting guidance from the Commission on the issues associated with the Customer Self-Direct Renewable Energy Option detailed under A.C.C. R14-2-1809. Specifically, the Company would like guidance on the following issues:

1) Should the Affected Utility authorize self-directed funding to Eligible Customers when no other incentives are available to other customers in that customer class?

2) Should self-directed funding requests be subject to the same incentive level restrictions as other customers, such as \$0.10 per watt or 70kW size limit for up-front incentives?

D. Market Cost of Comparable Conventional Generation.

Consistent with the REST Rules, TEP calculates program expenses using the Market Cost of Comparable Conventional Generation ("MCCCG"). Details on the methodology for the MCCCG calculation are included in Exhibit 2 attached hereto. The annual MCCCG rates are calculated in advance and stated as a single dollar per MWh value by technology type. The expenses are based on the power purchase agreement ("PPA") pricing after subtracting the corresponding MCCCG based on projected hourly energy profiles and are included in confidential Exhibits 3 and 4 (AMCCG and Implementation Plan New Resource Costs).² Exhibit 5 (Implementation Plan New Resources) shows associated energy production. The profiles are determined by TEP's production cost model. The MCCCG is included for wind, PV systems, concentrated solar with storage, and bio-fueled renewable resources.

² Exhibits 3 and 4 will be provided directly to Commission Staff upon execution of a Protective Agreement.

III. THE PLAN BUDGET

As stated previously, the cost to implement TEP's 2014 Plan for Plan A is \$40.7 million, Plan B is \$40.4 million, and Plan C is \$40.1 million. The detailed budget for all three Plan options is attached as Exhibit 1, which includes a breakdown of the costs for utility-scale energy, residential and non-residential DG programs, research and development, outside services support and reporting, technology, and education and outreach. Table 6 includes a high level Plan budget.

Table 5. Plan Budget by Category

Utility Scale	\$ 30,711,330
Plan A Residential/Non-Residential UFI	\$ 600,000
Plan B Residential UFI	\$ 300,000
Existing Large Commercial PBI	\$ 7,944,363
Associated Costs (Metering, I.T., Reporting & Labor, Technical Training, Education/Outreach, and R&D)	\$ 1,432,379
2014 Program Cost Plan A	\$ 40,688,072
2014 Program Cost Plan B	40,388,072
2014 Program Cost Plan C	40,088,072
Carryover Funds	\$ 6,521,430
Total Plan A	\$ 34,166,642
Total Plan B	33,856,642
Total Plan C	33,566,642

IV. THE 2014 REST TARIFF

The proposed tariffed rate is contained in attached Exhibit 6.³ TEP's 2014 Plan (A, B, or C) will require a tariff charge to be set at \$0.008/kWh, with customer caps by class. The caps were developed using the proportional cap allocation method, previously approved by the Commission. Under this methodology, the caps for all customer classes are increased proportionately. Table 6 details 1) the Company's approved budget for 2013 and proposed

³ Additionally, the Renewable Energy Standard Tariff (Rider R-6) and the Customer Self-Directed Tariff (Rider R-7) are set forth in the attached Exhibit 7 and the Customer Load Percentage Analysis is set forth in the attached Exhibit 8.

budget for 2014 delineated by rate class and 2) the currently approved customer class caps and the caps proposed for the 2014 Plan.

Table 6. 2013/2014 REST Budget by Rate Class

Rate Class	2013 Approved REST Budget	2014 Proposed REST Budget Plan A
Residential	\$15,251,396	\$14,490,645
Small General Service	\$10,565,550	\$10,933,894
Large General Service	\$5,977,898	\$5,734,336
Industrial & Mining	\$2,956,735	\$2,772,000
Lighting (PSHL)	\$258,273	\$236,001
Public Authority	\$764,696	Included in Small GS
Total	\$35,774,548	\$34,166,876

Rate Class	Current Rates Caps	Proposed Rates Caps
Residential	\$3.80	\$3.80
Small General Service	\$130.00	\$115.65
Large General Service	\$1,050.00	\$1,050.00
Industrial & Mining	\$7,700.00	\$7,700.00
Lighting (PSHL)	\$130.00	\$115.65
Public Authority	\$140.00	NA
Per kWh to all Classes	\$0.008000	\$0.008000

V. RENEWABLE ENERGY BALANCING, INTEGRATION, AND FIELD TESTING

TEP dedicates portions of its REST funding towards technical support for the adoption of renewable energy. Table 7 outlines TEP's proposed budget for this work in 2014. TEP plans to continue its commitment to furthering the integration of renewable energy onto its system by participating in the following projects.

Table 8. TEP’s Integration Initiatives by Project

Renewable Integration Initiatives	Budget
PV Panel Lab Degradation Testing	\$ 3,000
Solar Test Yard Maintenance Equipment	\$ 25,000
Field PV Component Degradation Analysis	\$ 50,000
Solar and Wind Forecast Integration Portal	\$182,000
UVIG, SEPA, AWEA	\$ 5,000
Total	\$275,000

A. PV Panel Lab Degradation Testing

In order for TEP to adequately maintain its existing and future portfolio of photovoltaic generation, specific degradation problems need to be identified early in order to prevent and prepare for failures in the field. TEP will utilize the University of Arizona’s degradation laboratory with panels used on TEP facilities. This will help save long-term Operations and Maintenance (O&M) dollars. The proposed budget for this important project is \$3,000.

B. Solar Test Yard Maintenance.

TEP regularly performs technical analysis on existing and developing PV technologies in its widely regarded test yard facility. Data collected from this field helps the Company solicit industry and university partners and helps collaborative efforts to find grant money for research projects. This collaboration and grant funding allows TEP to optimize investment in appropriate technology while passing on as little cost as possible to customers. The dollars requested are for maintaining existing technology and managing the many interconnections in the yard. These maintenance costs should remain around \$25,000 annually.

C. PV Component Degradation Analysis

While laboratory analysis is important as it offers a controlled variable environment, field analysis of degradation is also critical. Factors ranging from soil characterization, vegetation growth, geotechnical composition, heat islanding, real-world temperature/humidity change, dust, and altitude have impacts on life spans of photovoltaic generation. TEP will work with scientists at the University of Arizona to monitor and compare deployment characteristics across existing and proposed sites in an effort to reduce long term cost of ownership of PV and help the Company most efficiently site generation resources in the future.

D. Solar and Wind Forecast Integration Portal

Integrating solar and wind resources on to the grid is an important responsibility of balancing area authorities like TEP. One of the most critical areas of focus for proper integration is forecasting generation availability over several time horizons. TEP needs to have a reasonably accurate 2 day forecast of production as well as an extremely accurate 15 minute forecast. TEP observations have demonstrated that large scale solar resources can shed 80% of their production in 5 seconds. These “intermittent events” need to be predicted as accurately as possible to allow TEP to manage generation and reserve requirements effectively. There is no commercially available alternative on the market that has the high resolution accuracy needed by TEP and the Company is a widely recognized leader amongst high-solar-penetration utilities for its work in this area. The critical partner developing the forecast is the University of Arizona departments of Physics and Atmospheric Sciences. Funds will be managed through the University of Arizona Renewable Energy Network. This system critical project will be ongoing for 2 years and will be migrating in later years to an Information Technology upgrade project to TEP’s Energy Management System (EMS).

E. UVIG, SEPA, AWEA

As a result of the REST, TEP actively participates in three renewable industry associations. These are the Utility Variable (Energy) Integration Group (UVIG), the Solar Electric Power Association (SEPA), and the American Wind Energy Association (AWEA). High

penetrations of solar and wind make UVIG (a variable generation group) relevant, and SEPA and AWEA provide the Company with important resources and expertise that are helpful to manage renewable programs and stay up on issues facing the industry and other comparable utilities around the country. Fees for each are \$5,000 for a total of \$15,000.

VI. ADDITIONAL COMPLIANCE ISSUES AND INFORMATION

A. Compliance with Commission Decision No. 72033. LIQUIDATED DAMAGES

As part of Decision No. 72033, TEP was required to “include, as part of future annual REST plan filings, a list of any cases within the previous three calendar years where Tucson Electric Power has received damages or other considerations as a result of non-compliance related to REST contracts.” As of the date of this filing, TEP has received no damages or other considerations as a result of non-compliance related to REST contracts in the previous three years.

Recently, TEP filed a request for approval of a PPA with Red Horse Wind (Docket E-01933A-13-0056). At the time of this filing, Staff has released their Recommended Opinion & Order, as well as filed an amendment addressing the treatment of liquidated damages. TEP requests that the Commission adopt Staff’s proposed amendment language in its 2014 REST Implementation Plan Order, as it applies to all of the Company’s Renewable Purchase Power Agreements, thus replacing the language from Decision No. 72033 with the following language:

“IT IS FURTHER ORDERED that included with the reporting requirement in Decision No. 70233, dated December 10, 2010, on page 20 lines 6-9, which outlined the reporting of any liquidated damages cases within the previous three calendar years, Tucson Electric Power Company shall also make a recommendation for the disposition of the proceeds, and if applicable inform the Commission of the measures Tucson Electric Power Company intends to take in order to comply with the REST requirements in light of the existing circumstances.”

TEP was also ordered, as part of Decision No. 72033, to “disclose, as part of future annual REST plan filings, whether its affiliates, its employees, or its directors have any direct

financial or other interest in renewable energy projects that are owned or whose output is contracted for by Tucson Electric Power.” As of the date of this filing, TEP has no affiliates, employees, or directors with any direct financial or other interest in renewable energy projects that are owned or whose output is contracted for by TEP.

Finally, Decision No. 72033 required “that Tucson Electric Power Company notify the Commission as part of all future REST Implementation Plans, whether the inclusion of the Davis-Monthan AFB project in the Company’s commercial DG program has precluded any other non-residential renewable DG systems from receiving utility incentives because Tucson Electric Power Company is already in compliance with its non-residential renewable DG requirements as a result of signing the contract with the Davis-Monthan AFB.” There are no projects that have been denied specifically due to the DMAFB project as of the date of this filing.

VII. CONCLUSION

The proposed 2014 Renewable Implementation Plan options A, B and C filed by TEP have been developed in a way that allows the Company to effectively comply with the REST mandate. The Company feels that any of the proposed DG Plans A, B, or C are acceptable. TEP respectfully requests the Commission adopt one of the three Tucson Electric Power 2014 REST Implementation Plan options as submitted.

EXHIBIT 1

TEP EXHIBIT 1

TEP Renewable Energy Standard Tariff								
Line Item Budget	2013 Approved	2014 Plan A	2014 Plan B	2014 Plan C	2015	2016	2017	2018
Total REST Budget & Tariff Collection:	\$ 35,779,502	\$ 34,166,642	\$ 33,866,642	\$ 33,566,642	\$ 50,219,797	\$ 50,417,950	\$ 41,269,384	\$ 43,643,422
Utility Scale Energy								
Above Market Cost of Conventional Generation calculated annually on hourly data per MCCC Matrix	\$ 23,021,000	\$ 25,481,208	\$ 25,481,208	\$ 25,481,208	\$ 30,045,843	\$ 29,119,114	\$ 28,196,369	\$ 27,277,579
DMAFB SunEdison	\$ 1,275,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TEP owned	\$ 5,929,596	\$ 5,230,122	\$ 5,230,122	\$ 5,230,122	\$ 10,408,784	\$ 11,628,191	\$ 3,314,158	\$ 6,510,278
Total	\$ 30,225,596	\$ 30,711,330	\$ 30,711,330	\$ 30,711,330	\$ 40,454,628	\$ 40,747,305	\$ 31,510,527	\$ 33,787,858
Customer Sited Distributed Renewable Energy:								
Up-front Incentive (UFI) (residential) PV and H2O	\$ 744,486	\$ 300,000	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
Up-front Incentive (UFI) (commercial) PV and H2O	\$ 6,453,375	\$ 7,944,363	\$ 7,944,363	\$ 7,944,363	\$ 7,944,363	\$ 7,944,363	\$ 7,944,363	\$ 7,944,363
Annual Performance-based Incentive (PBI)	\$ 29,832	\$ 35,363	\$ 35,363	\$ 35,363	\$ 38,899	\$ 42,789	\$ 47,068	\$ 51,775
Annual meter reading cost	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Consumer Education and Outreach	\$ 7,327,693	\$ 8,679,726	\$ 8,379,726	\$ 8,079,726	\$ 8,083,262	\$ 8,087,152	\$ 8,091,431	\$ 8,096,138
Total	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
TEP internal and contractor training costs	\$ 100,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Information Systems Integration Costs								
Metering:	\$ 131,365	\$ 118,204	\$ 118,204	\$ 118,204	\$ 124,114	\$ 130,320	\$ 136,836	\$ 143,677
Direct material cost for DG production meters, cables, disconnects, meter panels, BTU meters	\$ 1,265,329	\$ 339,103	\$ 339,103	\$ 339,103	\$ 373,013	\$ 410,315	\$ 451,346	\$ 496,481
Program Labor and Administration	\$ 409,013	\$ 300,710	\$ 300,710	\$ 300,710	\$ 330,780	\$ 363,858	\$ 400,244	\$ 440,269
Internal Labor	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
External Labor	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
Materials, Fees and Supplies	\$ 1,736,342	\$ 703,813	\$ 703,813	\$ 703,813	\$ 767,794	\$ 838,173	\$ 915,590	\$ 1,000,750
AZ Solar website								
Total	\$ 525,000	\$ 275,000	\$ 275,000	\$ 275,000	\$ 215,000	\$ 40,000	\$ 40,000	\$ 40,000
Renewable Energy Balancing, Integration, and Field Testing	\$ -	\$ 3,000	\$ 3,000	\$ 3,000	\$ -	\$ -	\$ -	\$ -
PV Panel Lab Degradation Testing	\$ -	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Solar Test Yard Maintenance Equipment	\$ -	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -
Field PV Component Degradation Analysis	\$ -	\$ 182,000	\$ 182,000	\$ 182,000	\$ 150,000	\$ -	\$ -	\$ -
Solar and Wind Forecast Integration Portal	\$ -	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
UWIG, SEPA, AWEA	\$ -	\$ 275,000	\$ 275,000	\$ 275,000	\$ 215,000	\$ 40,000	\$ 40,000	\$ 40,000
Total	\$ 40,122,996	\$ 40,688,072	\$ 40,388,072	\$ 40,088,072	\$ 50,219,797	\$ 50,417,950	\$ 41,269,384	\$ 43,643,422
2014 Program Cost (Total Budget)	\$ 4,343,494	\$ 6,521,430	\$ 6,521,430	\$ 6,521,430	\$ -	\$ -	\$ -	\$ -
Carryover of REST Funds	\$ 35,779,502	\$ 34,166,642	\$ 33,866,642	\$ 33,566,642	\$ 50,219,797	\$ 50,417,950	\$ 41,269,384	\$ 43,643,422
Grand Total (to be collected in 2014 tariff)								

EXHIBIT 2

TEP Exhibit 2

Market Cost of Comparable Conventional Generation 2014 Renewable Energy Standard and Tariff

OVERVIEW

Consistent with the Renewable Energy Standard Tariff (“REST”) Rules passed by the Arizona Corporation Commission (“Commission”), Tucson Electric Power Company’s (“TEP”) Renewable Energy Standard and Tariff Implementation Plan contemplates recovery of expenses in excess of the Market Cost of Comparable Conventional Generation (“MCCCG”).” The Commission provided guidance on defining MCCCG in the context of its REST Rules and identified the MCCCG as “the Affected Utility’s energy and capacity cost of producing or procuring the incremental electricity that would be avoided by the resources used to meet the Annual Renewable Energy Requirement, taking into account hourly supply and demand circumstances. Avoided costs should include any avoided transmission, distribution, and environmental compliance costs.” This exhibit defines the methodology for developing the MCCCG rate for the Company.

METHODOLOGY

Annual MCCCG rates shall be calculated in advance and stated as a single \$/MWh value by renewable technology type. The renewable technology types will be based on projected hourly energy profiles for each type of renewable resource. Annual MCCCG rates will include renewable resources such as wind resources, fixed photovoltaic systems, concentrated solar with storage, single-axis tracking photovoltaic systems, and bio-fueled resources. Specific MCCCG rates would be developed as needed when new renewable technologies or new purchase power agreements are added to the Company’s renewable portfolio. Annual MCCCG rates will capture the value of the seasonality and time of day delivery by deriving an average of on and off peak dispatch costs weighted by on and off peak renewable generation. MCCCG rates shall be calculated each year using the companies production cost simulation software ‘Planning & Risk’. The hourly MCCCG rate determination criteria are shown in Table 1 below by comparing the types of renewable generation with the resource dispatch type. All projected MCCCG hourly rates are based on a ‘Planning & Risk’ production cost simulation that

TEP Exhibit 2

forecasts adequate generation and transmission capacity to meet all firm load obligations including system reserve requirements. Finally, the cost of renewable generation above the annual MCCCCG rates will be recovered through the REST Adjustor Mechanism and REST Tariff.

Table 1 - MCCCCG Hourly Rate Determination Matrix

		Types of Renewable Generation Resources			
		Dispatchable Renewable Generation	Firm Renewable Generation	Non-Firm Renewable Generation	Curtable Non Firm Renewable Generation
Resource Dispatch Type	Wholesale sales transaction served from existing resource portfolio	The MCCCCG rate will be based on projected incremental production costs to serve firm load and wholesale sales opportunities for that hour. Costs will include any projected transmission, distribution and environmental compliance costs.			
	No market transactions. Generation available from thermal resource portfolio.				
	Day, week or month ahead purchase transaction to serve firm load requirements.	The MCCCCG rate will be based on the projected day, week or month-ahead firm purchase power transactions committed for that hour. Costs will include any projected transmission, distribution and environmental compliance costs.			
	Spot market transaction to serve firm load requirements.	The MCCCCG rate will be based on the projected Palo Verde spot market price for that hour. Costs will include any projected transmission, distribution and environmental compliance costs.			

TEP Exhibit 2

CALCULATION

$$MCCCG_{on} = \text{Annual Average On Peak MCCCCG Rate} = \frac{\sum_{i=1}^{8760} PR_i * G_i * X_i}{\sum_{i=1}^{8760} G_i * X_i}$$

$$MCCCG_{off} = \text{Annual Average Off Peak MCCCCG Rate} = \frac{\sum_{i=1}^{8760} PR_i * G_i * (1 - X_i)}{\sum_{i=1}^{8760} G_i * (1 - X_i)}$$

$MCCCG_{Annual Rate}$ = Average of on and off peak MCCCCG rate weighted by projected on and off peak renewable generation.

It is assumed that there is a specific MCCCCG rate for each renewable technology type.

Where

PR_i = Projected Planning & Risk dispatch cost (\$/MWh) for hour $i=1,2,\dots,8760$.

G_i = Projected energy generation in renewable technology resource profile for hour $i=1,2,\dots,8760$.

$X_i = \begin{cases} 1 & \text{if hour } i \text{ is an on peak market hour} \\ 0 & \text{Otherwise} \end{cases}$ for $i = 1, 2, \dots, 8760$

Table 2 – TEP’s 2014 MCCCCG Annual Rates

Renewable Technology	MCCCCG Annual Rates	\$/MWh
	Solar PV	
AZ Wind		\$43.30
Biomass		\$44.99
NM Wind		\$41.90
Solar CSP		\$51.50

EXHIBIT 3

REDACTED

EXHIBIT 4

REDACTED

EXHIBIT 5

IMPLEMENTATION PLAN NEW RESOURCES

Table 1 - Targeted Resources

Line No.	Targeted Generation Resources:	Ownership ¹	Targeted Completion	2008-2012 Total MW	2014	2015	2016	2017	2018	Total	Line No.
1	Solar:										1
2	Springerville	TEP	Complete	6.4	7,573	7,573	7,573	7,573	7,573	37,865	2
3	UA Science & Tech Park I - SOLON	TEP	Complete	1.6	3,041	3,041	3,041	3,041	3,041	15,205	3
4	UA Science & Tech Park II - Amonix	PPA	Complete	2.0	4,111	4,111	4,111	4,111	4,111	20,555	4
5	UA Science & Tech Park III - SOLON	TEP	Complete	5.0	7,914	7,914	7,914	7,914	7,914	39,570	5
6	UA Science & Tech Park IV - AstroSol	PPA	Complete	6.0	10,407	10,407	10,407	10,407	10,407	52,035	6
7	SunPower	TEP	Complete	0.5	875	875	875	875	875	4,375	7
8	Prairie Fire	TEP	Complete	5.0	7,954	7,954	7,954	7,954	7,954	39,770	8
9	NRG Solar	PPA	Complete	35.0	78,010	78,010	78,010	78,010	78,010	390,050	9
10	SunEdison	PPA	Complete	25.0	57,950	57,950	57,950	57,950	57,950	289,750	10
11	E.ON	PPA	Complete	6.2	14,518	14,518	14,518	14,518	14,518	72,590	11
12	E.ON	PPA	Complete	14.0	32,782	32,782	32,782	32,782	32,782	163,910	12
13	SunPower	TEP	01/2014	10.0	19,947	19,947	19,947	19,947	19,947	99,735	13
14	Areva	TEP	02/2014	5.0	13,118	14,310	14,310	14,310	14,310	70,358	14
15	Cogenra	PPA	06/2014	1.0	1,148	1,968	1,968	1,968	1,968	9,020	15
16	Avalon	PPA	07/2014	35.0	33,266	66,532	66,532	66,532	66,532	299,394	16
17	TBD	TEP	2015	20.0	-	38,000	38,000	38,000	38,000	152,000	17
18	Wind:										18
19	Macho Springs	PPA	Complete	50.4	130,244	130,244	130,244	130,244	130,244	651,220	19
20	Red Horse Wind	PPA	2015	50.0	-	129,560	129,560	129,560	129,560	518,240	20
21											21
22											22
23	Biomass/Biogas:										23
24	Sundt-Los Reales	PPA	Complete	4.0	21,100	21,100	21,100	21,100	21,100	105,500	24
25	Total Targeted Generation			282.1	443,958	646,796	646,796	646,796	646,796	3,031,142	25
26											26
27	Targeted Distributed Energy Resources:										27
28	Residential:										28
29	Solar PV	UFI		28.6	54,781	63,781	77,781	92,781	107,781	396,907	29
30	Solar H2O	UFI			6,608	6,733	6,733	6,733	6,733	33,540	30
31											31
32											32
33	Subtotal Residential			28.6	61,389	70,514	84,514	99,514	114,514	430,447	33
34	Non-Residential:										34
35	Solar PV	UFI		5.6	9,929	9,929	9,929	14,929	22,929	67,645	35
36	Solar PV	PBI		41.0	72,448	72,448	72,448	77,448	85,448	380,240	36
37	Solar H2O	UFI			5,629	5,629	5,629	5,629	5,629	28,145	37
38	Solar Chilling	PBI			1,531	1,531	1,531	1,531	1,531	7,655	38
39	Daylighting	UFI			142	142	142	142	142	710	39
40											40
41											41
42	Subtotal Non-Residential			46.6	89,679	89,679	89,679	99,679	115,679	484,395	42
43											43
44	Total Targeted DE			75.2	151,068	160,193	174,193	199,193	230,193	914,842	44

EXHIBIT 6



Tucson Electric Power

Tucson Electric Power Company

Original Sheet No.: 801

Superseding: _____

TEP STATEMENT OF CHARGES

Fee No.	Description	Rate	Effective Date	Decision No.
1.	Service Transfer Fee	\$ 20.00	July 1, 2013	73912
2.	Customer-Requested Meter Re-read	\$ 20.00	July 1, 2013	73912
3.	Special Meter Reading Fee	\$ 20.00	July 1, 2013	73912
4.	Service Establishment and Reestablishment under usual operating procedures During Regulator Business Hours – Single-Phase Service	\$ 32.00	July 1, 2013	73912
5.	Service Establishment and Reestablishment under usual operating procedures After Regular Business Hours (includes Saturdays, Sundays and Holidays) – Single-Phase Service	\$ 57.00	July 1, 2013	73912
6.	Service Establishment and Reestablishment under usual operating procedures During Regular Business Hours – Three-Phase Service	\$ 78.00	July 1, 2013	73912
7.	Service Establishment and Reestablishment under usual operating procedures After Regular Business Hours (includes Saturdays, Sundays and Holidays) – Three-Phase Service	\$ 216.00	July 1, 2013	73912
8.	Service Reestablishment under other than usual operating procedures – Single-Phase Service	\$ 150.00	July 1, 2013	73912
9.	Single-Phase Line Extension Charge per Foot	\$ 17.00	July 1, 2013	73912
10.	Three-Phase Line Extension Charge per Foot	\$ 27.00	July 1, 2013	73912
11.	Underground Differential Line Extension Charge per Foot	\$ 21.00	July 1, 2013	73912
12.	PME Switchgear Cabinet	\$20,500.00	July 1, 2013	73912
13.	Meter Test	\$ 186.00	July 1, 2013	73912
14.	Returned Payment Fee	\$ 10.00	July 1, 2013	73912
15.	Late Payment Finance Charge	1.5%	July 1, 2013	73912

Filed By: Kentton C. Grant
 Title: Vice President of Finance and Rates
 District: Entire Electric Service Area

Rate: Statement of Charges
 Effective: July 1, 2013
 Decision No.: 73912



Tucson Electric Power

Tucson Electric Power Company

Original Sheet No.: 801-1

Superseding: _____

TEP STATEMENT OF CHARGES

(continued)

Description	Rate	Effective Date	Decision No.
Rider R-1 – Purchased Power and Fuel Adjustment Clause (PPFAC)	\$(0.001388) per kWh	July 1, 2013	73912
Rider R-2 – Demand Side Management Surcharge (DSMS) RESIDENTIAL: NON-RESIDENTIAL:	\$0.002232 per kWh 0.025479%	July 1, 2013	73912
Rider R-3 – Market Cost of Comparable Conventional Generation (MCCCG) Calculation as Applicable to Rider-4 NM-PRS	\$0.025240 per kWh	April 1, 2013	73771
Rider R-5 – Electric Service Solar Rider (Bright Tucson Community Solar™) Solar Block Energy Rate for Residential Lifeline Discount, Rate R-06-01 Solar Block Energy Rate for Residential Electric Service, Rate R-01 Solar Block Energy Rate for General Service, Rate GS-10 Solar Block Energy Rate for Large General Service, Rate LGS-13 Solar Block Energy Rate for Municipal Service, Rate PS-40	\$0.050198 per kWh \$0.050324 per kWh \$0.048475 per kWh \$0.049371 per kWh \$0.049086 per kWh	February 1, 2011	71835 ¹
Rider R-5 – Electric Service Solar Rider (Bright Tucson Community Solar™) Solar Block Energy Rate for Residential Electric Service, Rate R-01 Solar Block Energy Rate for Small General Service, Rate GS-10 Solar Block Energy Rate for Large General Service, Rate LGS-13	\$0.053463 per kWh \$0.053274 per kWh \$0.053227 per kWh	July 1, 2013	73912
Rider R-6 – Renewable Energy Standard and Tariff Surcharge REST-TS1 Renewable Energy Program Expense Recovery <u>Monthly Cap</u> For Residential Customers: For Small Commercial Customers: For Large Commercial Customers: For Industrial Customers: For Public Authority: For Lighting:	\$0.008000 per kWh <u>Monthly Cap</u> \$ 3.80 per month \$ 115.6530.00 per month month \$1,050.00 per month \$7,700.00 per month \$ 170.00 per month \$ 115.6530.00 per month month	February 1, 2013	73637PENDING

¹The Rider R-5 approved by Decision No. 71835 is closed for new enrollment as of July 1, 2013

Filed By: Kentton C. Grant
Title: Vice President of Finance and Rates
District: Entire Electric Service Area

Rate: Statement of Charges
Effective: July 1, 2013
Decision No.: 73912



Tucson Electric Power

Tucson Electric Power Company

Original Sheet No.: 801-2

Superseding:

TEP STATEMENT OF CHARGES (continued)

Table with 4 columns: Description, Rate, Effective Date, Decision No. It contains three rows of charges including Rider R-6, Rider R-8, and Rider R-9.

Filed By: Kentton C. Grant
Title: Vice President of Finance and Rates
District: Entire Electric Service Area

Rate: Statement of Charges
Effective: July 1, 2013
Decision No.: 73912

EXHIBIT 7



Tucson Electric Power

Tucson Electric Power Company

Original Sheet No.: 706
Superseding: _____

Rider R-6
Renewable Energy Standard and Tariff (REST) Surcharge
REST-TS1 Renewable Energy Program Expense Recovery

APPLICABILITY

Mandatory, non-bypassable surcharge applied to all energy consumed by all Customers throughout Company's entire electric service area.

RATES

For all energy billed which is supplied by the Company to the Customer. The REST surcharge shall be applied to all monthly bills. The REST rates are shown in the TEP Statement of Charges.

Notes:

1. A Large Commercial Customer is one with monthly demand greater or equal to 200 kW but less than 3,000 kW.
2. An Industrial Customer is one with monthly demand equal to or greater than 3,000 kW.
3. For non-metered services, the lesser of the load profile or otherwise estimated kWh required to provide the service in question, or the service's contract
4. kWh shall be used in the calculation of the surcharge.

This charge will be a line item on customer bills reading "Renewable Energy Standard Tariff."

Per Decision No. 73637 effective February 1, 2013, any Customer who has received incentives under the REST Rules, shall pay the average of the REST surcharge paid by members of their Customer class. This requirement shall apply to renewable systems reserved on and after January 1, 2012. The average price by class is shown in the TEP Statement of Charges

TEP STATEMENT OF CHARGES

For all additional charges and assessments approved by the Arizona Corporation Commission (ACC) see the TEP Statement of Charges which is available on TEP's website at www.tep.com.

RULES AND REGULATIONS

The standard Rules and Regulations of the Company as on file with the ACC shall apply where not inconsistent with this Rider.

TAX CLAUSE

To the charges computed under the above rate, including any adjustments, shall be added the applicable proportionate part of any taxes or governmental impositions which are or may in the future be assessed on the basis of gross revenues of the Company and/or the price or revenue from the electric energy or service sold and/or the volume of energy generated or purchased for sale and/or sold hereunder.

Filed By: Kentton C. Grant
Title: Vice President of Finance and Rates
District: Entire Electric Service Area

Rate: R-6
Effective: July 1, 2013
Decision No.: 73912



Tucson Electric Power

Tucson Electric Power Company

Original Sheet No.: 707

Superseding: _____

Rider R-7
Customer Self-Directed Renewable Energy Option
REST-TS2 Renewable Energy Standard Tariff

AVAILABILITY

Open to all Eligible Customers as defined at A.A.C. R14-02-1801.H.

APPLICABILITY

Any Eligible Customer that applies to the Company under this program and receives approval shall participate at its option.

PARTICIPATION PROCESS

An Eligible Customer seeking to participate shall submit to the Company a written application that describes the Distributed Renewable Energy (DRE) resources or facilities that it proposes to install and the estimated costs of the project. The Company shall have sixty (60) calendar days to evaluate and respond in writing to the Eligible Customer, either accepting or declining the project. If accepted, the Customer shall be reimbursed up to the actual dollar amounts of customer surcharge paid under the REST-TS1 Tariff in any calendar year in which DRE facilities are installed as part of the accepted project. To qualify for such funds, the Customer shall provide at least half of the funding necessary to complete the project described in the accepted application, and shall provide the Company with sufficient and reasonable written documentation of the project's costs. Customer shall submit their application prior to May 1 of a given year to apply for funding in the following calendar year.

FACILITIES INSTALLED

The maintenance and repair of the facilities installed by a Customer under this program shall be the responsibility of the Customer following completion of the project. In order to be accepted by the Company for reimbursement purposes, the project shall, at a minimum, conform to the Company's System Qualification standards on file with the Commission. (REST Implementation Plan, Renewable Energy Credit Purchase Program – RECPP, Distributed Generation Interconnection Requirements, Net Metering Tariff, Company's Interconnection Manual)

PAYMENTS AND CREDITS

All funds reimbursed by the Company to the Customer for installation of approved DRE facilities shall be paid on an annual basis no later than March 30th of each calendar year. All Renewable Energy Credits derived from a project, including generation and Extra Credit Multipliers, shall become the property of the Company and shall be applied towards the Company's Annual Renewable Energy Requirement as defined in A.A.C. R14-2-1801.B.

RULES AND REGULATIONS

The standard Rules and Regulations of the Company as on file with the Arizona Corporation Commission shall apply where not inconsistent with this Rider.

RELATED SCHEDULES

- REST-TS1 - Renewable Energy Program Expense Recovery

Filed By: Kentton C. Grant
Title: Vice President of Finance and Rates
District: Entire Electric Service Area

Rate: R-7
Effective: July 1, 2013
Decision No.: 73912

EXHIBIT 8

TEP Exhibit 8

Customer Load Percentage Analysis

**TUCSON ELECTRIC POWER COMPANY
2014 REST IMPLEMENTATION PLANS
CUSTOMER IMPACTS**

Company Proposed						
Customer Class	Total Revenue	Percent of Revenue	Average Bill	Montly Cap	Percent of Customers at Cap	Percentage to Total Load
Residential	\$14,490,645	42.4%	\$3.22	\$3.80	72.0%	41.7%
Small Commercial	\$10,933,894	32.0%	\$20.09	\$115.65	4.8%	23.5%
Large Commercial	\$5,734,336	16.8%	\$793.90	\$1,050.00	45.2%	12.8%
Industrial & Mining	\$2,772,000	8.1%	\$7,668	\$7,700.00	100.00%	9.73%
Lighting (PSHL)	\$236,001	0.7%	\$15.57	\$115.65	0.43%	0.41%
Total	\$34,166,876	100.0%				

EXHIBIT 9

Exhibit 9

Tucson Electric Power Company

Renewable Energy Credit Purchase Program

2014

TABLE OF CONTENTS

I.	Frequently Asked Question.....	1
II.	Project Funding	3
III.	Installer Qualifications.....	5
IV.	Net Metering	5
V.	Prohibition on System Removal	5
VI.	Community Solar	6
VII.	Up-Front Incentives	7
	A. Solar Electric Residential Projects 30 kW DC or Less and Non-Residential Projects 70 kW DC or Less.....	11
	B. Residential and Small Non-Residential Solar Water Heating and Space Heating Smaller than 400,000 kWh Equivalent Annual Production per Year	16
	i. Qualifications for Residential Solar Water Heating and Space Heating	17
	ii. Solar Hot Water Off-Angle and Shading Annual Energy Derating Chart.....	20
VIII.	Other Incentives	47
	A. Technologies without Technology Specific Criteria	47
	B. Non-Conforming Projects.	47
	C. Guidelines for Projects Electing to Not Receive Incentives.....	47
	Appendix 1: Incentive Summary Tables	
	Appendix 2: Glossary	

I. Frequently Asked Questions

What is Distributed Generation?

Distributed Generation (DG) is defined as electric generation sited at a customer premise, providing electric energy to the customer load on that site or providing wholesale capacity and energy to the local Utility Distribution Company for use by multiple customers in contiguous distribution substation service areas. The generator size and transmission needs shall be such that the plant or associated transmission lines do not require a Certificate of Environmental Compatibility from the Arizona Corporation Commission (ACC).

What are Distributed Renewable Energy Resources?

Distributed Renewable Energy Resources are applications of appropriate technologies that are located at a customer's premise that displace conventional energy resources that would otherwise be used to provide electricity to Arizona customers.

Tucson Electric Power Company (TEP or Company) provides programs consistent with these definitions and generally refers to these programs as DG programs. For more information on these and other definitions, please visit the ACC's Renewable Energy Standard and Tariff webpage at <http://www.cc.state.az.us/divisions/utilities/electric/environmental.asp>

What is Net Metering?

Net Metering refers to the production of electricity from a qualifying renewable energy electric generator, such as photovoltaic (PV) panels, used to offset electricity provided by TEP. Customers deemed eligible for participation in TEP's Net Metering Tariff will be required to install a bi-directional meter capable of measuring the flow of electricity to and from the customer's premises. Net Metering customers may buy and sell electricity to and from TEP under the applicable terms and tariff rate. In the event that a Net Metering customer carries a negative balance due to the over-production of electricity for the time period specified in the Net Metering Tariff, the customer's remaining credits will be transitioned to a payment at the applicable wholesale rate. This will occur once per year, in October. The customer's balance will then be reset to zero.

No system may exceed 125% of connected load for that meter, where connected load is defined as the maximum demand divided by 0.6. For more information on Net Metering, please visit <http://www.tep.com/customer/rates/pricing/>

Why is TEP involved with DG?

The ACC, which regulates TEP and utilities like it in Arizona, enacted the Renewable Energy Standard and Tariff (REST) Rules in 2008. These rules require TEP to replace a substantial portion of its retail sales with renewable energy by investing in a variety of projects, including both utility-scale and DG projects. In order to comply with a portion of the REST Rules governing DG projects, TEP may purchase Renewable Energy Credits (REC) from eligible customers through their incentive programs. Under these programs, TEP does not own or build the systems that generate these credits, but rather incents them by purchasing the resulting RECs. Pursuant to the REST Rules, one REC is equivalent to 1 kilowatt hour (kWh). For more information on the ACC's REST Rules, please visit the ACC's REST Rules webpage at <http://www.cc.state.az.us/divisions/utilities/electric/environmental.asp>

How does TEP get involved with DG?

One way in which TEP supports DG projects is by providing residential and non-residential programs for customers with qualifying renewable energy generators to participate in. These programs include a variety of

ACC approved up-front and performance-based incentive payments by technology. These incentives are the method by which TEP actually purchases a REC. For details, terms, and conditions regarding for each qualifying technology, please see the appropriate sections of this document. Please note that TEP issues incentive payments for RECs; these payments are NOT REBATES. It should also be noted that not every renewable technology system is eligible to receive an incentive. TEP will only incent technologies specifically outlined herein.

Who is eligible for the incentive and how do I apply?

Any residential or non-residential customer currently connected to TEP's electric service system that installs a qualifying renewable facility, in compliance with the terms and conditions described herein, may apply to participate in one of TEP's DG programs. Alternatively, any TEP-qualified installer may submit the required DG program application on behalf of a qualifying TEP customer.

What is a TEP-qualified installer?

A TEP-qualified installer is an installer that has been evaluated by TEP personnel and deemed to have met the prerequisites for qualification. In order to become TEP-qualified, each installer must meet certain TEP requirements, including but not limited to annual submittal of the necessary paperwork contained within the "Installer's Packet". Each submittal must include, but is not limited to the following: an Installer's Agreement, a current and valid Registrar of Contractor's (ROC) license appropriate for the solar technology being installed, Arizona business license in good standing, and similar information regarding any sub-contractor(s), if applicable. TEP will not, under any circumstances, issue or assign incentive payment(s) to an installer who is not TEP-qualified.

Where can I find more information?

For the terms and conditions of participation in any of TEP's DG programs, please consult TEP's Renewable Energy Credit Purchase Program (RECPP), which can be found online at www.tep.com/Renewable/. Questions may be directed to (520) 917-3673.

What else do I need to know?

Each of the programs described herein, including incentive amounts and all terms and conditions, are subject to change as dictated by program need and any and all regulatory authorities. Nothing included in TEP's RECPP is intended as a guarantee of funds or qualification for purposes of program participation.

TEP's RECPP does not accommodate non-customer sited projects for any reason. "Solar Farms" or other utility-scale generation projects do not qualify under TEP's RECPP. These projects may participate in TEP's next request for proposals (RFP) for renewable energy. Information regarding TEP's upcoming RFP may be found at www.tep.com.

TEP's RECPP does not allow for any aggregated or virtual net metering of a customer's loads under any circumstance. The incentives described herein must meet the definitions of DG and Renewable Energy Resource as defined by the ACC and contained within the Frequently Asked Questions portion of this document.

II. Project Funding

TEP will allocate funds to all qualifying technologies applying for residential and non-residential incentives. Non-PV categories may be protected from over-spending in PV at the discretion of TEP Program Managers. This may result in a 10% carve out for technologies other than PV for both classes of projects. No more than 25% of a single budget may be reserved for any single project.

Funding for the following is detailed below:

1. **Up-Front Incentive Levels for Solar Electric Residential Projects 30 kW DC or Less and Non-Residential Projects 70 kW DC or Less². Residential and Small Non-Residential Solar Water Heating and Space Heating Smaller than 400,000 kWh Equivalent Annual Production per Year.**
- 3.

Funds will be made available for reservations on a first-come, first-reserved basis, until annual funding is exhausted. If the incentive level has changed from the date of the original reservation to the date when the reservation is approved, the new incentive level shall be applied.

III. Installer Qualifications

All systems receiving incentives under the RECPP must be installed by an installer properly licensed by the state of Arizona and qualified to install solar projects. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

1. The installer must possess a valid license on file with the Arizona Registrar of Contractors (AZROC) with a license classification appropriate for the solar technology being installed. Alternatively, the installer must identify use of any sub-contractor(s) and ensure the subcontractor(s) maintain an appropriate license(s) on file with the AZROC for the solar technology being installed. Installers may not sub contract outside their scope of work per the AZROC rules; and
2. The installer must possess an Arizona business license that is active and in good standing.

Installers must have completed the TEP Installer's Packet and have provided the above information to be retained on file with TEP. The installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed by the end of the calendar year and resubmitted for participation in the upcoming program year.

IV. Net Metering

RECPP incentives can be applied to systems designed to serve only the typical load of the customer with whom the incentive agreement has been established. The assessment of that typical load does not preclude the periodic production of electricity in excess of the customer's demand. All projects must comply with ACC Net Metering rules.

V. Prohibition of System Removal

Neither the Qualifying System nor any component thereof may be removed by any party, including but not limited to the applicant or future owners or occupants of the property until expiration of the Renewable Energy Credit Agreement or the last day of the final month of the final full calendar year of the applicable incentive payment term. If the Qualifying System or any component thereof is removed by any party in violation of this provision, the customer party to the Renewable Energy Credit Agreement shall immediately reimburse TEP a prorated amount of the incentive amount paid by TEP to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the original Renewable Energy Credit Agreement's contracted operational life of the original system has expired.

TEP shall attempt to monitor the number of missing or non-working distributed generation systems and shall summarize its observations in its annual Compliance Report.

VI. Community Solar

For customers who do not wish to operate a DG system, TEP offers the Bright Tucson Community Solar Program. The Bright Tucson Community Solar Program offers an easy and affordable way for TEP customers to meet their electric needs with locally generated solar power by purchasing solar power in "blocks" of 150 kWh per month. A customer may buy some or all of their power through the program. For more information, please see TEP's Green Energy webpage at www.tep.com/renewable/business/bright/.

VII. Up-Front Incentives

Up-Front Incentive (UFI) programs are limited to Residential and Small Non-Residential Projects only.

a. Qualifications

Qualifying Technology	Size Limit
Residential Solar Photovoltaics (PV)	Less than 30 Kilowatts (kW) Direct Current (DC)
Residential Hot Water & Space Heating	
Small Non-Residential Solar PV	Less than 70 kW DC
Small Non-Residential Hot Water & Space Heating	Less than 400,000 Kilowatt Hours (kWh) of Estimated Annual Savings

b. Application Process

TEP's UFI application process appears below. TEP requires strict adherence to this process. Any deviation from the requirements below may result in your application being denied. If you are working with an installer or contractor, please ensure that they follow the required processes explained below. TEP will assign payment under its UFI application process to the party that appears on the assignment of payment form or as designated by the UFI REC Purchase Agreement. Please work with your installer or contractor prior to beginning the process below to determine who payment should go to. **Once assignment of payment is decided and submitted to TEP, modifications will not be allowed under any circumstances.**

1st Step: Submittal of the Properly Completed TEP Online Application.

*Please visit www.tep.com/renewable for online application submission.

2nd Step: Submittal of the Properly Completed Reservation Packet* to TEP.

The RECPP Reservation Packet includes the following items:

1. RECPP Reservation Packet Cover Sheet
2. Assignment of Payment Form (AOP) if applicable
3. IRS Form W-9, required from the TEP main customer for cash purchase projects. For lease projects W-9 is required from the lessor.
4. Current UFI Renewable Energy Credit Purchase Agreement, signed by the TEP main customer.
5. For Solar Water Heating Applications:
 - A recent copy of the Solar Rating and Certification Corporation (SRCC) OG300 schematic obtained from the SRCC website that includes in the printed view the annual kWh savings estimated.
 - In the event of a collector substitution both collectors must be SRCC OG100 rated. A recent copy of the SRCC OG100 Certification and Rating is required for both the collector named on the OG300 system and the substituting collector.
6. For Solar Space Heating Incentives:

- A copy of an Energy-Modeling and Performance Simulation Report that estimates the energy savings that can be expected from the system. Report should include a system schematic/diagram.
- A recent copy of the SRCC OG100 Certification and Rating obtained from the SRCC website.

*** *All Reservation paperwork must contain the associated project number that is provided upon successful completion of online application**

3rd Step: Required program documents & other associated paperwork can be forwarded as follows:

Mail may be forwarded to the following address regardless of program:

Tucson Electric Power
Mail Stop HQE502
P.O. Box 711
Tucson, AZ 85702-0711

Emails and Faxes may be sent to the following based on program:

Residential PV: sunshare@tep.com or faxed to (520) 545-1576
Residential Hot Water/Space Heating: solarwaterheating@tep.com or faxed to (520) 545-1577
Non Residential Projects: commrenewables@tep.com or faxed to (520) 770-6719

Paperwork sent directly to any specific employee Company email address may not be processed.

4th Step: Confirmation or Denial of Reservation.

- Once received, TEP will match the online application with the submitted Reservation Packet. It is the customer's and/or installer's responsibility to ensure that all forms are filled out completely and correctly. **Forms with missing and/or incorrect information will be placed in a "Missing information" status and will not be approved until corrected. Outdated forms will be rejected.**
- TEP will evaluate each application for completeness and confirm whether or not reservation funds are available. **All applications are subject to the availability of program funds.** TEP will also verify, where an installer is used, that the installer is a TEP-qualified installer. Provided that the application meets TEP's requirements, and that the installer, if any, is TEP-qualified, and that program funds sufficient to fund the application are available, TEP will issue the customer and installer a reservation confirmation letter and provisionally approve the application. **If no funds are available at the time TEP processes the reservation, TEP will notify the installer and customer and the application will be denied.**

5th Step: Submittal of Jurisdictional Final Inspection.

1. Residential Programs:

Within 120 days from the date of the reservation confirmation letter, customer or installer must submit an application to the appropriate jurisdictional entity (e.g., City of Tucson or Pima County) for a final inspection of the qualifying system. Failure to obtain a jurisdictional final inspection within 180 days of the date of the reservation confirmation letter will result in the revocation of a customer's incentive reservation.

If this occurs, the customer or installer must reapply to participate in the program subject to available funding and incentive levels in effect at time of reapplication.

2. Non-Residential Programs:

Within 150 days from the date of the reservation confirmation letter, customer or installer must submit an application to the appropriate jurisdictional entity (e.g., City of Tucson or Pima County) for a final inspection of the qualifying system. Failure to obtain a jurisdictional final inspection within 210 days of the date of the reservation confirmation letter will result in the revocation of a customer's incentive reservation. If this occurs, the customer or installer must reapply to participate in the program subject to available funding and incentive levels in effect at time of reapplication.

3. In the event that a jurisdictional final inspection is not completed within the required timelines and the customer or installer provides proof to TEP that a correctly completed application for a jurisdictional final inspection was made within the timeline required. TEP will neither process nor revoke the customer's reservation for 30 days to allow customer time to confirm with the inspecting jurisdiction when the inspection will occur. Provided that the customer provides TEP with an inspection date within those 30 days, the customer's reservation will be honored. If 30 days elapses with no information from the customer, the reservation will be revoked and customer must reapply to participate in the program subject to available funding and incentive levels in effect at time of reapplication.
4. For all PV systems, the inspecting jurisdiction will electronically provide TEP with proof of a passed inspection. **It is the responsibility of the installer to monitor that the jurisdiction has transmitted the approved final inspection to TEP.** For solar water heating systems and other non-PV systems, the installer or customer must submit proof of a passed final inspection directly to TEP that includes the installation address, scope of work, and inspection status.

6th Step: Submittal of Certificate of Completion (COC) Form.

For all program applications: once the jurisdictional final inspection has been approved, the installer or customer must submit the COC. For PV systems, please submit this form electronically to sunshare@tep.com. For solar Water Heating – Space Heating systems, please submit the COC to solarwaterheating@tep.com along with the copy of the corresponding approved jurisdictional final. For non-residential programs please submit the COC to commrenewables@tep.com It is the responsibility of the installer to be sure that the COC contains the reservation Project Number, any COC's without a project number are considered incomplete and **will not be accepted**.

7th Step: TEP will inspect the system and set the appropriate meters if required (such as for PV).

8th Step: TEP process of incentive payment.

Upon receipt of the COC and the system passing inspection, TEP will process the payment to the party indicated on the Assignment of Payment form or as designated by the UFI REC Purchase Agreement. In the case of solar leases where only the Lessor can be paid, see section 6.3 of the UFI REC Purchase Agreement. Assignment of Payment forms may only be submitted once as part of the RECPP Reservation Packet. TEP will not accept changes to the AOP. TEP will not pay incentives without complete and accurate receipt of the required documents.

c. Restrictions/Important Notes:

1. TEP reserves the right to modify the business process to better serve customers or to increase efficiency. Please refer to www.tep.com/renewable for the most up-to-date information.
2. With the exception of minor system modifications during the procurement process (panel wattage changes of less than 10 watts, alternative inverter, et cetera), any material changes to a system made after the application is processed will result in cancellation of the existing application and will require a new online application to be submitted. The reservation request may be denied because the request is not in compliance with program requirements (see specific technical sections below).
3. Project extensions will not be granted except as outline herein.
4. Receipt of the application is not valid until a properly completed RECPP Reservation Packet and the installer's New Supplier Fact Sheet has been received by TEP. Once the Reservation Packet is received and deemed complete, the application is validated and the reservation retained at the incentive level in place at time of validation. Any reservation packets submitted incorrectly will be cancelled as will their corresponding online application. Reapplication may result in a reduction of incentive or unavailable funding.
5. In 2014, TEP will not purchase RECs from retroactive systems. "Retroactive" is defined as a renewable solar system installed before an application for incentive was received and approved by TEP. TEP must receive the required program documents; RECPP Reservation Packet and approve the application, and reserve the funds prior to the system being installed to receive the incentive ("installed" is defined as the date of the final clearance from the appropriate jurisdiction).
6. Incentives are not guaranteed.
7. No more than 25% of a single budget may be reserved for any single project.
8. In order to participate in the RECPP, installers must have on file with TEP a completed Installer's Packet, including a New Supplier Fact Sheet.. This document is available in the Installer's Corner at www.tep.com/renewable.

A. Solar Electric Residential Projects 30 kW DC or Less and Non-Residential Projects 70 kW DC or Less

The UFIs for eligible customers with residential projects 30 kW DC or less and non-residential projects 70 kW or less are paid in a one-time payment based on the system's designed capacity. Table 1 identifies the incentives available for eligible systems.

Table 1. Dollar per Watt Incentive for On-Grid Residential Systems Smaller than 30 kW DC and On-Grid Non-Residential Systems 70 kW DC or Less

YEAR	RESIDENTIAL	SMALL NON-RESIDENTIAL
2014	\$0.10	\$0.10

a. Terms & Restrictions

- On-Grid Residential customers will receive a UFI up to a **cap of 30 kW DC**. If a residential system is installed larger than 30 kW DC, TEP will only provide an incentive payment for the first 30 kW DC.
- Any residential project larger than 10 kW AC will be subject to Engineering review to determine if proposed project is on a shared transformer. Following TEP's Service Requirements, customers may potentially be subject to a reduction in system size or upgrading of existing facilities at the expense of the customer should it be determined necessary by TEP Engineering.
- On-Grid Small Non-Residential customers will receive a UFI up to a **cap of 70 kW DC**. Small Non-Residential systems larger than 70 kW DC must apply under the large non-residential program.
- The UFI may not exceed 50% of Total System Cost.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.
- As described later in this document, **these incentive levels may be decreased because of sub-optimal system positioning**.
- The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change after the system reservation is approved, the incentive amount reserved will not change as long as the reservation is not cancelled.
- For consumer protection, and in order to minimize program manipulation affecting legitimate solar development, no incentive applications will be accepted where the installed price per watt exceeds \$6.00, or where labor charges are in excess of 200% of the system component costs.
- In return for TEP's payment of a UFI, TEP will be given complete and irrevocable ownership of the Renewable Energy Credits until December 31st of the 20th full calendar year after completion of installation of the system. Operational life during that time frame must be supported by system warranty or planned maintenance schedules. If a system size exceeds the incentive cap, TEP will still be given complete and irrevocable ownership of the Renewable Energy Credits, within this timeline, for the full system size.

Project Requirements after Installation

After completing the installation of a Residential Solar Electric project of 30 kW DC or less, or a Non-Residential Solar Electric project of 70 kW DC or less, the customer must continue to provide information to TEP about the system's performance.

All customer systems receiving UFIs are obligated to include a TEP-supplied production meter, which will report system production to TEP in accordance with the regular meter-reading schedule. TEP, at its option, may perform periodic inspections of the system for operation, metered production, and reporting purposes.

b. System Qualifications and Requirements

All solar electric generating Customer Systems must meet the following system and installation requirements to qualify for TEP's RECPP. Capitalized terms not defined herein shall have the meanings ascribed to them in the RECPP Agreement.

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive an RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive an RECPP incentive, as it does reflect both industry and TEP concurrence with those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement, which is in conflict with a site-specific governmental requirement, shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Required Equipment Standards

1. The Customer System components must be certified as meeting the requirements of IEEE-929 - Recommended Practice for Utility Interface of Photovoltaic Systems.¹
2. Photovoltaic components must be certified by a nationally recognized testing laboratory as meeting the requirements of UL-1703 - Standard for Flat Plate Photovoltaic Modules and Panels Systems and be covered by a non-prorated manufacturer's warranty of at least 20 years.
3. The inverter must be certified as meeting the requirements of IEEE-1547 - Recommended Practice for Utility Interface of Photovoltaic Systems and it must be UL-1741 certified. Inverters must be covered by a manufacturer's warranty of at least ten years.
4. The Customer System design and installation must meet all requirements of the latest edition of the National Electrical Code (NEC), including Article 690 and all grounding, conductor, raceway, over-current protection, disconnect, and labeling requirements.

¹ Some technology-specific criteria reference third party standards. The requirements of those standards are fully applicable when referenced as part of technology specific criteria. TEP recognizes that new standards are likely to develop in the near future for technologies included in the RECPP, and recommends that the new standards are examined for application in this program definition as they become available.

5. All other electrical components must be UL listed.
6. The Customer System and installation must meet the requirements of all federal, state, and local building codes and have been successfully inspected by the building official having jurisdiction. Accordingly, the installation must be completed in accordance with the requirements of the latest edition of NEC in effect in the jurisdiction where the installation is being completed, including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-122, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded.
7. The Customer System must meet Company and Arizona Corporation Commission interconnection requirements for self-generation equipment. See <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf> for these requirements.

Installation Requirements

1. A grid-connected Residential Customer System must have a total solar array nameplate rating of at least 1,200 watts DC and no more than 30,000 watts DC.
2. The Customer System installation must meet TEP's Electric Service Requirements 2013 Edition, Section 1.22, as follows:

“As required by TEP/UES's Interconnection Requirements for Distributed Generation, the customer shall provide and install a disconnect switch to isolate all ungrounded conductors of the generating facility from the TEP/UES system. The switch shall be a gang-operated, load-break device with a visible air-gap in the open position. It shall be rated for the current and voltage requirements of the generating facility and shall be lockable in the open position”.
3. The DG utility meter and utility disconnect will be installed within 10' of the main service panel and in a location readily accessible by TEP at all times.
4. Products must be installed according to manufacturers' recommendations.
5. The Customer System PV panels and modules must face within +/- 90 degrees of true south, and be substantially unshaded from 9 am to 3 pm. System arrays which are facing at an azimuth angle other than optimal as defined herein or shaded for more than one hour per day will be subject to a reduced incentive payment per Attachment B.
6. The Customer System PV panels and modules must be fitted at an angle of 0 degrees to 60 degrees from horizontal. System arrays which are fitted with an elevation angle other than optimal as defined herein will be subject to a reduced incentive payment per Attachment B.
7. For Residential Customer Systems, Company shall furnish a meter, DG meter socket, and AC disconnect switch in accordance with Section 1.22 of TEP's Electric Service Requirements. Company shall install the meter. For Non-Residential customer systems, Company shall furnish and install DG meter only. The meter socket and AC disconnect shall be installed in accordance with Section 1.22 of TEP's Electric Service Requirements. Installer must notify TEP of wiring configuration so that Company may provide the appropriate 3-phase meter.
8. Total voltage drop on the DC and AC wiring from the furthest PV module to the AC meter will not exceed 2%.

9. PV panels and DC to AC inverter will be installed with sufficient clearance to allow for proper ventilation and cooling. At a minimum, manufacturer clearance recommendations will be observed. PV modules may be mounted less than 4 inches above any surface and an additional inch of clearance for each foot of continuous array surface area beyond four feet in the direction parallel to the mounting support surface, only in cases when arrays are flush-mounted to roof pitch. Otherwise, the four-inch spacing and an additional inch of clearance for each foot of continuous array surface area minimum is required.
10. Storage Batteries are not allowed as part of the Customer System unless the inverter is a separate component and TEP can locate the DG utility meter at the inverter's output. If configured otherwise, battery losses will adversely reflect in the annual AC metered energy output. Customer's solar energy generation and energy storage system must meet the requirements of 2 and 3 of this Attachment A.
11. The DC to AC inverter used must provide maximum power point tracking for the full voltage and current range expected from the photovoltaic panels used and the temperature and solar insolation conditions expected in Tucson, Arizona.
12. The DC to AC inverter must be capable of adjusting to "sun splash" from all possible combinations of cloud fringe effects without interruption of electric production.
13. TEP reserves the right to modify standards as technology changes on a case-by-case basis, pending independent laboratory analysis, Professional Engineer (PE) stamp, or TEP engineering analysis.

General Requirements

1. All Customer System installations must be completed in a professional, workmanlike and safe manner.
2. The Customer must be connected to the Company's electric grid and be a net-metered customer.
3. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.
4. The project must comply with applicable local, state, and federal regulations.
5. Products must be installed according to manufacturer's recommendations.
6. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
7. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
8. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production..
9. PV system components shall be properly labeled, including AC & DC disconnects, DG meter, service panel (outside cover), and breakers inside the service panel.
10. The system will in all cases have a material and full labor warranty of at least five years.

SunShare Solar Electric off-Angle & Shading Annual Energy Derating Chart for Residential Systems of 30 kW DC or Less and Small Non-Residential Systems of 70 kW DC or Less

TEP Up-Front Incentive (UFI) Payment - PV Off-Angle/Azimuth & Shading Derating Chart

		Array Azimuth Angle from Due South																		
		East	80	70	60	50	40	30	20	10	South	10	20	30	40	50	60	70	80	West
Array Angle Above Horizontal	0	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
	5	90%	90%	90%	90%	90%	90%	95%	95%	95%	95%	95%	95%	95%	90%	90%	90%	90%	90%	90%
	10	90%	90%	90%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	90%	90%	90%
	15	90%	90%	95%	95%	95%	95%	100%	100%	100%	100%	100%	100%	95%	95%	95%	95%	90%	90%	85%
	20	85%	90%	95%	95%	95%	100%	100%	100%	100%	100%	100%	100%	100%	95%	95%	95%	90%	85%	85%
	25	85%	90%	95%	95%	95%	100%	100%	100%	100%	100%	100%	100%	100%	95%	95%	95%	90%	85%	85%
	30	85%	90%	90%	95%	95%	100%	100%	100%	100%	100%	100%	100%	100%	95%	95%	90%	90%	85%	80%
	35	85%	85%	90%	95%	95%	100%	100%	100%	100%	100%	100%	100%	100%	95%	95%	90%	85%	85%	80%
	40	80%	85%	90%	95%	95%	100%	100%	100%	100%	100%	100%	100%	100%	95%	90%	90%	85%	80%	75%
	45	80%	85%	85%	90%	95%	95%	100%	100%	100%	100%	100%	100%	95%	95%	90%	85%	85%	80%	75%
	50	75%	80%	85%	90%	90%	95%	95%	100%	100%	100%	95%	95%	95%	90%	90%	85%	80%	75%	70%
55	75%	80%	85%	85%	90%	95%	95%	95%	95%	95%	95%	95%	90%	90%	85%	80%	80%	75%	70%	
60	70%	75%	80%	85%	85%	90%	90%	90%	95%	90%	90%	90%	85%	85%	85%	80%	75%	70%	65%	

0 degree kept at 85% to account for soiling
 3/12 roof pitch to be kept at 5% derate for higher cell temps of flush mount

Array Shading

If both off-angle shading conditions apply, multiply the off angle derating factor with the shading derating factor to obtain the array derating factor for the Up-Front Incentive (UFI) payment Calculation.

Maximum Morning Shaded Hours	0	1	0	1	0	2	1	2	2	0	3	1	3	3	2
Maximum Evening Shaded Hours	0	0	1	1	2	0	2	1	2	3	3	3	1	2	3
Percentage of annual energy	100%	100%	100%	95%	90%	90%	85%	85%	75%	75%	70%	70%	70%	80%	80%

Qualifying PV systems using Building Integrated Photovoltaic (BIPV) modules of total array capacity of 5 kW DC or less shall receive 90% of the UFI incentive value. Systems using BIPV modules of total array capacity of greater than 5 kW DC shall be derated based on heating unless the applicant can demonstrate optimal performance.

B. Residential and Small Non-Residential Solar Water Heating and Space Heating Smaller than 400,000 kWh Equivalent Annual Production per Year

Residential solar water heating and space heating in residential and small non-residential applications are eligible for up-front incentives (UFI). UFIs are those incentives where the customer receives a one-time payment based on the system's designed capacity.

Table 2. UFIs for Residential Solar Water Heating and Space Heating

Year	Residential Incentive Level**	Small Non-Residential Incentive Level**
2014	\$0.40/kWh (max \$1,750)	\$0.40/kWh (max \$200,000)

**Indicates estimated annual kWh production in first year.

a. Terms & Restrictions

- Energy savings rating is based on the Solar Rating and Certification Corporation (SRCC) OG-300 published rating or International Association of Plumbing and Mechanical Officials (IAPMO) rating to the OG-300 standard, Engineering Report or reputable Energy Modeling and Performance simulation Report. The rate applies to forecast/measured first year energy savings only.
- Small non-residential customers will receive a UFI up to the system size with output smaller than a 400,000 kWh equivalent.
- The UFI may not exceed 50% of total System Cost.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.
- The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change after the reservation has been approved, the incentive amount reserved will not change as long as the reservation is not cancelled.
- In return for TEP's payment of a UFI, TEP will be given complete and irrevocable ownership of the Renewable Energy Credits until December 31st of the 20th full calendar year after completion of installation of the system. Operational life during that time frame must be supported by system warranty or planned maintenance schedules.

i. Qualifications for Residential and Small Non-Residential Solar Water Heating and Space Heating

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement which is in conflict with a site-specific governmental requirement shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Specifications

1. Domestic Solar Water Heating systems will be rated by the Solar Rating Certification Corporation (SRCC) and or the International Association of Plumbing and Mechanical Officials (IAPMO) and meet the OG-300 system standard. Systems that include OG-100 collectors, but are not certified under OG-300, will need to be verified by submitting either a testing certification for a substantially similar system prepared by a publicly funded laboratory or by submitting an engineering report stamped by a registered professional engineer or a reputable Energy Modeling and Performance Simulation Report detailing annual energy savings.
2. Solar Space Heating systems will utilize OG-100 collectors and systems will be sized appropriately in conformance with the building design review. Annual energy savings will be determined by submitting an engineering report stamped by a registered third-party professional engineer or a reputable Energy Modeling and Performance Simulation Report.
3. Active, open-loop systems are not eligible for RECPP incentives except for active, open-loop systems that have a proven technology or design that limits scaling and internal corrosion of system piping, and includes appropriate automatic methods for freeze protection and prevents stagnation temperatures that exceed 250 degrees Fahrenheit (F) under all conditions at the location of installation. Details disclosing conformance with this exception shall be submitted as part of the manufacturer's verification documentation.
4. The 'high' limit on all Domestic Water Heating controllers shall be set no higher than 160 degrees F.
5. Active thermal storage for solar space heating systems shall use water as the storage element.
6. Contractors must provide a minimum of a ten year collector warranty as provided by the system manufacturer, including a minimum warranty period of five years for repair/replacement service to the customer.
7. Domestic Water Heating systems that are installed as an addition to an existing system or are submitted as a customer designed system or not certified to OG-300 must be specifically reviewed and approved by the utility.

8. The solar collector shall have an equipment warranty of at least 10 years to qualify for a UFI
9. The heat exchangers, and storage elements shall have an equipment warranty of at least 5 years to qualify for a UFI

Installation Guidance

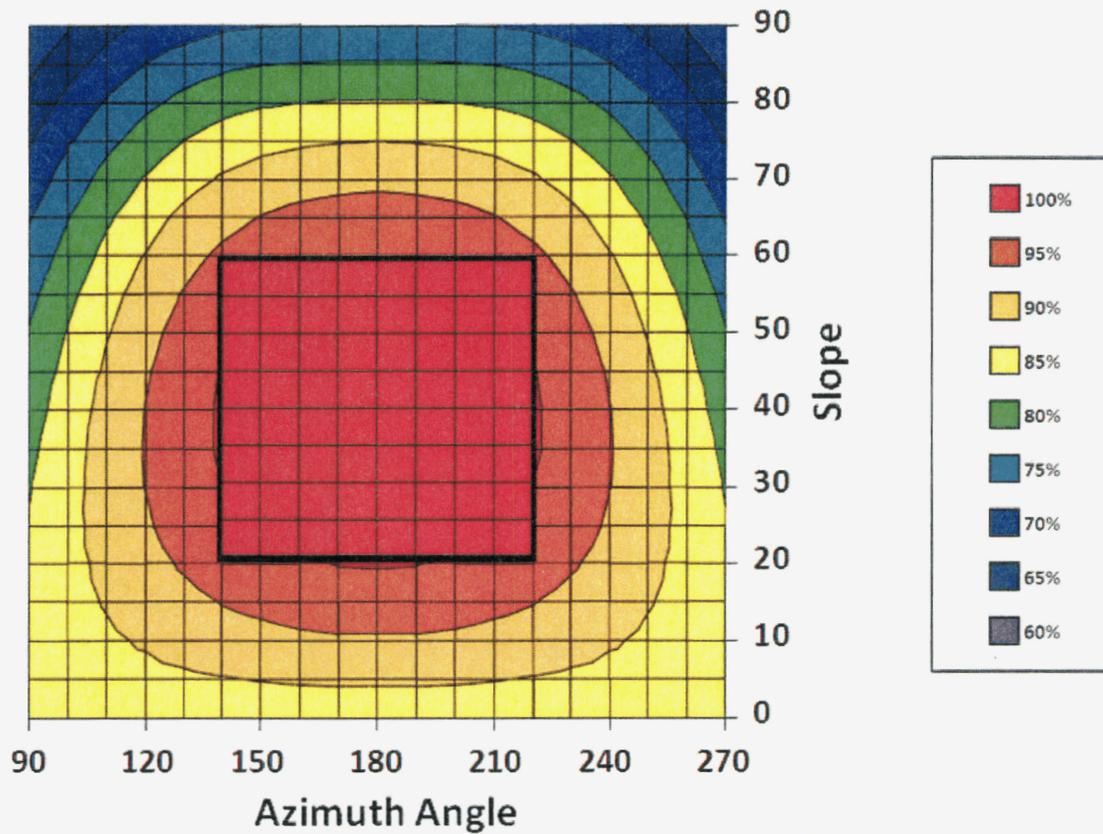
1. The system shall be installed with a horizontal tilt angle between 20 degrees and 60 degrees (40 and 60 degrees for space heating applications), and an azimuth angle of +/- 60 degrees of due south (+/- 20 degrees for space heating applications). It is recommended that collectors be positioned for optimum winter heating conditions at a minimum tilt angle of 45 degrees above horizontal, or as recommended by the manufacturer for the specific collector type and geographic location of installation. Azimuth or tilt angles outside these parameters may be reviewed and approved by the utility, at their discretion. Solar Hot Water de-rating chart, contained herein, may be used to adjust incentive level based upon affected output.
2. All systems should be installed such that the energy collection system is substantially unshaded and should have substantially unobstructed exposure to direct sunlight between the hours of 9:00 a.m. and 3:00 p.m. Solar Hot Water derating chart may be used to adjust incentive level based upon affected output due to shading.
3. Heat exchange fluid in glycol systems should be tested, flushed and refilled with new fluid as necessary or at a minimum every five years or sooner per manufacturer's recommendations.
4. The anode rod should be checked and replaced per manufacturer's recommendations, but no less frequently than every five years.
5. For optimal system performance; a timer, switch, and a temperature sensor on the backup element of the storage tank is recommended.
6. The collectors and storage tank should be in close proximity to the backup system and house distribution system to avoid excessive pressure or temperature losses.
7. It is recommended that in areas where water quality problems are reported to have reduced the expected life of a solar water heater, that a water quality test is performed for each residence to screen for materials that through interaction with the materials of the proposed solar water heating system may reduce the expected operational life of the system components.
8. In areas subject to snow accumulation, sufficient clearance will be provided to allow a 12" snowfall to be shed from a solar collector without shadowing any part of the collector.
9. Ball valves shall be used throughout the system. Gate valves shall not be used in any new installation systems.
10. Pipes carrying heated fluids shall be insulated for thermal energy conservation as well as personal protection when exposed to ambient conditions, although this is highly recommended in either situation.
11. TEP reserves the right to modify standards as technology changes on a case-by-case basis, pending independent laboratory analysis, Professional Engineer (PE) stamp, or TEP engineering analysis.

General Requirements

1. The project must comply with applicable local, state, and federal regulations.

2. Products must be installed according to manufacturers' recommendations.
3. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale on new installations.
5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.

ii. **Solar Hot Water Off-Angle and Shading Annual Energy Derating Chart**



If the SHW system falls outside of the 95-100% performance band, then the UFI for the system will be derated. The incentive will be derated based on the decrease in annual energy output anticipated by this chart.

IX. Other Incentives

A. Technologies without Technology Specific Criteria

Technology specific criteria have not yet been developed for the following qualifying technologies:

- Fuel Cells
- Other

For applicants requesting incentives for these technologies or for applicants requesting installation of a technology with specific project technology criteria, but where some criteria cannot be met, the applicant will need to submit design and output documentation.

Applicants installing these systems will, at a minimum, need to provide an energy savings and designed output report for the system. The report must include either a testing certification for a substantially similar system prepared by a publicly funded laboratory or an engineering report stamped by a qualified registered professional engineer. The engineering report and/or testing certification shall provide a description of the system and major components, design criteria and performance expectations, applicable standards and/or codes, and a brief history of components in similar applications. Additional information may be required as part of the RECPP requirements.

B. Non-Conforming Projects

Non-conforming projects will be identified as the Program evolves. Incentive levels for such projects will be calculated based on TEP engineering analysis, independent laboratory analysis, and/or professional engineering (PE) stamps. Non-conforming projects that prove combined economic and renewable energy value will be allowed appropriately calculated incentives within the RECPP.

C. Guidelines for Projects Electing to Not Receive Incentives

If a customer chooses not to receive incentives from TEP in exchange for the RECs, the customer shall still notify TEP that a renewable energy generator is being connected to TEP's grid and complete any associated interconnection processes. The process for non-incentive utility interconnection will be available at www.tep.com/renewable.

Appendix 1: Incentive Summary Tables

RECPP – CONFORMING PROJECT INCENTIVE MATRIX

2014 Program Year

Technology/Application	UP FRONT INCENTIVE ¹ 20-Year REC Agreement	10-Year REC Agreement ² 10-Year Payment (\$/kWh)	15-Year REC Agreement ² 15-Year Payment (\$/kWh)	20-Year REC Agreement ² 20-Year Payment (\$/kWh)
SOLAR ELECTRIC:				
RESIDENTIAL (GRID-TIED)	\$0.10/Watt DC ⁸	NA	NA	NA
NON-RESIDENTIAL (GRID-TIED) 70 kW DC or less	\$0.10/Watt DC ⁸	NA	NA	NA
NON-RESIDENTIAL SOLAR WATER HEATING/SPACE HEATING ^{5,9,10} (400,000 annual kWh output production equivalent or less)	\$0.40/kWh	NA	NA	NA
RESIDENTIAL SOLAR WATER/SPACE HEATING ^{6,9,10}	\$0.40/kWh	NA	NA	NA

Notes:

- 1) Residential projects are eligible for an up-front incentive (UFI). UFI payments cannot exceed 40% of the cost of renewable energy equipment.
- 2) Non-residential systems 70 kW AC or less are UFI only.
- 3) The solar space heating and cooling incentives may be used in combination for the appropriate components of one system.
- 4) This category includes both traditional water heating and those systems combined with residential solar water heating used for space heating. Space heating applications require a report detailing energy saving for the complete system.
- 5) Some UFI based installations will require an adjustment of the incentive as detailed in the PV Incentive Adjustment Chart.
- 6) Energy savings rating is based on the SRCC OG-300 published rating or the TEP-RECPP Space Heating Calculator. The customer contribution must be a minimum of 15% of the project cost after accounting for and applying all available Federal and State incentives.

Appendix 2: Glossary of Terms

ACC – Arizona Corporation Commission.

AZROC – Arizona Registrar of Contractors.

Applicant – Utility customer of record for the Utility Revenue Meter located at the installation site; a builder of the structure (residential or non-residential) who will reserve and install the Qualifying system; or for an off-grid Qualifying System, the property owner for the installation site located within a Utility's service territory.

Arizona Business License – A business license issued by the ACC.

Cancelled – Reservation Status indicating that a Reservation has been terminated, funding is no longer allocated, and the utility has removed the reservation from the funding queue.

Cancellation – The termination of the Reservation.

Commissioned – Qualifying System certified to be in operation.

Commissioning Package – Written verification signed by the installer and the customer confirming that the system has been installed in conformance with the approved reservation and that the system is ready for operation.

Conforming Project – Any project utilizing a renewable technology listed in Attachment D.

Conformance Inspection – Inspection performed by the utility to verify that the system has been installed and operates in conformance with the Reservation application.

Customer – Utility customer of record for the Utility Revenue Meter located at the installation site or a builder of the structure (residential or non-residential) who will reserve and install the Qualifying System.

Extension – The extension of the Reservation Timeframe.

Installer – The entity or individual responsible for the installation of a qualifying system.

Installed – The date of the final clearance from the appropriate jurisdiction

Interconnection Inspection – Inspection performed by the utility to confirm that the system can be safely interconnected to the power grid.

Non-Conforming Project – Non-conforming projects include, but are not limited to, projects with staged completion dates, multi-customer or multi-system projects, projects involving more than one technology, projects requiring new or unique agreement terms, projects with technologies for which qualification standards have not been developed or projects requiring non-standard timeframes.

Performance Based Incentive (“PBI”) – Incentive based on a rate per actual kWh output or on equivalent kWh of energy savings.

Project Costs – System Costs plus financing costs.

Proof of Project Advancement – Documentation demonstrating that a project is progressing on schedule and is staged for Commissioning on or before the end of the Reservation Timeframe.

Qualifying System – Distributed renewable energy systems meeting the qualifications for production of qualified Renewable Energy Credits in Arizona acceptable to the Arizona Corporation Commission as they may be defined for affected utilities to meet any renewable energy standards.

Renewable Energy Credit (“REC”) – One Renewable Energy Credit is created for each kWh, or kWh equivalent for non-generating resources, derived from an eligible renewable energy resource. RECs shall include all environmental attributes associated with the production of the eligible renewable energy resource.

Reservation – A dollar amount committed by the utility to fund a project if all program requirements are met.

Reservation Status – Indicator relating to approval or denial of a Reservation request. If a Reservation is approved, the Reservation Status is Reserved. If a Reservation request is denied, the Reservation Status is either Cancelled or Wait Listed.

Reserved – Status indicating the acceptance of a Reservation request.

Reservation Timeframe – The duration of the utility’s funding commitment for a Reservation.

Retroactive System – A Renewable solar system installed before an application for incentive was received and approved by TEP.

System Costs – Costs associated with the Qualifying System components, direct energy distribution, system control/metering, and standard installation costs directly related to the installation of the Qualifying System.

Up Front Incentive (“UFI”) – One time incentive payment based on system capacity or estimated energy kWh production rather than on measured system output.

Wait List – Status indicating Applicant has met program requirements, but the Utility has insufficient funding to commit to funding the project.