Tucson Electric Power Company
One South Church, P.O. Box 711
Tucson, Arizona 85702

April 1, 2008

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

RE: RE-00000C-05-0030
Annual Renewable Energy Standard Program Report
A.A.C. R14-2-1812.

Docket Control:

Enclosed please find an original and thirteen copies of Tucson Electric Power Company's ("TEP") Renewable Energy Standard Program Report for the year-ending 2007 pursuant to A.A.C. R14-2-1812. Please note that the Commission has yet to approve TEP's application for its Renewable Energy Standard and Tariff Implementation Plan (Docket No. E-01933A-07-0594).

If you have any questions regarding this filing, please feel free to contact me at (520) 884-3680.

Sincerely,

Jessica Bryne

Jessica Bryne
Regulatory Services

cc: Compliance, ACC
Mr. Ernest Johnson, Director of Utilities Division

Tucson Electric Power Company

RENEWABLE ENERGY STANDARD PROGRAM REPORT FOR YEAR-END 2007

APRIL 2008

A UniSource Energy Company
P.O. Box 711
Tucson, Arizona 85702

RENEWABLE ENERGY STANDARD PROGRAM REPORT
YEAR-END 2007

The Environmental Portfolio Standard Report contains the following information:

RENEWABLE ENERGY STANDARD PROGRAMS

ENVIRONMENTAL PORTFOLIO STANDARD PROGRAMS

EXECUTIVE SUMMARY

The ACC has mandated under the Environmental Portfolio Standard ("EPS"), R14-2-1618, that any Load Serving Entity shall derive a percentage of its total retail energy sold from new solar resources or environmentally-friendly renewable electricity technologies whether that energy is purchased or generated by the seller. The percentage changes each year, increasing to a maximum of 1.1% in 2007 and remaining the same through the life of the standard. In 2007, the percentage is 1.10% of which at least 60% must be derived from solar electric generation.

At the Arizona Corporation Commission Staff ("Staff") meeting on January 6, 2004, the Commissioners directed Staff to hold a series of workshops to consider four issues related to the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618). The four issues identified by the Commissioners were:

1. A discussion of increasing Environmental Portfolio Standard ("EPS") funding levels.
2. Elimination of the EPS Expiration Date.
3. Restoration of Demand Side Management ("DSM") funding.
4. Allocation of funding among various technologies.

Staff commenced the workshop series on March 5, 2004. The last and Fifth Workshop was June 25, 2004. A Staff report proposing changes to the EPS was issued January 21, 2005. A proposed draft EPS Rule was issued in late April 2005 and was the topic of discussion at Commission meetings held on June 2 and 3, 2005. A new renewable energy standard rule was approved by the ACC and was effective on August 14, 2007. The new program is called the Renewable Energy Standard and Tariff (REST).

Renewable Generating Capacity

This report covers TEP's progress for January 1, 2007 through December 31, 2007, and includes cumulative reporting from January 1, 1997. As of December 31, 2007, TEP had installed or supported installation of a total of 11,857 kW of renewable generating capacity, which has generated 318,781,616 kWh of renewable energy and generated 174,382,463 kWh of renewable credits using the appropriate multiplying factors in the EPS since January 1, 1997. The following tables will summarize capacity, program costs and requirements of the EPS.

EPS Program Results Summary

Since 1999, TEP has spent $35,526,608 on renewable energy development programs in support of developing renewable generation resources to meet the annual energy percentage goals of the EPS. In return, TEP has received revenues of $35,697,117 for these programs. TEP has spent the revenues received in our best effort to meet the annual solar energy percentage goals of the EPS. EPS surcharge collections effectively began in March 2001, and the annual retail energy reported for EPS purposes has been prorated to a 10-month year in 2001 for the purpose of this report. TEP has met 53% of its total EPS renewable energy goals through December 2007.

SunShare & Net Metering

TEP offers the SunShare Hardware Buydown program, with ACC approval, to its customers. Since the program was offered in 2001, 227 customers have purchased our Option 2 package, which was a solar kit offered by TEP at a pass-through cost. This represents 664 kW DC. Option 2 was terminated at the end of 2006. One hundred ninety-eight customers qualified for, and joined, the SunShare Option 1 or Option 3 program through December 31, 2007, with a total installed DC capacity of 508 kWp. The net program total is 425 SunShare participants through December 31, 2007. There is currently 1,172 kW DC of customer-sited, installed PV capacity as part of the SunShare or customer partnering programs.

In 2000, TEP offered, with Commission approval, a net metering option for owners of photovoltaic ("PV") systems of less than 5 kW AC in size. TEP requested, and the Commission approved in March 2003, an increase in the maximum size of a PV generation system qualifying for net metering to 10 kW AC and expanded the eligible technologies to include wind generation up to that size. As of December 31, 2007, 366 PV customers have qualified and enrolled in the net metering program. No wind customers have yet enrolled in net metering. These PV customers have a combined net capacity of 1,122 kW DC.

GreenWatts

GreenWatts is an ACC approved TEP green power purchase program that enables interested supporters to pool funds and invest directly in the creation of green power. Each GreenWatt is sold in "blocks" of 20 kWh per month. Revenues from GreenWatts are used for installing more community-based solar generation. At the end of December 31, 2007, TEP had commitments from 2,381 residential customers, amounting to adoption of 5,437 blocks and 42 commercial customers who have adopted 747 total blocks of green energy.

Total revenues produced-to-date are $85,974 from commercial customers and $415,641 from residential customers for total revenue of $501,615. All of these funds have been or soon will be applied to installation costs of additional community-based PV systems installed in the Tucson area, such as at the Tohono Chul Museum, the City of Tucson's Hayden Udall Water Treatment Facility, Reid Park Zoo, Hohokum Middle School, Tucson Botanical Gardens, Safford Middle School, Palo Verde High School, Clements Center, Project MORE, Tucson Audubon Society, Civano School, Vail Empire High School, Doolen Junior High, Davidson Middle School, La Cima Middle School, Tanque Verde High School, Tucson Airport Authority, and Reid Park Zoo among others.

Renewable Energy Resources and Renewable Resource Survey Systems

TEP continues to operate a system of 15 renewable resource survey systems. This includes eight, 40-meter high fixed wind survey towers at locations in Arizona. TEP continues to evaluate a wide range of renewable energy options for the future, including landfill gas, biomass, wind, digester gas, geothermal and solar thermal electric conversion.

Past Environmental Resource Development Goals

TEP achieved its voluntary goal of having 5 MW of renewable generating capacity by the end of the year 2000, which was derived from the ACC's 1992 Integrated Resource Planning Procedures.

SUMMARY OF EPS REQUIREMENTS

Description	Cumulative Thru 12/31/06	Reporting Period Jan-Dec 07	Cumulative Thru 12/31\07
Retail Sales, kWh	49,780,999,806	9,634,405,758	59,415,405,564
TEP EPS Requirement (1.10% of retail sales for 2007), kWh	352,794,779	105,978,463	458,773,243
"Other" Credits Needed To Meet EPS Requirements(40% in 2007)	152,758,614	42,391,385	195,149,999
"Solar Electric" Resource Credits Needed to Meet EPS Requirements.	200,036,166	63,587,078	263,623,244
Landfill Gas Project "Other" Credits	358,545,096	26,649,638	385,194,734
"Solar Electric" Resource Credits	85,605,407	22,361,044	107,966,451
Wind Credits Purchased	21,135	0	21,135
Wind Generated Credits	430	2,465	2,895
"Other" Credits Purchased	0	0	0
"Solar Electric Manufacturing" Credits Obtained from Global Solar, kWh	2,331,942	2,280,837	4,612,779
Sales of "Other" Credits, kWh **	-90,659,551	-8,833,860	-99,493,411
Sales of Solar Electric Credits kWh	0	-11,000,000	-11,000,000
Purchases of "Solar Electric" Credits	21,065	0	21,065
Total "Solar Electric" Credits	87,958,414	13,641,881	101,600,295
Total "Other " Credits	267,907,110	17,818,243	285,725,353
Excess "Solar Electric" Credits Above Meeting EPS Requirements, kWh ***	0	22,361,044	22,361,044
Excess "Other" Credits Above Meeting EPS Requirements, KWH ****	115,148,496	26,652,103	141,800,599

** GreenWatts Retired and Landfill Gas Credits Transferred

*** Jan-Dec 07 Credits not retired

**** Jan-Dec "Other" Credits not retired

SUMMARY OF RENEWABLE GENERATION AND CAPACITY

Type of Generation	kW Capacity	Cumulative Generation, kWh	Cumulative Extra Credits, kWh	Cumulative Renewable Credits, kWh
Landfill Gas	5,500	271,801,672	113,393,062	385,194,734
Solar PV	6,355	46,978,015	60,988,436	107,966,451
Solar Trough	0	0	0	0
Small Hydro-Electric	0	0	0	0
Wind Generation	2	1930	965	2895
Total Other	5,502	271,803,602	113,394,027	385,197,629
Total Solar Electric	6,355	46,978,015	60,988,436	107,966,451
Total Solar Electric and Other	11,857	318,781,616	174,382,463	493,164,079

SUMMARY OF PROGRAM EXPENDITURES

	Program Costs		
Program	Thru 12/31/06	Period Jan-Dec 07	Life of Program Thru Dec 07
Solar Electric	$33,767,052	$1,759,556	$35,526,608
Solar Thermal	$0	$0	$0
Geothermal	$0	$0	$0
Wind **	$161,778	$0	$161,778
Hydro	$0	$0	$0
Other Technologies	$0	$0	$0
Marketing **	$291,128	$47,805	$338,933
Hardware Buydown Program - Option 1,3 **	$543,925	$747,711	$1,291,636
SunShare Option 2 Revenue **	$2,366,033	$17,783	$2,383,816
SunShare Materials Cost **	$3,769,553	$230,884	$4,000,437
Total TEP Renewables Program	$33,928,830	$1,759,556	$35,688,386

** These expenditures included in Solar Electric expenditure data.

SUMMARY OF PROGRAM REVENUES

Description	Period Thru 12/31/06	Period 1/1/07 Thru 12/31/07	Life of Project	2007 Retail Energy Sales MWH
GreenWatts Total	$397,635	$103,980	$501,615	-
Allocation of SBC Total	$15,120,000	$2,460,000	$17,580,000	-
Residential Surcharge Total	$7,372,231	$1,372,748	$8,744,979	4,004,797
Small Commercial Surcharge Total	$7,324,062	$1,362,359	$8,686,421	3,651,513
Large Commercial Surcharge Total	$159,443	$24,659	$184,102	1,978,096
Renewables Surcharge Total	$14,855,736	$2,759,766	$17,615,502	9,634,406
Total EPS Program Revenues	$30,373,371	$5,323,746	$35,697,117	-

SOLAR THERMAL ELECTRIC GENERATION

PROGRAM DESCRIPTION

The purpose of the Solar Thermal Electric Generation Development Program is for technology review and economic assessment of the use of large scale solar thermal electric generators both in combination with existing thermal generating stations and in stand alone generating station applications. This includes solar resource assessment at a couple of possible solar trough sites in Arizona.

TEP reviewed the addition of Thermal Solar Trough produced heat to the condensate cycle of Springerville Generating Station Unit #1 ("SGS #1") and Unit #2 ("SGS #2").

In addition, during 2002, TEP received and evaluated a proposal for installation of a solar dish generation system and an opportunity to install a stand alone solar trough generation system.

There has been no significant testing activity in this area in 2004, 2005, 2006 or 2007, but interest from private developers for a large solar thermal generation project in Arizona or a neighboring state has been increasing based on a number of contacts with potential developers.

PROGRAM CHANGES FOR 2008

There are no changes planned for 2008. Resource and system economics evaluation will continue.

LANDFILL GAS AND BIOMASS / BIOGAS PROJECT

PROGRAM DESCRIPTION

The purpose of the Landfill Gas and Biomass Project program is to develop existing landfill gas and biomass / biogas resources into reliable, cost effective, environmentally sensitive electric generation fuel sources. The program's purpose is also to find and economically use existing biomass / biogas resources to produce electric energy.

PROGRESS AND PARTICIPATION

In August 1999, TEP and the City of Tucson started electric production from the installation of a nominal 5 MW Landfill Gas System at the Los Reales Landfill in Tucson, Arizona. The landfill gas is piped from the landfill to the Irvington Unit 4 Generating Station where it is co-burned with coal and/or natural gas. During the very dry year of 2003, the average energy produced from landfill gas was 3,741 kW, and in 2004 the average energy production from landfill gas was 3,679 kW. However, during periods of normal atmospheric moisture, TEP has previously experienced a monthly average exceeding 6,000 kW. Based on this past production and an expectation that planned repairs and improvements to the landfill gas collection system will be made by the landfill gas vendor, TEP is claiming 5,500 kW of landfill gas capacity in the Executive Summary.

To date (1999 through December 31, 2007) the project has displaced the use or production of the following:

Tons of Coal Not Burned	**126,260**
Tons of CO2 Not Produced	**185,182**
Tons of SO2 Not Produced	**1,111**

There were no costs beyond those expected of normal fueled generation from the operation of the landfill gas-to-energy system in 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006 or 2007. Thus, there are no expenses against the EPS surcharge or other sources of renewable generation revenue. EPS credits produced have been reported by TEP to meet EPS annual credit requirements, provide the renewable energy content of GreenWatts sales, sold to other utilities providing additional revenue for solar generation development or banked for the future. The current status of EPS landfill gas generation production credits are reported in the EPS Programs Executive Summary.

PROGRAM CHANGES FOR 2008

TEP continues to review additional landfill gas-to-energy projects as well as a number of biomass / biogas waste-to-energy opportunities. An ongoing technology search continues to find efficient technologies to convert a number of biomass products into electricity in a safe, reliable, cost-effective manner. The search will continue to locate technically feasible, economically

advantageous and environmentally appropriate methods for converting forest waste, biogas and agricultural by-products into electricity. Landfill gas production enhancements were installed in 2005 at the Los Reales Landfill in Tucson.

2007 Landfill Gas Generation Summary

	January	February	March	April	May	June	July	August	September	October	November	December	Year to Date	
Landfill Gas Burned-Mscf From Operating Summary	35	45	50	49	50	47	48	45	47	50	49	51	566	
Landfill Gas Ave Btu/scf From Operating Summary	476	483	480	469	465	464	469	480	479	490	485	481	477	
Landfill Gas Heat Input-MMBtu Calculated From Op Summary	16,660	21,723	24,000	22,981	23,250	21,808	22,512	21,600	22,513	24,500	23,765	24,531	269,843	
Unit 4 Net Heat Rate From Operating Summary	9,628	11,079	11,188	10,592	10,190	10,678	10,648	11,216	11,084	10,730	10,711	11,170	10,743	
MMBtu of Landfill Gas From Invoice	16,656	21,723	24,000	22,976	23,260	21,791	22,404	21,810	22,636	24,765	23863	24416	270,299.70	
Landfill Gas Generation in kWh Calculated From Data Above	1,729,923	1,960,758	2,145,156	2,169,280	2,282,723	2,040,738	2,104,057	1,944,544	2,042,223	2,308,015	2,227,897	2,185,855	25,141,168	
Monthly U4 Service Hours From Operating Summary	529.80	669.87	740.53	720.00	744.00	714.00	735.25	700.18	700.50	744.00	716.17	725.17	8,439	
Average Landfill Generation Capacity in kW - Calculated	3,265	2,927	2,897	3,013	3,068	2,858	2,862	2,777	2,915	3,102	3,111	3,014	2,979	
Cumulative 2007 Landfill Gas Generation in kWh - Calculated	1,729,923	3,690,681	5,835,836	8,005,116	10,287,840	12,328,578	14,432,635	16,377,178	18,419,401	20,727,416	22,955,313	25,141,168	25,141,168	
Unit #4 Coal Heat Value HHV in Btu/lb - Operating Summary	9,862	10,278	10,432	10,321	10,321	11,163	10,285	10,136	10,343	10,136	9,888	10,505	10,306	
Coal Displaced by Landfill Gas, in Tons, Calculated	844.4	1,056.8	1,150.3	1,113.1	1,126.8	976.0	1,089.2	1,075.9	1,094.3	1,221.6	1,206.7	1,162.1	1,093	
2007 Cumulative Coal Displaced By Landfill Gas in Tons	844.4	1,901.2	3,051.5	4,164.6	5,291.4	6,267.5	7,356.6	8,432.5	9,526.7	10,748.4	11,955.0	13,117.2	13,117	
CO_2 Emissions Deferred by Burning Coal in Tons - 40% Fixed Carbon	1239	1550	1687	1633	1653	1432	1597	1578	1605	1792	1770	1704	1,603	
2007 Cumulative CO_2 Emissions Deferred by Burning Coal - Tons	1239	2788	4476	6108	7761	9192	10790	12368	13973	15764	17534	19239	19,239	
SO_2 Emissions Deferred by Burning Coal in Tons - 0.44% Sulfur	7	9	10	10	10	9	10	9	10	11	11	10	10	
2007 Cumulative SO_2 Emissions Deferred by Burning Coal - Tons	7	17	27	37	47	55	65	74	84	95	105	115	115	
Period Hours Available	744	672.00	744	720	744	720	744	744	720	744	720	744	8,760	
On Line Availability (Service) Hours	529.8	669.87	740.53	720	744	714	735.25	700.18	700.5	744	716.17	725.17	8,439	
Percentage on Line	71.21%	99.68%	99.53%	100.00%	100.00%	99.17%	98.82%	94.11%	97.29%	100.00%	99.47%	97.47%	96.34%	

WIND RESOURCE DEVELOPMENT

PROGRAM DESCRIPTION

The purpose of the Wind Resource Development Program is for wind resource information gathering, technology review and economic assessment of the use of wind energy for electric generation both in combination with existing generating stations and in stand alone generating station applications.

Wind monitor stations have been installed by TEP throughout Arizona. At the end of December 2007, TEP was receiving data from eight, 40 meter survey towers and ground level wind data at an additional five fixed and two mobile monitor installations. While initial plans were to develop sites for an additional six monitor stations, results of the wind data collected from the existing monitor sites has left some doubt about the economic viability of the wind in the general region of the monitor sites, so the planning for development of additional monitor sites is on hold pending receipt of more wind data from the existing sites. The bulk of the monitoring is being performed in eastern Arizona around SGS. However, as customers have indicated an interest in development of wind resources in their area, TEP has monitored those showing signs of promise.

TEP installed a 1.8 kW beta version Southwest Windpower grid connected wind turbine on June 13, 2006, and continues to monitor its operation.

PROGRAM CHANGES FOR 2008

No changes are expected in 2008. TEP plans to continue evaluating the data from existing wind survey sites, reviewing geographic information to predict new potential wind resource sites and licensing sites for installation of wind and solar resource monitor instrumentation. This data will be used for evaluation of possible wind generation locations and for evaluation of bids received in response to a renewable energy RFP issued in mid-2008. The data will also be used to find tools for mitigating the effect on the reliability and stability of the electrical grid from the intermittency of wind generation. Detailed wind speed data was placed into the public domain through Northern Arizona University and is updated at least annually.

SOLAR PV RESOURCE DEVELOPMENT

The TEP Solar PV program is designed to develop large utility scale distributed PV generation systems as well as provide incentives and support for TEP customers to install PV on their premises in a safe, economical manner, which maximizes electrical production from the sun. The large utility scale installations provide the opportunity to capture cost savings through long-term purchases from specific manufacturers and to reduce the cost of solar components through bulk purchasing for the customer-based systems.

The goal of the program is to best meet the annual solar electric generation energy requirements of the EPS, within the limited funding provided by the EPS, while providing sufficient long-term PV demand to drive down PV component costs during the term of the EPS; and to provide feedback to PV component makers to help them improve the safety, reliability and performance of their products to help move the PV industry to product maturity.

PROGRESS AND PARTICIPATION

Small Utility Supported Distributed Generation

Installation of small TEP supported distributed generation systems throughout Tucson has been successful in providing energy in support of EPS solar credit goals and in developing public interest in solar energy. To date, 296 kW DC of small TEP supported and maintained PV systems have been installed on customer premises or TEP property. Some GreenWatts revenues are used for support of solar installations in the Tucson area, such as at the Tohono Chul Museum, Pima Air Museum, Safford Middle School, Palo Verde High School, Hohokum Middle School, Tucson Botanical Gardens, Clements Center, Project MORE, Tucson Audubon Society, Civano School, Vail Empire High School, Davidson Middle School, Tanque Verde High School, La Cima Middle School and Reid Park Zoo among others.

Customer Partnering Distributed Generation

TEP has partnered with customers, notably the City of Tucson, to install medium-sized, customer-owned and sited PV systems totaling 103 kW DC. However, there are a limited number of customers with available funding to support these types of projects. Some GreenWatts revenues are used for support of these installations.

SunShare

TEP offers the SunShare Hardware Buydown program, with ACC approval, to its customers. Since the program was offered in 2001, there have been more than 1,977 expressions of interest. To date, there have been 425 participants installing PV systems. Of these participants, 20 have chosen Option 1, 227 have chosen Option 2, and 178 have chosen Option 3. There is currently 1,172 kW DC of customer-sited, installed PV capacity as part of the SunShare program.

Net Metering

In 2001, TEP offered, with Commission approval, a net metering option for owners of PV systems of less than 5 kW AC in size. TEP requested, and the Commission approved in March 2003, an increase in the maximum size of a PV generation system qualifying for net metering to

10 kW AC and expanded the eligible technologies to include wind generation up to that size. As of December 31, 2007, 366 PV customers have qualified for and enrolled in the net metering program. No wind customers have yet enrolled in net metering. These PV customers have a combined net capacity of 1,122 kW DC. To further simplify customer-sited PV and wind installations, in addition to net metering, TEP also offers simple interconnection requirements for small customer located PV and wind systems.

Summary of PV Programs

In summary, the TEP Solar PV program, in response to the ACC's EPS annual renewable energy production requirements, has effected the installation or assisted in the development of 6,355 kW DC of solar PV generating resources in Arizona.

PROGRAM CHANGES FOR 2008

The ACC passed into law the Renewable Energy Standard and Tariff (REST) in 2007. To meet these new requirements, TEP developed a REST Implementation Plan in 2007, and it was filed in October 2007. The Implementation Plan is expected to be approved by the ACC in April of 2008 and fully implemented by TEP in June 2008.