# GALLAGHER & KENNEDY

— P.A. —

LAW OFFICES

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April 1, 2008

#### HAND DELIVERED

Docket Control Arizona Corporation Commission 1200 W. Washington St. Phoenix, AZ 85007

Re: 2007 Annual Compliance Report by the Arizona Electric Power Cooperative on

Behalf of Its Arizona Participating Member Distribution Cooperatives—Duncan Valley Electric Cooperative, Inc.; Graham County Electric Cooperative, Inc.; Mohave Electric Cooperative, Inc.; and Trico Electric Cooperative, Inc. (collectively, the "Cooperatives"); Docket No. E-01773A-05-0723

Dear Sir or Madam:

Pursuant to the requirements of A.A.C. R14-2-1812.A, the Cooperatives submit their Annual Compliance Report for the calendar year 2007. An electronic copy of this report is also being transmitted to the Director of the Utilities Division.

Very truly yours,

GALLAGHER & KENNEDY, P.A.

Michael M. Sas

By:

Michael M. Grant

MMG/plp 10421-51/1801970

cc (w/attachment): Ernest Johnson, Utilities Director (emailed)

Ray Williamson, Utilities Division (emailed) Brian Bozzo, Utilities Division (emailed)

Dennis Criswell

Original and 13 copies filed with Docket

Control this 1<sup>st</sup> day of April, 2008.

# ARIZONA ELECTRIC POWER COOPERATIVE, INC. AND ITS PARTICIPATING MEMBER COOPERATIVES

# RENEWABLE ENERGY STANDARD AND TARIFF COMPLIANCE REPORT FOR 2007

# **INTRODUCTION**

Pursuant to A.A.C. R14-2-1812, the Arizona Electric Power Cooperative, Inc. ("AEPCO"), on behalf of its four Arizona member distribution cooperatives which are participating in the Commission-approved REST Plan—Duncan Valley Electric Cooperative, Inc. ("DVEC"); Graham County Electric Cooperative, Inc. ("GCEC"); Mohave Electric Cooperative, Inc. ("Mohave"); and Trico Electric Cooperative, Inc. ("Trico") (collectively, the "Participating Cooperatives")—submits this compliance report for calendar year 2007. This report relates to AEPCO's Amended and Restated EPS/REST Plan, which was approved by the Commission in Decision No. 69728 dated July 30, 2007 (the "REST Plan").

#### **EXECUTIVE SUMMARY**

The REST Plan uses surcharge dollars from Participating Cooperatives' retail tariffs and proceeds from retail green power purchases collected by the Participating Cooperatives from their member customers. The funds are used primarily to support programs for developing renewable facilities—either by retail member-customers or AEPCO—purchasing renewable energy and participation in large-scale renewable generation projects. Funds are also used for administration, advertising and promotion of the programs, as well as educational activities.

The REST Plan was approved by Decision No. 69728 dated July 30, 2007 pursuant to R14-2-1814. Each of the Participating Cooperatives then filed the retail tariffs required under the REST Rules. Those tariffs were approved by the Commission at its Open Meeting on February 12, 2008. Thus, these new tariffs were not in effect during calendar year 2007.

This report complies with the requirements of Rule 1812. It supplies data concerning energy, cost, renewable energy credits and selection procedures for renewables. At the same time this report is filed with Docket Control, an electronic copy is also being transmitted to the Director of the Utilities Division as required by R14-2-1812.A.

<sup>&</sup>lt;sup>1</sup> AEPCO's fifth Arizona member distribution cooperative, Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC"), filed and received Commission approval for its own REST Plan in 2007.

#### THE REST PLAN

The REST Plan, which is also known as SunWatts, consists primarily of four programs:

- 1. <u>The Green Energy Purchase Program</u>: Allows customers voluntarily to contribute to a "green" fund to support renewable energy programs.
- 2. <u>Incentive/Rebate Program</u>: Provides incentives to customers for installation of qualifying photovoltaic, solar water heating and small wind energy systems.
- 3. <u>Purchase Power Contract Program</u>: Involves the purchase of qualifying renewable energy or renewable energy credits from third parties.
- 4. <u>Large Scale Renewable Generation Program</u>: Allows the Participating Cooperatives to take part in utility-sized renewable generating units.

# 2007 INSTALLATIONS AND ENERGY GENERATED

In 2007, 43 new PV locations were installed in the Participating Cooperatives' service areas. Of these new sites, 12 were located off-grid and 31 were located on-grid, for a total installed capacity of 123.07 kW. Of these new units, 42 are distributed (41 residential and one commercial) and one is utility owned.

In 2007, one solar water heater system was installed in the Participating Cooperatives' service areas. This water heater installation is expected to save approximately 2900 kWh per year.

These additions bring the number of installations supported by the Cooperatives to 77 (21 off-grid, 56 on-grid), with a total installed capacity of 236.71 kW, plus a 25 kW DG utility system owned by AEPCO and one solar water heater. This number is lower than in 2006, because distributed installations in the SSVEC territory supported in prior years have been removed from the total in light of the fact that SSVEC now has its own Commission-approved REST program and will provide information on those systems in its own report.

# City of Tucson/Thornydale Phase III

The City of Tucson, Trico and AEPCO completed Phase III of the large PV system at the City's Thornydale Reclaimed Water Reservoir site in September 2007. Like the two earlier phases, Phase III is comprised of PV panels mounted to the reservoir's concrete roof. This phase was approximately 50 percent larger than the two earlier phases. The Cooperatives contributed \$75,000 in REST surcharge funds for this phase of the project. The Phase III project is rated at 31,300 Watts DC and will add an additional 68,547 kWh generated annually. The total project now generates 164,907 kWh annually and is the largest municipally-owned PV site in Arizona. Additional phases are being contemplated.

# AEPCO HQ PV Installation

AEPCO's installation of a 25 kW system at the AEPCO Benson headquarters facility began in January 2007. The project was completed in mid-March 2007 and generated approximately 29,357 kWh in the remaining nine months of last year.

# **R14-2-1812 INFORMATION**

Pursuant to R14-2-1812.B, AEPCO and the Participating Cooperatives supply the following information:

- 1. The actual kWh of energy obtained from Eligible Renewable Energy Resources in 2007 was 459,979 kWh.
- 2. The kWh of energy obtained from Eligible Renewable Energy Resources normalized to reflect a full year's production is 576,649 kWh.
- 3. The kW of generation capacity, disaggregated by technology type is 263.31 kW for the DG PV installations and 2.9 kW for all Solar Water Heater installations.
- 4. Cost information in cents per kWh for the actual energy obtained from Eligible Renewable Energy Resources is \$.07 per kWh for all actual energy generated from PV and \$.033 per kWh for all actual energy generated from Solar Water Heaters. Cost information in cents per kW of generation capacity disaggregated by technology type is \$3,085.15 for each kW of installed PV and \$500 for each kW of installed Solar Water Heating.<sup>2</sup>
- 5. The Renewable Energy Credits used to satisfy the Annual Renewable Energy Requirement are 459,979 kWh. The Renewable Energy Credits used to satisfy the Distributed Renewable Energy Requirement are 430,623 kWh. AEPCO and/or the Participating Cooperatives maintain documentation concerning renewable energy credits.
- 6. Concerning resource acquisition procedures, AEPCO and the Participating Cooperatives are Rural Utilities Services ("RUS") borrowers and are subject to RUS procedures on resource acquisition as specified in the Code of Federal Regulations (generally, 7 CFR § 1710, et seq.). Requests for proposals are issued to all known potential providers and solicitations are published in at least three

<sup>&</sup>lt;sup>2</sup> Calculations for cents per kW and kWh were based on name plate ratings using total rebates paid through 2007 and construction expenses for the AEPCO Headquarters Photovoltaic Project. Customer-supplied funds for projects are not known to the Cooperatives and have not been used in the calculations.

national publications in addition to these direct contacts. In 2007, AEPCO accepted all responsive proposals made in relation to solicitations and, therefore, no independent audit was conducted.

#### LARGE SCALE PROJECTS—2008 AND BEYOND

#### Renewable RFP

Because a contract for a large amount of renewable power expected to be entered into with a New Mexico provider which had responded affirmatively to AEPCO's 2006 large-scale purchase solicitation was not executed by the provider, another RFP was issued in early March of this year. The due date for responses to this RFP is April 4, 2008, which generally coincides with receipt of data on several other renewable projects being considered by AEPCO as discussed below. It is expected that all of the projects will be reviewed and decisions on particular projects will be made by early summer.

# Solar Cooling Project

AEPCO, on behalf of the Participating Cooperatives, has partnered with the Cooperative Research Network on a research project to identify and evaluate renewable options for increasing peak generation capacity. The first phase of the project is a research project to evaluate the feasibility and cost effectiveness of solar cooling of inlet air for combustion turbines.

The results of the study conducted by Sargent and Lundy Engineering ("S&L") showed this technology to be feasible and possibly cost effective. As a result, AEPCO and S&L have prepared and sent out an RFP to install solar cooling equipment on Gas Turbine #4 at Apache Generating Station in Cochise, Arizona. This technology would create a green output of 5-12 MW during the summer season. Once bids on this installation are received and evaluated, a final decision will be made.

#### Concentrated Solar Generation

AEPCO has joined the Joint Development Group, which is made up of generation utilities in California, Nevada, Arizona and New Mexico. This group is investigating the development of a large-scale (250 MW) Concentrated Solar Generation Project. AEPCO is exploring the potential of ownership or a purchased-power agreement ranging from 2.5-10 MW for 20-30 years. The RFP for this project was issued by Arizona Public Service Company ("APS"), the project manager, in December 2007, with proposals due March 19, 2008. This project will also be part of the evaluation of large-scale projects.

#### Solar Plant—Tucson

AEPCO, along with Trico and the Participating Cooperatives, has begun preliminary discussions with the City of Tucson and Tucson Electric Power Company regarding the potential for building a jointly-owned solar generating plant on land owned by the City of Tucson in the Avra Valley area northwest of the City. This project may be either PV or solar thermal and could range in size from 1 MW (PV) to 100 MW (solar thermal). A Phase I engineering study of this project, jointly financed by the City of Tucson and the

Cooperatives, was completed by CH2MHill in January 2008. That study found the site to be "ideal" for a solar generating plant. As a result of that study, the City of Tucson and CH2MHill are seeking proposals from third-party vendors to construct between 1 and 5 MW of PV generation at the site. Completion of this smaller project prior to the end of 2008 will take advantage of federal investment tax credits that will be reduced from 30 percent to 10 percent on January 1, 2009. Should the federal tax credits be extended or re-authorized, the larger concentrated solar thermal project will again be considered.