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ORIGINAL

BEFORE THE ARIZONA CORPORATION COMMISSION

2009 FEB -5 P 3: 52

AZ CORP COMMISSION
DOCKET CONTROL

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

IN THE MATTER OF THE APPLICATION) DOCKET NO. E-01025A-08-0332
OF AJO IMPROVEMENT COMPANY'S)
APPLICATION FOR APPROVAL OF) **NOTICE OF FILING**
THE 2009 RENEWABLE ENERGY STANDARD,) **COMPLIANCE**
IMPLEMENTATION PLAN)
_____)

In compliance with Decision No. 70700, Ajo Improvement Company Electric Company ("AIC"), files its 2009 Renewable Energy Standard Implementation Plan ("2009 REST Plan"), which incorporates changes the Commission ordered (Exhibit 1 attached hereto). Also included in this filing is a draft of AIC's proposed Public Notice of the Availability of Distributed Renewable Generation Incentives (Exhibit 2 attached hereto). That notice includes several items highlighted in Staff's memorandum and in the proposed order:

- Bigger incentive for residential solar hot water heaters - \$1.20 per kWh for first year energy savings only;
- Bigger incentives for residential and non-residential photovoltaic systems – to \$4.00 per watt and \$3.50 per watt respectively.
- Explicitly stating that customers receiving distributed renewable generation incentives are not precluded from receiving net metering benefits.

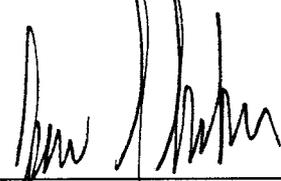
AIC intends to provide this notice through bill inserts and through providing publication of notices in the local newspaper, once Staff indicates that the form is acceptable.

Arizona Corporation Commission
DOCKETED

FEB 05 2009

DOCKETED BY

1 RESPECTFULLY SUBMITTED this 5th day of February, 2009.

2
3
4 By 

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11 Original and thirteen copies of the foregoing
12 filed this 5th day of February, 2009, with:

13 Docket Control
14 ARIZONA CORPORATION COMMISSION
15 1200 West Washington Street
16 Phoenix, Arizona 85007

17 Copy of the foregoing hand-delivered
18 this 5th day of February, 2009, to:

19 Lyn A. Farmer, Esq.
20 Chief Administrative Law Judge
21 Hearing Division
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EXHIBIT

"1"

PUBLIC NOTICE OF AVAILABILITY OF INCENTIVES FOR ELIGIBLE DISTRIBUTED RENEWABLE ENERGY RESOURCES

On January XX, 2009, the Commission approved the Renewable Energy Standard Tariff Implementation Plan for Ajo Improvement Company ("AIC") in Decision No. XXXXX (Docket No. E-01025A-08-0332). As part of its commitment to developing renewable resources, AIC is offering matching incentives as described below (up to \$11,000) for certain eligible Distributed Renewable Energy Resources, as defined in the Commission's Rules at A.A.C. R14-2-1802.B. The Commission further ordered that the incentives for residential solar hot water heaters be increased to \$1.20 per kWh for the first year of savings, that the incentives for residential photovoltaic systems be increased to \$4.00 per watt, and that the incentives for non-residential photovoltaic systems be increased to \$3.50 per watt. AIC's goal remains to create a program that will provide incentives to customers to pursue such resources, which could result in the reduction of electric bills.

Incentive payments will provide for a portion of the total system cost and will be an up front one-time payment based on a 20-year agreement with AIC in accordance with the approved Implementation Plan. **Incentives will be given on a first-come first-serve basis, but in no case will an incentive exceed 60% of the total system cost or \$11,000 – whichever is less.** Further, AIC will receive complete and irrevocable ownership of all Renewable Energy Credits ("RECs") expected from system production for the effective life of the system. AIC will conduct maintenance inspections and meter readings as appropriate to confirm compliance and to determine whether changes in its program are needed and/or warranted. Applications will be reviewed in accordance with the procedure set forth in the approved Implementation Plan.

Under AIC's REST Implementation Plan as approved in Decision No. XXXXX, there are many types of eligible Distributed Renewable Energy Resources systems that could qualify for incentives. Eligible Distributed Renewable Energy Resources include:

- Photovoltaic Systems;
- Small Domestic Solar Water Heating;
- Small Domestic Solar Space Heating;
- Solar Space Cooling;
- Non-Residential Solar Water Heating and Space Cooling;
- Biomass/Biogas Cooling;
- Non-Residential Solar Daylight; and
- Small Wind Generator.

For Solar Hot Water Heaters, the incentive is available for customers seeking to replace natural gas hot water heaters, and notifies customers that technology may be available to accommodate solar hot water heaters for those customers whose hot water heaters are currently on natural gas systems.

To qualify for these incentives, however, several criteria must be met. These include both general criteria that apply to all eligible Distributed Renewable Energy Resources, as well as certain technology-specific criteria for each such resource. Installation for any qualifying resource must also be done in accordance with the Implementation Plan, and subject to periodic inspections. All eligible Distributed Renewable Energy Resources must also include a system-dedicated kWh performance meter, which allows AIC to measure system energy production. Further, such a system must be operated and maintained appropriately and for the duration detailed in AIC's approval of any request for approval. Other requirements may apply, as detailed in the approved Implementation Plan.

Those customers who receive distributed renewable generation incentives are also eligible to receive benefits under net metering. The Commission approved Net Metering Rules in Decision No. 70567 (October 28, 2008). Those rules must be certified by the Arizona Attorney General before becoming effective. Once those rules are certified by the Arizona Attorney General, AIC will have 60 days to file its net metering tariff proposal. That must receive Commission approval before it can take effect.

Both the Commission Decision and AIC's final Implementation Plan are available for public inspection during regular business hours at the Commission's offices at 1200 West Washington Street, Phoenix, Arizona, 85007, and on the internet via the Commission website (www.azcc.gov) using the eDocket function – or can be made available upon request at AIC's offices at South Highway 85, Ajo, Arizona 85321. For more information about AIC's REST Distributed Renewable Energy Program, please call (520) 387-7451.

EXHIBIT

"2"

AJO IMPROVEMENT COMPANY

2009 RENEWABLE ENERGY STANDARD IMPLEMENTATION PLAN

1. INTRODUCTION

Ajo Improvement Company ("AIC") submits this Implementation Plan to comply with the Renewable Energy Standard Tariff Rules ("REST Rules"). The REST Rules are codified at A.A.C. R14-2-1801 to R14-2-1816. The Commission approved the REST Rules in Decision No. 69127 (November 14, 2006). The Arizona Attorney General's Office then certified the REST Rules on June 15, 2007, meaning that they became effective August 14, 2007.

AIC's 2008 Renewable Energy Standard Implementation Plan was approved in Decision No. 70304 (April 24, 2008). Per the REST Rules at A.A.C. R14-2-1813, AIC is required to submit its Implementation Plan for the following year outlining how it intends to comply with the Rules. The Implementation Plan must include the following information:

- A description of Eligible Renewable Energy Resources to be added per year for the next five (5) years. A description of each technology, the kW and kWh to be obtained and the estimated cost per kWh and total cost per year.
- A description of how each Eligible Renewable Energy Resource is to be obtained.
- A proposed evaluation of whether AIC's existing funding will allow it to recover its reasonable and prudent costs of complying with the RES.
- A line-item budget allocating specific funding for Distributed Renewable Energy Resources, for the Customer Self-Directed Renewable Energy Option, for power purchase agreements, for utility-owned systems, and for each Eligible Energy Resource described in the Implementation Plan.

The REST Rules require that 2.00% of total kWh retail sales be from eligible Renewable Energy Resources in 2009, 2.50% in 2010, 3.00% in 2011, 3.50% in 2012 and 4.00% in 2013. The REST Rules further require that 15% of the total Renewable Energy Resource Requirement come from Distributed Renewable Energy Resources in 2009, 20% in 2010, 25% in 2011, 30% in 2011 and 30% in 2012.

2. BACKGROUND INFORMATION

AIC is a small electric utility that serves about 1,028 customers in and around the town of Ajo, Arizona. Its current customer base consists of approximately 854 residential customers and 174 non-residential customers. Many of AIC's residential customers are retired or on fixed incomes. None of the 174 non-residential customers has demand typically over 3 MW per month for three consecutive months. Presently, AIC owns no

generation and procures all of its power from the wholesale market to meet load. Further, not much customer growth is anticipated to occur in AIC's certificated service area between now and 2025. Therefore, funds collected for renewable resources and distributed generation will be largely limited to existing customers.

AIC's Energy Sales in 2007 was 12,630,592 kWh.¹ In 2006, AIC's Energy Sales was 12,668,563 kWh.² This averages to a figure of 12,649,578 kWh. Based on these figures, AIC anticipates that its Annual Renewable Energy Requirement will be as follows:

- approximately 252,992 kWh in 2009;
- approximately 316,239 kWh in 2010;
- approximately 379,487 kWh in 2011;
- approximately 442,735 kWh in 2012;
- approximately 505,983 kWh in 2013; and
- ultimately about 1,897,437 kWh after 2024.

AIC anticipates its annual Distributed Renewable Energy Requirement will be the following – based on the average of Energy Sales in 2006 and 2007:

- approximately 37,948 kWh in 2009;
- approximately 63,248 kWh in 2010;
- approximately 94,872 kWh in 2011;
- approximately 132,821 kWh in 2012;
- approximately 151,795 kWh in 2013; and
- ultimately about 569,231 kWh after 2024.

Because AIC's 2008 Implementation Plan was approved April 24, 2008, AIC has not had much time to ramp up its RES strategy. Therefore, AIC notes that ample uncertainty exists in many aspects of obtaining renewable resources. AIC hopes to meet or exceed the minimum targets in the RES, but faces risks including operational performance, reliability, efficiency, sufficiency of transmission and deliverability of renewable energy resources. AIC is also aware of the potential for renewable contract termination and/or major delays in procuring these resources.

3. PLAN TO PROCURE ELIGIBLE RENEWABLE ENERGY RESOURCES.

AIC is still exploring any opportunities to procure Eligible Renewable Energy Resources from one or more sources – including solar, geothermal, wind and/or biomass. At this time, the Company is unclear about the availability to pursue procurement of wind generation, and is not sure to what extent that opportunity is available or if there are

¹ Based on AIC's Arizona Corporation Commission Utilities Division Annual Report for Year Ending 2007.

² Based on AIC's Arizona Corporation Commission Utilities Division Annual Report for Year Ending 2006.

barriers to procurement – such as transmission constraints. The Company remains unsure of the probability to procure other Eligible Renewable Energy Resources besides wind.

Further, the pricing for such renewable generation – at this time – at a premium of up to \$48 per MWh over generation from Conventional Energy Resources (for a total price of up to \$110 per MWh.) Currently, the cost for AIC to procure power from conventional sources is approximately \$80 per MWh. Based on this information, AIC believes the following tables best summarize the description of kWh, kW, and cost above conventional resources for AIC:

Planned Renewable Generation Procurement (kWh)

Year	2009	2010	2011	2012	2013	Total
Energy – Prospective Procurement ³	215,044	252,991	284,615	309,914	354,188	1,416,752

Planned Renewable Generation Capacity Procurement (kW)

Year	2009	2010	2011	2012	2013	Total
Total Energy – Prospective Procurement	25.27	31.59	37.91	44.22	50.54	189.53

Cost Above Conventional Generation (\$'s)⁴

Year	2009	2010	2011	2012	2013	Total
Total Energy – Prospective Procurement	10,322	12,144	13,661	14,876	17,001	68,004

The Company warns that its procurement plan – at this time – is still far from mature due to the vagaries of the renewable resource market. This market is also far from mature at this point – in AIC’s estimation. Therefore, these figures are, at best, preliminary estimates at this time. Further, AIC’s 2008 Implementation Plan was approved April 24, 2008; its 2009 Implementation Plan application is due on July 1, 2008, or approximately 67 days after the Commission issued Decision No. 70304. This has not been enough time to fully understand the details and challenges of acquiring Eligible Renewable Energy Resources to meet its requirement.

To the extent available, AIC also may undertake competitive procurement processes to solicit additional renewable generation. Many factors, however, will determine the success of any approach AIC uses to obtain Eligible Renewable Energy Resources. AIC must find entities willing to offer renewable power to it, given AIC’s small size and

³ Based on the mid-point of the projected range of the Annual Renewable Energy Requirement.

⁴ Based on a premium for renewable generation at about \$48 per MWh.

remote location. Further, renewable generation has the potential to not meet scheduled commercial operation and may not match needed delivery schedules and planned quantities. AIC is aware of the potential for renewable contract termination or major delays in delivering renewable energy.

4. PLAN FOR DISTRIBUTED RENEWABLE ENERGY RESOURCES.

Regarding the Distributed Renewable Energy Requirement, AIC does not have the experience of some of the larger utilities in Arizona. Even so, AIC understands the importance of Distributed Renewable Energy Resources to the Commission and offers the opportunity for incentive payments to customers to encourage the promulgation of eligible Distributed Renewable Energy Resources. These payments are designed to defray some of the costs of a system designed to offset a customer's typical load.

Types and Requirements for Eligible Distributed Renewable Energy Systems

Examples of eligible Distributed Renewable Energy Resources include:

- Photovoltaic Systems;
- Solar Space Cooling;
- Non-Residential Solar Water Heating and Space Cooling;
- Small Domestic Solar Water Heating;
- Small Domestic Solar Space Heating;
- Biomass/Biogas Cooling;
- Non-Residential Solar Daylight; and
- Small Wind Generator.

An eligible distributed renewable energy system must include a dedicated performance meter that allows for measurement of system energy production. Systems receiving incentives must be installed according to manufacturers' recommendations and generally accepted industry standards, as well as comply with all applicable federal, state and local regulations, accepted governmental statutes, codes, ordinances, and accepted engineering and installation practices. Any system must be inspected by the jurisdiction having authority over construction projects in the customer's locale. Any distributed renewable energy system must meet all applicable interconnection requirements. Written confirmation of meeting all applicable standards must be provided to AIC. All major components of the distributed renewable energy system must be purchased no more than 180 days before AIC receives an application for incentive payments from a customer.

Further, some technology-specific criteria reference third-party standards. The requirements of those standards are fully applicable when referenced as part of technology specific criteria. Rapid growth in national and international renewable energy programs is resulting in greater need for the development of standardization in design, implementation, performance measurement, system integrity, and installation. New

standards may possibly develop in the near future for technologies included below. New standards may be added as they become available. The following standards or standard development bodies are referenced below as part of the technology criteria for specific eligible Distributed Renewable Generation Resources:

- The Active Solar Heating Systems Design Manual developed by the American Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc. ("ASHRAE") in cooperation with the Solar Energy Industries Association ("SEIA") and the ACES Research and Management Foundation (the Design Manual)
- Arizona state boiler regulations (see R4-13-406)
- The select technology specific qualification developed by the California Energy Commission ("CEC")
- Solar Rating and Certification Corporation ("SRCC"). The SRCC criteria and ratings can be viewed at www.solar-rating.org.
- The Underwriters Laboratory ("UL").
- IEEE-929 standard for utility interconnection of PV systems.

Technology Specific Criteria

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive an incentive from AIC. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to achieve the systems designed output. Although installation guidance is not currently mandated in order for a project to receive an incentive, it does reflect both industry and utility concurrence on those practices which are important for a technology to best achieve the designed output. In the future installation guidance items may be considered for inclusion as part of the equipment qualifications.

Biomass/Biogas Electric, Hydroelectric and Geothermal Electric

Equipment Qualifications

- Biomass system installations involving a regulated boiler or pressure vessel are required to comply with all Arizona state boiler regulations; provide a qualifying boiler inspection identification number; and keep all applicable permits in good standing.
- System must include a dedicated performance meter to allow for monitoring of the amount of electricity produced.
- Energy savings and designed output for the system will 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. The engineering report must 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. This certification or engineering report must be provided in Step #6 of the Application Process detailed below.

- The system must have a material and labor warranty of at least five (5) years.
- The system must meet Arizona Department of Environmental Quality (“ADEQ”) environmental standards.

Installation Guidance

Because of the individual nature of biomass systems, care should be taken to make sure the system complies with all applicable permitting and regulatory requirements, including but not limited to air emission standards and air permit regulations.

Solar Non-Residential Daylighting

Equipment Qualifications

All systems shall include the following components as part of the daylighting system:

- A roof mounted skylight assembly with a dome having a minimum 70% solar transmittance.
- A reflective light well to the interior ceiling or a minimum 12” below roof deck in open bay areas.
- An interior diffusion lens.
- A minimum of one thermal break/dead air space in the system between the skylight dome and the interior diffuser.
- If artificial lighting systems remain a part of the installation the system shall include automated lighting control(s) which are programmed to keep electric lights off during daylight hours.
- The system must provide a minimum of 70% of the light output of the artificial lighting system which would otherwise be used for all of the claimed period of energy savings as measured in foot-candles.
- Energy savings and designed output for the system will be verified by submitting either a testing certification for a substantially similar system prepared by a publicly funded laboratory or by submitting an engineering reporting stamped by a registered professional engineer or accredited AEE Measurement and Verification professional. The engineering report 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.
- The system must have a material and labor warranty of at least five (5) years.

Installation Guidance

All systems should be installed such that the skylight dome is substantially unshaded and have substantially unobstructed exposure to direct sunlight between the hours of 9 a.m. and 3 p.m.

Small Wind Generator

A small wind generator is a system with a nameplate rating of one MW or less. The technology criteria described below are intended for small wind generators with a nameplate rating of 100kW or less. Larger systems will be required to submit a detailed package describing site selection, energy production modeling, and an engineered system design and installation report.

Equipment Qualifications

- Eligible small wind systems must be certified and nameplate rated by the CEC⁵. See www.consumerenergycenter.org/erprebate/equipment.html for a list of certified generators. For grid tied or off-grid wind generators where an inverter is used, the CEC listed nameplate rating of the wind generator will be multiplied by the CEC approved weighted efficiency percentage listed for the inverter in the "List of Eligible Inverters" at www.consumerenergycenter.org/cgi-bin/eligible_inverters.cgi to calculate the wind turbine nameplate rating for use in determining the UFI payment.
- Grid connected inverters used as part of the system shall carry a UL listing certifying full compliance with Underwriter's Laboratory ("UL")-1741
- A system must include a dedicated performance meter installed to allow for measurement of the amount of electricity produced.
- The performance meter and utility disconnect will be installed in a location readily accessible to AIC during normal business hours.
- The tower used in the installation must be designed by an engineer and must be suitable for use with the wind generator. Tower installation must be designed and supervised by individuals familiar with local geotechnical conditions.
- The wind generator and system must include a 10-year manufacturer's warranty and a material and labor warrantee of at least five (5) years.

Installation Guidance

- Location: a wind turbine hub should be at least 20 feet above any surrounding object and at least 28 feet above the ground within a 250-foot radius. Wind generators should be installed in locations with an elevation at or above the general elevation of the surrounding terrain.
- Lot Size: should be at minimum one-half acre. Municipalities and public facilities such as schools and libraries are exempt from the minimum lot size requirements.
- The Applicant should demonstrate its proposed system is able to obtain at least a 15% annual capacity factor. The following are readily available methods for helping to demonstrate the potential for a 15% capacity factor, but other methods may be used. The installation location should have a demonstrated average annual wind speed of at least 10 MPH as measured at a height of no more than 50

⁵ AIC notes that the Uniform Credit Purchase Program ("UCPP") Working Group recommends review of the SWCC standards for rating small wind generators once they become available for purposes of supplanting the CEC requirement in this Technology Criterion.

feet above the ground. Average annual wind speed can be demonstrated by wind speed records from an airport, weather station or university within 20 miles of the proposed wind generator location, or by a 50 meter wind power density classification of Class 2 "Marginal" or higher on the "State of Arizona Average Annual Wind Resource map dated July 16, 2005 or later as published by Sustainable Energy Solutions of Northern Arizona University. Northern Arizona University provides detailed wind resource maps as well as other resource services. For more information contact Northern Arizona University at <http://wind.nau.edu/maps/>.

Photovoltaic Systems

Equipment Qualifications

All Systems

- All systems shall be installed with a horizontal tilt angle between 0 degrees and 60 degrees, and azimuth angle of +/- 100 degrees of due south. The eligibility for the full incentive payment will be determined by the installation configurations for some systems and subject to AIC's discretion.
- A system must include a dedicated performance meter to allow for monitoring of the amount of electricity produced.
- Photovoltaic modules must be covered by a manufacturer's warranty of at least 20 years.
- Inverters must be covered by a manufacturer's warranty of at least 10 years.

Grid-Connected Systems

- The minimum PV array size shall be no less than 1,200 W-DC
- All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of UL Standard 1703.
- All other electrical components must be UL listed.
- 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.
- The utility meter, inverter, and utility disconnect will be installed in a location readily accessible by AIC during normal business hours.
- Other equipment qualifications may be specifically required as determined by AIC.

Off Grid Systems are not included in this program

Installation Guidance

The Customer will be directed to the following resources to gain information regarding industry reference documents for system installation and performance forecasting:

The California Energy Commission's Guide to Buying a Photovoltaic Solar Electric System at http://energy.ca.gov/reports/2003-03-11_500-03-014F.PDF

Solar Space Cooling

Equipment Qualifications

- The minimum cooling capacity of the system will be 120,000 BTU (10 tons) per hour.
- Solar collector panels used will have a Solar Rating and Certification Corporation (“SRCC”) OG-100 rating or laboratory documentation showing the panel energy output under controlled and replicable test conditions.
- Energy savings and designed output for the system will 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. The engineering report 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.
- System must include a dedicated performance meter to allow for monitoring of the amount of heat input to the thermal cooling device or system. Energy production will be calculated at one kW-hr per 3,415 Btu of metered heat delivered to the thermal cooling device or system.
- The system must have a material and labor warranty of at least five (5) years.

Installation Guidance

- The horizontal tilt angle of the collector panels should be between 20 and 60 degrees and the panel orientation should be between +/- 45 degrees of south.
- 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 a.m. and 3 p.m.
- The system installation should comply with the design manual.

Non-residential Solar Water Heating and Space Heating

Equipment Qualifications

- Solar collector panels used will have a SRCC OG-100 certification or laboratory documentation showing the panel energy output under controlled and replicable test conditions.
- The system must include a dedicated performance customer-supplied meter to allow for monitoring of the amount of useful heat produced – if annual energy production is expected to exceed 10,000 kWh or equivalent. Otherwise, compliance reporting production will be based on the design energy savings submitted at the time of application.

- Energy savings and designed output for the system will 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. The engineering report 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.
- The solar collector, heat exchangers and storage elements must have an equipment warranty of at least 10 years and the entire system must have a material and full labor warranty of at least five (5) years.

Installation Guidance

- The horizontal tilt angle of the collector panels should be between 20 and 60 degrees and the panel orientation should be between +/- 45 degrees of south.
- 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 am and 3 pm.
- The system installation should comply with the design manual.

Small Domestic Solar Water Heating and Space Heating

Equipment Qualifications

- Domestic Solar Water Heating systems will be rated by the SRCC 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 detailing annual energy savings. Solar Space Heating systems will utilize OG-100 collectors.
- Domestic Water Heating systems shall be selected and sized according to the geographic location and hot water needs of the specific application. Reservation requests will include a manufacturer's verification disclosing that the system size and collector type proposed is appropriate for the specific application. The manufacturer's verification may be presented as a manufacturer's product specification sheet and will be included in the reservation request.
- Solar Space Heating systems will be sized in conformance with the Solar Space Heating Incentive Calculation Procedure attached to AIC's Implementation Plan as Exhibit D.
- Active, open-loop systems are not eligible for any 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 stagnations temperatures that exceed 250 degrees Fahrenheit 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.

- Integrated Collector System (“ICS”) systems shall have a minimum collector piping wall thickness of 0.058 inches. Details disclosing conformance with this requirement must be submitted as part of the Manufacturer’s verification documentation. ICS units must include certification that collector stagnation temperature will never exceed 250 degrees Fahrenheit under any possible conditions at the location of the installation.
- The ‘high’ limit on all Domestic Water Heating controllers shall be set no higher at 160 degrees Fahrenheit.
- Active thermal storage for solar space heating systems shall use water as the storage element.
- Contractors must provide minimum of a five-year equipment warranty as provided by the system manufacturer, including a minimum warranty period of five (5) years for repair/ replacement service to the customer.
- 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.
- The solar collector, heat exchangers and storage elements must have an equipment warranty of at least 10 years.

Installation Guidance

- The system shall be installed with a horizontal tilt angle between 20 degrees and 60 degrees, and azimuth angle of +/- 60 degrees of due south. 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.
- 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 a.m. and 3 p.m.
- Heat exchange fluid in glycol systems should be tested and flushed and refilled with new fluid as necessary or every five (5) years or sooner per manufacturer’s recommendations.
- It is recommended that the anode rod be checked and replaced per manufacturer’s recommendations, but no less frequently than every five (5) years.
- It is recommended that the system design include a timer, switch, or other control device on the backup element of the storage tank.
- 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.
- It is recommended that in areas where water quality problems are reported to have reduced 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 system may reduce the expected operational life of the system components. The customer should consider contacting the manufacturer to determine if warranty or operational life will be affected.
- 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.

- Each system should have a comprehensive operation and maintenance manual at the customer's site – including a spare parts list, data sheets, and flow diagrams indicating operating temperatures and pressures, maintenance schedules and description of testing methods. Further, each customer must complete an initial start up and operation training review with the contractor at the time of system start up.
- Ball valves should be used throughout the system. Gate valves should not be used.

Technologies without Technology Specific Criteria and Non-Conforming Projects

AIC is not aware of any technology-specific criteria developed for the following qualifying technologies:

- Biogas/Biomass Thermal
- Biogas/Biogas Combined Heat and Power (“CHP”)
- Fuel Cells
- Geothermal – Space Heating and Process Heating
- Non-Residential Pool Heating

For applicants requesting incentives for the above technologies or for applicants requesting installation of a technology with conforming 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 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 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 utility specific UCPP requirements.

Installation

The installer for any and all distributed renewable energy systems must possess a valid license on file with the Arizona Registrar of Contractors (“AZROC”), with a license classification appropriate for the technology being installed, or the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. The installer must also have proof of liability insurance, which is to be provided when Applicant submits the application. Further, any equipment dealer must provide proof of a business license showing that the dealer is in good standing with the appropriate agency(ies) and must also provide proof of liability insurance.

Reporting Requirements

Applicants must submit a report demonstrating energy savings and that projected output will be achieved. The report must show that the distributed renewable energy system meets all applicable requirements including – if necessary – testing certification and/or an engineering report stamped by a registered professional engineer. The report must also describe the system and its major components and include designed performance and system output.

Inspections

Any and all distributed renewable energy systems must be inspected by the entity having authority to inspect construction projects within AIC's certificated service area. AIC's inspections are in addition to, and not instead of, any building and construction-related inspections. AIC must have access to any distributed renewable energy system during normal business hours for any inspection by AIC. AIC will inspect any and all grid-tied systems to ensure the system is connected to the grid in conformance with AIC's interconnection requirements. *Under no circumstances is any grid-tied system to be installed in parallel or otherwise connected with the AIC system until the time that AIC has inspected the distributed renewable energy system and gives written authorization. This inspection will only take place after the appropriate building and construction-related inspection has been performed.*

Further, AIC may conduct further inspections to ensure any distributed renewable energy system continues to conform to applicable codes, regulations and standards. AIC will conduct these inspections solely within its discretion. AIC may also conduct other inspections to ensure the system is operated in compliance with the Applicant's original request and the Company's approval of the request.

Metering

All distributed renewable energy systems must include a system-dedicated kWh performance meter, which allows AIC to measure system energy production. The Applicant must include performance meters as part of the system designed and the Applicant will be responsible for the cost of the performance meter. The performance meter must be installed according to AIC's meter installation standards and is subject to inspection. These meters are in addition to billing meters and must be calibrated to meet industry standards and provide direct kWh readings.

System Operation and Maintenance

An Applicant must operate and maintain any distributed renewable energy system appropriately and must do so for the duration detailed in his or her request and the Company's approval of such request. If an Applicant fails to maintain and operate the distributed renewable energy system in AIC's certificated service area for the period detailed in the AIC's approval of the application, then Applicant will be in default of the terms and conditions of the agreement between Applicant and AIC. Applicant will be responsible for reimbursing AIC the total amount of the incentive payment. In addition, liquidated damages may also apply. AIC, however, has the ability in its sole discretion to determine that the distributed renewable energy system is not operational due to equipment malfunction or other disrepair and Applicant is making best efforts to repair the system and return it to operation. In that case, the reimbursement requirement will not apply.

Should a system cease to be operational, the Applicant must notify AIC within five (5) business days after the distributed renewable energy system is either removed from the property or fails to be operational. Short outages (lasting less than 30 days) that are for planned maintenance or system repair are not part of this requirement.

An Applicant who has been in default at any time will be completely disqualified for any future funding permanently.

Sale of Property

Applicant must notify AIC if Applicant sells the property on which the distributed renewable energy system is located by notifying AIC in writing. Applicant may be required to reimburse payment incentive and/or be in default – unless the subsequent owner agrees in writing to operate and maintain the distributed renewable energy system per the terms and conditions agreed to between Applicant and AIC.

Renewable Energy Credits

AIC will receive complete and irrevocable ownership of all Renewable Energy Credits or RECs expected from system production for the effective life of the distributed renewable energy system – when it makes any incentive payment to an Applicant. These RECs will be applied toward AIC's RES targets.

Incentives

Any incentive payment will be an up-front one-time payment and will be determined based on system capacity (Watts) and/or estimated annual production (kWh), as well as

based on a 20-year agreement with AIC. The following chart highlights the incentives per type of eligible Distributed Renewable Energy Resources:

Type	2009 – 2011	2012 – 2013
Biomass/Biogas (Electric, Thermal, Cooling)	TBD	TBD
Biomass/Biogas CHP (Electric, Thermal) ⁶	TBD	TBD
Daylighting ⁷	\$0.20 / kWh	\$0.18 / kWh
Geothermal (Electric)	\$0.50 / Watt	\$0.45 / Watt
Geothermal (Thermal)	\$1.00 / Watt	\$0.90 / Watt
Hydroelectric	TBD	TBD
Small Wind	\$2.50 / Watt AC	\$2.25 / Watt AC
Solar Electric – Residential ⁸	\$4.00 / Watt DC	\$2.70 / Watt DC
Solar Electric – Non-Residential ⁹	\$3.50 / Watt DC	\$2.25 / Watt DC
Solar Space Cooling ¹⁰	TBD	TBD
Non-Residential Solar Water Heating / Space Heating ¹¹	TBD	TBD
Residential Solar Water Heating / Space Heating¹²	\$1.20 / kWh for first year savings only.	
Non-Residential Pool Heating	TBD	TBD

TBD – To Be Determined

Those amounts identified in the chart were largely based on the Uniform Credit Purchase Program (“UCPP”) Working Group Project Incentive Matrix. For those categories where the incentive is to be determined the incentive amounts will be determined on a case-by-case basis and will include consideration of capital costs, capacity (kW), and estimated annual production (kWh).

Incentives will be dealt on a first-come first-serve basis and it is the intent to split total annual incentive payments evenly between residential and non-residential applicants. Eligibility requirements for which an Applicant may receive incentive payments to develop and install distributed renewable energy resources are described in the Company’s schedule entitled “Applications for Distributed Renewable Energy Resources Schedule” – Sheet No. 34.0 – that was approved in Decision No. 70304 and is attached as Exhibit A.

⁶ The CHP incentives may be used in combination for the appropriate components of one system.

⁷ Rate applies to first year energy savings only.

⁸ Some installations may require an adjustment of the incentive.

⁹ Some installations may require an adjustment of the incentive.

¹⁰ Solar space heating and cooling incentives may be used in combination for the appropriate components of one system.

¹¹ Solar space heating and cooling incentives may be used in combination for the appropriate components of one system.

¹² 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 savings for the complete system. Energy savings rating is based on the SRCC OG-300 published rating or the Uniform Credit Purchase Program 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.

Funds for incentive payments are made available for distributed renewable energy systems on the first working day after January 1st of each calendar year. Should funds collected for distributed renewable energy systems not be used during the calendar year, they will be applied to the next calendar year.

Despite the above, funds for any one project will not exceed 60% of the total cost of the project. This 60% cap will apply to entire system costs for the project (*i.e.*, including financing costs). But at no time will more than \$11,000 be provided in incentives for any one project. This \$11,000 cap will include the costs of financing (*i.e.*, no more than \$11,000 will be provided towards the total system cost of any one project).

Distributed Renewable Energy System Program Monitoring

AIC will track progress toward program goals by compiling data received from conducting maintenance inspections, meter readings and analyzing trends in customer participation and technology installation. New information, changing market conditions, changing assumptions and/or technological innovations may lead to changing certain facets of the Implementation Plan regarding Distributed Renewable Energy Resources. AIC will bring those issues to the Commission's attention in a timely manner. AIC will report on the productivity for all distributed renewable energy systems annually by reporting on the total installed capacity and projected productivity.

Should a distributed renewable energy system be removed before its agreement term expires and without AIC's permission – or if an Applicant does not repair a system – then AIC will continue to reflect in the annual compliance reporting the annual historic energy production for the system until the agreement term for the system has been completed. The actions AIC would take, if any, to address removal of the system contrary to the agreement or failure to make needed repairs to a system would depend on the particular circumstances of the removal. AIC would note – in its annual compliance reporting – that the system had been removed and what the annual historic energy production had been before the system was removed.

Application Process

- 1. Applicant submits a written and signed request to AIC (i.e. "the Application").**
- 2. Applicant receives approval from AIC.** This approval will be a written agreement between Applicant and AIC, and will constitute the terms and conditions that Applicant must agree to in order to receive any incentive payment. The approval will detail the time period for which the agreement applies. The approval will constitute the entire agreement between the Applicant and AIC regarding the specific distributed renewable energy system contained within the application. The approval

will also specify a timeframe for which Applicant has to install and receive all approvals before having to place system in operation. Should Applicant fail to do so, then the approval will be automatically terminated and Applicant will have to submit a completely new application.

If the application is deficient, AIC will inform the Applicant of the nature of the deficiency(ies). Applicant will have an opportunity to correct the deficiency(ies) within a specific time period indicated on AIC's notification of deficiency. If deficiencies are not addressed within that time period to AIC's satisfaction, then the application will automatically be deemed denied. If an application cannot be approved because funding is not available, then the application will be put on a waiting list and AIC will send written notification to the Applicant.

3. **Applicant agrees to terms and conditions contained in the approval through written and signed confirmation explicitly agreeing to those terms and conditions.**
4. **Applicant submits proof – no later than 90 days before installation – that Applicant is going forward with installing the distributed renewable energy system approved.** This is to ensure that funds are reserved to projects that will actually be installed.
5. **Applicant submits a system design for review and approval by AIC.** AIC must approve system design before Applicant proceeds with installation.
6. **Applicant has system installed. AIC inspects the system to ensure it is connected to the grid per AIC's interconnection requirements.** This will take place after AIC receives proof that the system has been inspected by the appropriate entity to inspect construction and building. Applicant also must include proof that installation has been performed pursuant to this Implementation Plan. AIC will provide Applicant with written confirmation that the system passed its installation inspection.

At no time will Applicant make any material change from the approved application without prior written consent from AIC. Applicant must submit a Proposed Modification to Application in order to receive such written consent. AIC will then determine whether additional funding is available, should additional funding be requested or required due to the material change. Should additional funding not be available, then Applicant will only receive the incentive payment amount originally approved.

7. **Applicant receives one-time incentive payment.**

Eligibility Requirements

Eligibility requirements are set forth in the Company's schedule entitled "Applications for Distributed Renewable Energy Resources Schedule" – Sheet No. 34.0 – that is approved in Decision No. 70304 and attached as Exhibit A. Any customer of AIC is eligible to apply for and, if approved, receive incentive payment for an eligible Distributed Renewable Energy Resource as defined in A.A.C. R14-2-1802.

1. The Applicant must apply for – and receive approval for – funding in accordance with the procedure set forth above.
2. The distributed renewable energy system must be established physically within the Company's certificated service area.
3. Any project applied for must meet the requirements for a Distributed Renewable Energy Resource described in the Arizona Corporation Commission's REST Rule A.A.C. R14-2-1802.
4. The Company will assume no liability for any incentive payment subsequently assigned to third party(ies) from the Applicant.

All Renewable Energy Credits ("RECs") derived from any Applicant receiving incentive payment(s) for any distributed renewable energy system, including generation and Extra Credit Multipliers, will be applied to satisfy AIC's Annual Renewable Energy Requirement and Distributed Renewable Energy Requirement.

Further, any customers paying Tariff funds of at least \$25,000 annually for any number of related accounts or services within an Affected Utility's service are eligible for the Customer Self-Directed Renewable Energy Option. That Schedule – approved in Decision No. 70304 and attached as Exhibit B (Sheet No. 35.0) – details the requirements to be met when submitting a written application. One half of the funding must come from the Eligible Customer for each project proposed. Per A.A.C. R14-2-1809.C., all RECs derived from the project(s) will apply to satisfy AIC's Annual Renewable Energy Requirement.

Those customers who receive distributed renewable energy incentives are still eligible to receive the benefits of net metering. The Commission approved Net Metering Rules in Decision No. 70567 (October 28, 2008). Once those rules are certified by the Arizona Attorney General, AIC will have 60 days to file its net metering tariff proposal. That must receive Commission approval before it can take effect.

Other

To the extent that additional distributed renewable energy resources are needed to fulfill its annual Distributed Renewable Energy Requirement, AIC may consider initiating its own distributed renewable energy system(s) to meet its Distributed Renewable Energy Requirement for that calendar year. This may include installation of distributed generation at its own operations facilities.

5. BUDGET

Given the many uncertainties that currently exist with procuring renewable resources, and with any joint development working groups and/or projects, AIC cannot state with much certainty what its budget will be to procure renewable resources. AIC's 2008 Implementation Plan will be in effect for approximately 67 days when its 2009 Implementation Plan application is filed. This is simply not enough time to get a more concrete grasp of what it will cost to comply with the REST Rules. Further, AIC is unsure how much demand there will be for distributed renewable energy resources. Specifically, AIC cannot state with any certainty what the separate costs will be for administration, implementation, commercialization and integration, and marketing and outreach. This is especially true considering AIC is a small utility. Therefore, the following budget estimates are – at best – a preliminary estimation of what AIC believes to be the RES Budget.

AIC's Estimated RES Budget (\$'s)

	2009	2010	2011	2012	2013	Total
Renewable Energy Resources						
Energy Power Purchase Agreements (Wind Resources)	10,322	12,144	13,661	14,876	17,001	68,004
Energy Power Purchase Agreements (Other Eligible Renewable Resources)	0	0	0	0	0	0
Utility-Owned Systems	0	0	0	0	0	0
Administration, Implementation, Commercialization & Integration	13,376	13,570	16,624	19,677	20,661	83,908
Renewable Energy – Subtotal	23,698	25,714	30,285	34,553	37,662	151,912
Distributed Renewable Energy Resources						
Incentives	28,885	42,746	56,607	62,229	71,118	261,585
Customer Self-Directed Renewable Energy Option	0	0	0	0	0	0
Administration, Implementation, Marketing & Outreach, Commercialization & Integration.	9,670	12,936	18,165	21,117	24,134	86,022
Distributed Energy – Subtotal	38,555	55,682	74,772	83,346	95,252	347,607
TOTAL	62,253	81,396	105,057	117,899	132,914	499,519

AIC will also consider participating in existing and future studies to enhance and accelerate the development, deployment, commercialization and use of renewable resource technologies to the benefit of AIC customers.

RES funding is intended to cover the cost of utility scale renewable generation in excess of the cost of conventional generation resource alternatives, incentive payments for distributed renewable energy resources, marketing expenses and program implementation and administration.

The Company does not currently have – nor does it anticipate having in 2009 – any customers that pay over \$25,000 in tariff charges annually and in total, for any number of related service accounts within AIC’s certificated service area. Therefore, AIC has and will likely have no customers eligible for the “Customer Self-Directed Renewable Energy Option” as codified in A.A.C. R14-2-1809. Its budget for this option is therefore zero.

6. FUNDING

Currently, AIC collects a Renewable Energy Standard Surcharge (“RESS”). The RESS was established in Commission Decision No. 70304 (April 24, 2008) – Docket No. E-01025A-07-0598 – as part of its Implementation Plan for 2008. The Company currently collects – through the RESS – \$0.004988 per kWh capped at:

- \$1.05 per month for each residential customer;
- \$39.00 per month for each non-residential customer;
- \$117.00 per month for each non-residential customer with demand over 3 MW per month for three consecutive months.

The RESS is shown as a separate item on customer bills. AIC’s RESS Schedule – Sheet No. 36.0 – was approved as being in compliance to Decision No. 70304 and is attached as Exhibit C.

For 2009, the Company proposes no change to the RESS per-kWh charge. Further, AIC does not propose any changes to the caps. In other words, the per-kWh increase in the RESS proposed from 2008 to 2009 equals 0% or \$0.00 for both residential and non-residential customers. AIC further notes both the per-kWh rate and the caps equate to the charges set forth in the Sample Tariff in the REST Rules.

Based on its number of customers as of December 31, 2007, for 2009, AIC can collect – through the RESS – a maximum of:

- \$10,760.40 per year from residential customers;
- \$81,432.00 per year from non-residential customers;
- Zero dollars per year from non-residential customers with demand over 3 MW per month for three consecutive months; for
- A total maximum amount no greater than \$92,192.40.

AIC, however, does not anticipate that all of its customers will use the requisite amount of kWh’s so that AIC will collect the maximum amounts through the RESS. Specifically, AIC anticipates, based on kWh’s delivered in 2007, that it is likely AIC will collect approximately \$49,033.44 in 2009. This is because many non-residential customers will not use enough kWh’s per month to be charged the maximum amount under the RESS – as the following chart shows:

	Total \$	Average \$ per Bill	% Reaching Cap
Residential	\$10,760.40	\$1.05	100%
Non-Residential	\$81,432.00	\$39.00	47.46%
Non-Residential > 3 MW	\$0	\$117.00	N/A
Total	\$92,192.40	-	-

N/A = Not Applicable.

In other words, while the *maximum* AIC could collect through the RESS is \$92,192.40, the amount AIC is most likely to collect through the RESS equals about \$49,033.44. This is further shown through the data AIC provided to Staff through the process in evaluating AIC's 2008 Implementation Plan application regarding sample AIC customers, reproduced below:

Sample Customer	Average kWh per Month	Monthly REST (\$'s)
School	64,009	39.00
Restaurant	3,574	17.83
Church	3,180	15.86
Health Clinic	16,763	39.00
Bank	4,440	22.15
Municipal Building	8,880	39.00
Pharmacy	2,733	13.63
Distributing Co	8,620	39.00
Dentist Ofc.	2,956	14.74
Residential	940	1.05

AIC may file to increase these amounts and request additional funding through the RESS should it become apparent that more funding is needed to meet the REST Rules in future years. In the alternative, AIC may seek a partial waiver of the RES Requirements if the RESS does not generate sufficient funds to meet the RES Requirements. Currently, AIC estimates it will require approximately \$73,435 to meet the requirement in 2009, \$94,551 to meet the requirement in 2010, \$119,858 to meet the requirement in 2011, \$134,014 to meet the requirement in 2012, and \$151,332 to meet the requirement in 2013. But, as stated above, these estimates are preliminary estimates at best.