



**ORIGINAL**  
**Grand Canyon State Electric**  
**Cooperative Association, Inc.**

Your Touchstone Energy® Cooperatives 



47

July 29, 2005

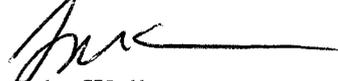
Docket Control  
Arizona Corporation Commission  
1200 West Washington  
Phoenix, Arizona 85007

*Re: Distributed Generation Workshops – Electric Cooperative Comments  
Docket No. E-00000A-99-0431*

Dear Sir/Madam:

Pursuant to the minutes from the July 8, 2005 Work Shop on Distributed Generation, Grand Canyon State Electric Cooperative Association, Inc. (GCSECA) submits the attached comments on behalf of Arizona Electric Power Cooperative, Inc., Duncan Valley Electric Cooperative, Inc., Graham County Electric Cooperative, Inc., Mohave Electric Cooperative, Inc., Navopache Electric Cooperative, Inc., Trico Electric Cooperative, Inc. and Sulphur Springs Valley Electric Cooperative, Inc. (collectively “Electric Cooperatives”).

Sincerely,

  
John Wallace

ORIGINAL + 13 copies of the foregoing  
filed Docket Control this 29<sup>th</sup>  
day of July 2005.

  
John Wallace

**AZ CORP COMMISSION  
DOCUMENT CONTROL**

**2005 JUL 29 PM 4:12**

**RECEIVED**

**The following comments on the Distributed Generation (DG) interconnection standard are provided by Arizona Electric Power Cooperative, Inc., Duncan Valley Electric Cooperative, Inc., Graham County Electric Cooperative, Inc., Mohave Electric Cooperative, Inc., Navopache Electric Cooperative, Inc., Trico Electric Cooperative, Inc. and Sulphur Springs Valley Electric Cooperative, Inc. (collectively "Electric Cooperatives" or "ECs").**

**The Electric Cooperatives reserve the right, individually and collectively, to provide additional or different comments and positions on any of the issues or proposed rule changes as becomes necessary in the future. The Electric Cooperatives, individually and collectively, also reserve the right to change opinions expressed below as new information becomes available.**

### **Distributed Generation Topics for Comment**

#### **I. Scope and Procedure**

**The Electric Cooperatives generally prefer the language contained in the Arizona Draft Interconnection Requirements For Distributed Generation (AZDIR) under Section 2. SCOPE, on page 4.**

#### **A. Applicability**

- a. Size and type of facilities which the policy applies to**

**25 kV or less and 10,000 kW or less**

- b. Categories of generator size or classes**

**Class I – 10 kW or less, single or three phase  
Class II – 11 to 50 kW or less, single or three phase  
Class III – 51 kW to 300 kW, three phase  
Class IV – 301 kW to 2,000 kW, three phase  
Class V – 2,001 kW to 10,000 kW, three phase**

- c. Distributed generation types – The EC's prefer the AZDIR language along with the modified Texas Rule 25.212(G) as follows:**

**Requirements specific to a facility paralleling for sixty cycles (EC's need to verify the appropriate number of cycles) or less (closed transition switching)**

**The protective devices required for facilities 2 MW or less which parallel with the utility system for 60 cycles or less are an interconnect disconnect**

**device, a generator disconnect device, an automatic synchronizing check for generators with stand alone capability, an over-voltage trip, an under-voltage trip, an over/under frequency trip, and either a ground over-voltage trip or a ground over-current trip depending on the grounding system, if required by the utility.**

d. Other issues

B. Rights and Responsibilities

**Establishment of Point of Interconnection – The point where the electric energy first leaves the wires or facilities owned by the Cooperative and enters the wires or facilities provided by DG Owner/Operator is the “Point of Interconnection.” Cooperative and DG Owner/Operator agree to interconnect the Facilities at the Point of Interconnection in accordance with the Cooperative’s rules, regulations, by-laws, rates, and tariffs (the “Rules”) which are incorporated herein by reference. The interconnection equipment installed by the DG Owner/Operator (“Interconnection Facilities”) shall be in accordance with the Rules as well.**

a. Utility and applicant

**Responsibilities of Cooperative and DG Owner/Operator for Installation, Operation and Maintenance of Facilities – DG Owner/Operator will, at its own cost and expense, install, operate, maintain, repair, and inspect, and shall be fully responsible for, its Facilities and Interconnection Facilities. DG Owner/Operator shall conduct operations of its Facilities and Interconnection Facilities in compliance with all aspects of the Rules and in accordance with industry standard prudent engineering practice. Maintenance of Facilities and Interconnection Facilities shall be performed in accordance with the applicable manufacturers’ recommended maintenance schedule. The DG Owner/Operator agrees to cause its Facilities and Interconnection Facilities to be constructed in accordance with the Rules and specifications equal to or better than those provided by the National Electrical Safety Code and the National Electrical Code, both codes approved by the American National Standards Institute, in effect at the time of construction.**

**The DG Owner/Operator covenants and agrees to cause the design, installation, maintenance, and operation of, its Facilities and Interconnection Facilities so as to reasonably minimize the likelihood of a malfunction or other disturbance, damaging or otherwise affecting or impairing the System. DG Owner/Operator shall comply with all applicable laws, regulations, zoning codes, building codes, safety rules and environmental restrictions applicable to the design, installation, operation and maintenance of its Facilities and Interconnection Facilities.**

**Cooperative will notify DG Owner/Operator if there is evidence that the Facilities' or Interconnection Facilities' operation causes disruption or deterioration of service to other customers served from the System or if the Facilities' or Interconnection Facilities' operation causes damage to the System. DG Owner/Operator will notify the Cooperative of any emergency or hazardous condition or occurrence with the DG Owner/Operator's Facilities or Interconnection Facilities, which could affect safe operation of the System.**

b. Easements/rights of way

**The DG Owner/Operator will be responsible for determining if an easement or right of way is required. Where an easement or right of way is required to accommodate the interconnection, the Customer shall provide, or obtain from others and provide, suitable easements or rights of way, in the utility's name.**

c. Insurance

**DG Owner/Operator shall carry adequate public liability and property damage insurance that shall be acceptable to the Cooperative.**

d. Other issues

**Limitation of Liability and Indemnification**

**Notwithstanding any other provision in this Agreement, with respect to the Cooperative's provision of electric service to DG Owner/Operator and the services provided by the Cooperative pursuant to this Agreement, Cooperative's liability to DG Owner/Operator shall be limited as set forth in the Cooperative's tariffs and terms and conditions for electric service, which are incorporated herein by reference.**

**For the purposes of this Agreement, a Force Majeure event is any event: (a) that is beyond the reasonable control of the affected party; and (b) that the affected party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent that they satisfy the preceding requirements: acts of war, public disorder, rebellion or insurrection; floods, hurricanes, earthquakes, lightning, storms or other natural calamities; explosions or fires; strikes, work stoppages or labor disputes; embargoes; and sabotage. If a Force Majeure event prevents a party from fulfilling any obligations under this agreement, such party will promptly notify the other party in writing and will keep the other party informed on a continuing basis as to the scope and duration of**

**the Force Majeure event. The affected party will specify the circumstances of the Force Majeure event, its expected duration and the steps that the affected party is taking to mitigate the effect of the event on its performance. The affected party will be entitled to suspend or modify its performance of obligations under this Agreement but will use reasonable efforts to resume its performance as soon as possible.**

**The DG Owner/Operator shall assume all liability for and shall indemnify the Cooperative and its members, trustees, directors, officers, managers, employees, agents, representatives, affiliates, successors and assigns for and shall hold them harmless from and against any claims, losses, costs, and expenses of any kind or character to the extent that they result from DG Owner/Operator's negligence or other wrongful conduct in connection with the design, construction, installation, operation or maintenance of the Facilities or Interconnection Facilities. Such indemnity shall include, but is not limited to, financial responsibility for (a) monetary losses; (b) reasonable costs and expenses of defending an action or claim; (c) damages related to death or injury; (d) damages to property; and (e) damages for the disruption of business.**

**Cooperative and DG Owner/Operator shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines, wires, switches, or other equipment or property on their respective sides of the Point of Interconnection. The Cooperative does not assume any duty of inspecting the DG Owner/Operator's lines, wires, switches, or other equipment or property and will not be responsible therefore. DG Owner/Operator assumes all responsibility for the electric service supplied hereunder and the facilities used in connection therewith at or beyond the Point of Interconnection.**

C. **Definitions - The EC's prefer the AZDIR Definitions.**

D. **Interconnection Process/Procedures**

**The Electric Cooperatives generally prefer the language contained in the AZDIR for topics listed below.**

- a. Procedures addressing both network and non-networked interconnections
- b. Pre-interconnection study or screening criteria
- c. Expedited processes for smaller generators
- d. Communication process concerning proposed DG projects
- e. Equipment pre-certification

- f. Utility reporting requirements to the Commission
- g. Utility inspections
- h. Interconnection dispute resolution process
- i. Disconnect from or reconnect with the grid procedure
- j. Other issues

E. Application Process and Document Requirements

**The Electric Cooperatives generally prefer the language contained in the AZDIR under Section 9 for topics listed below.**

- a. Time periods for processing applications
- b. Steps in the process
- c. Documentation requirements
- d. Designation of utility contact persons
- e. Other issues

II. Interconnection Technical and Operational Requirements

**The Electric Cooperatives generally prefer the language contained in the AZDIR under Sections 8, 10 and 11 for topics listed below.**

- A. Categories of equipment
- B. Design considerations/Protective equipment requirements
- C. Operational requirements
  - a. Voltage levels
  - b. Network & non-network items
- D. Inspection and start-up testing

**The Cooperative may disconnect the DG Owner/Operator's main electrical service if the DG Owner/Operator has connected its facilities without the inspection and approval of the Cooperative.**

- E. Testing and commissioning
- F. Meter installations

**The Cooperative shall purchase, own, install and maintain such metering equipment as may be necessary to meter the electrical output of the DG/Owner Operator Facilities. All costs associated therewith shall be borne by the DG Owner/Operator. Metering in general shall track the kWh production of the Facilities. Metering shall meet accuracy standards required for equivalent electrical services and can be done with standard meters or any devices that meet data collection and accuracy requirements. For Facilities greater than 300 kW, telemetry shall be required to monitor real-time output and other DG functions for large and medium generators that are operated remotely. Telemetry data shall be available to the Cooperative**

**and the communication of such data shall be compatible with the Cooperative's communication methods.**

- G. Maintenance requirements
- H. Other issues

### III. Other Considerations

**The Electric Cooperatives currently have Cogeneration Tariffs in place that specify the rate (avoided cost) that the Electric Cooperatives will pay the DG Owner/Operator for power supplied to the cooperative.**

**Any proposal that would require the Electric Cooperatives to pay an amount greater than a cooperative's avoided cost will result in all of the other cooperative's member/owners subsidizing the DG Owner/Operator for the difference between avoided cost and the higher amount paid.**

- A. Net metering
- B. Other issues