Duncan Valley Electric Cooperative

Interconnection Program

Solar power generators take the sun's rays and turn them into electric energy that can be used for everything from cooling your home in the summertime to keeping you warm in the winter. And by using the sun's resources, we reduce our reliance on fossil fuel-fired electric generation, thus preserving our valuable natural resources.

The program is easy!

(1) You must be a member of DVEC to participate in this program, installed within DVEC's franchise service area. **Complete the attached Interconnection Program enrollment form and return to DVEC**.

Once paperwork has been submitted and approved then the member will be given the OK to start construction and have **120 days** to complete the solar installation. **(Absolutely no construction of the project until DVEC approval has been given.)**

(2) You select and have installed a qualifying solar electric system in your home or business. This home or business must be served by DVEC. Furthermore, this system must meet all qualifications listed in the following "Qualifications" section.

(3) **You must use a licensed electrical contractor** to install the solar electric system that meets IEEE standards, the NEC code, and the cooperatives interconnect standards. The licensed contractor must also certify the solar array's rated output in terms of wattage.

(4) You sign an agreement assigning all associated environmental credits to DVEC.

(5) If a member elects to participate in DVEC's Annual Export Rate (AER) Tariff program, an additional agreement form is included in this packet.

6) You, the owner of the system, are responsible for all liability of the system including but not limited to payment of normal system repairs and maintenance to the unit, including labor.

(7) In order to fulfil your Interconnection Agreement, you must submit the following to your electric co-op:

- **Interconnection Program enrollment form.**
- **Paid invoice for the cost of the DG system.**
- **Interconnect forms filled out by your contractor doing the installation.**
- **Annual Export Rate (AER) agreement form.**
- **A one-line diagram of the system.**
- **A three-line diagram of the system.**
- **A building permit from the proper authorities.**
- **Completed IRS W-9 form.**
- **Wet signatures on all documents are required. E-signatures are not accepted in this packet.**
- **PV meter and loop not required, installer must supply meter if desired.**

(8) A more in-depth explanation of interconnection standards and requirements is contained in this packet under "Interconnection Program System Qualifications".

Documents should be submitted to:

Duncan Valley Electric Cooperative
P.O. Box 440
Duncan, AZ 85534

Duncan Valley Electric Cooperative

Interconnection Program System Qualifications

All customer solar electric generating systems must meet the following system and installation requirements to be connected to the electric distribution cooperative system:

1. The Customer System components must be certified as meeting the requirements of IEEE-929 - Recommended Practice for Utility Interface of Photovoltaic Systems.

2. The Customer System Components must be certified as meeting the requirements of UL-1741 - Power Conditioning Units for use in Residential Photovoltaic Power and be covered by a non-prorated manufacturer's warranty of at least two years.

3. The Customer System design and installation must meet all requirements of the latest edition of the National Electrical Code (NEC), including Article 690 and all grounding, conductor, raceway, overcurrent protection, disconnect and labeling requirements.

4. The Customer System and installation must meet the requirements of all federal, state and local building codes and have been successfully inspected by the building official having jurisdiction. To do so, the installation must be completed in accordance with the requirements of the latest edition of the NEC in effect in the jurisdiction where the installation is being complete, including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-122, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded.

5. The Customer System must meet Cooperative and Arizona Corporation Commission interconnection requirements for self-generation equipment.

6. The Customer System installation must meet the cooperative Service Requirements as follows:

   "An AC disconnect means shall be provided on all ungrounded AC conductors and shall consist of a lockable gang-operated disconnect clearly indicating open or closed. The switch shall be visually inspected to determine that the switch is open. The switch shall be clearly labeled stating "Photovoltaic System AC Disconnect."

7. All Customer System installations must be completed in a professional, workman-like and safe manner.

8. All electrical components of the solar system must have a UL listing certification.

9. A licensed contractor must be used. **THERE ARE NO EXCEPTIONS.**

Interconnection Program Enrollment Form

By signing below, I am assigning my rights associated with environmental credits to Duncan Valley Electric Cooperative, Inc. (DVEC).

I understand that as the owner of the equipment, I am fully responsible for the unit's operation, safety, and liability. I will pay for normal system maintenance and repairs to the unit, including labor.

I also agree to submit signed inspection forms after installation to ensure it meets requirements set forth in the DVEC Interconnection Program documentation. I agree that DVEC is not in any way responsible for the unit, its safety, operation, insurance or repair.

I, _____ (print name), hereby certify that I have read and reviewed the above Interconnection Program System Qualifications. I understand that I am solely responsible for ensuring that these qualifications are met and maintained for the life of my electric generating system and I am responsible for any consequences if they are not met. I understand they are needed for safe operation of my and DVEC's electrical system. I also understand if they are not met, I am not eligible for any rebate from DVEC. *Reminder, wet signatures are required. E-Signatures will NOT be accepted.

DATED_____ **SIGNED** _____

SPOUSE _____

Please print:

Member Name(s): _____

Physical Address: _____

Mailing Address: _____

Home Phone: _____ **Cell:** _____ **Work:** _____

Email: _____ **Account Number:** _____

Signature(s): _____

Date: _____

I agree to not have my system installed until I have been given express approval from DVEC and all other paperwork (including items listed under interconnection program guideline #7) have been completed and approved by DVEC. DVEC makes no promise of interconnection until approval to construct the system has been given.

DVEC reserves the right to refuse interconnection based on the following reasons, including but not limited to: failure to meet the qualifications as set forth in the DVEC Interconnection Program System Qualifications documentation, DVEC interconnection manual for distributed generation, incomplete enrollment packets, insufficient system testing or certification, installation and/or testing/certification by an unlicensed electrician.

Interconnection System Qualification Form

MEMBER INFORMATION

Member Name: _____

Member Street Address: _____

Member Mailing Address: _____

Member Telephone Number: _____

PHOTOVOLTAIC OR WIND TURBINE INVERTER INFORMATION

Manufacturer: _____

Model Number: _____

Number of Units: _____

AC Output Voltage (please check one: ___ 120 V, or ____ 120/240 V AC)

Total Power Output (please check one: ___KVA or ___kW)

PROTECTION INFORMATION

Please list the available range of protection settings, which should include pickup values and time delays.

Under/Over Voltage Protection _____

Under/Over Frequency Protection _____

Under/Over Current Protection _____

Other Protection _____

Interconnection System Qualification Form Continued

SYSTEM PERFORMANCE AND SOLAR ARRAY AND OR WIND TURBINE DATA

Max Power Output (Watts): _____

Max Power Voltage (Volts): _____

Max. Power Current (Amps): _____

Does inverter disconnect properly? _____

INSTALLATION INFORMATION
The system will be installed in compliance with IEEE 929 Recommended Practice for Utility Interface of Photovoltaic
(PV) System and the latest edition of the National Electric Code. The PV system components are listed
and tested by NRTL to UL Standard 1741.

Contractor Name (please print): _____

Contractor License Number: _____

Contractor Mailing Address: _____

Contractor Telephone Number: _____

Contractor Signature: _____

DISCONNECT SWITCH

Electrician Name (please print): _____

Electrician License Number: _____

Electrician Signature: _____

ADDITIONAL INFORMATION
The customer must include an electrical one-line and three-line diagram of the PV installation with this form, **load calculation sheets for new construction and existing sites.**
The electrical one-line and three-line diagrams must show connections, circuit breakers, fuses, etc., between main electrical components such as meter(s), main panel, disconnect switch, PV inverter(s), sub-panel, loads, etc.
A Site Plan must be submitted showing the arrangement of major equipment, including the electric service entrance section and utility meter, locations of PV inverter, interface equipment, and Disconnect Switch.
The licensed electrical or PV contractor should be able to provide the electrical one-line diagram, three-line diagram, detailed map and site plan and load calculation sheets.

Duncan Valley Electric Cooperative

Interconnection Form

By signing below, DVEC., acknowledges that it has inspected and confirmed that the customer's photovoltaic system and or wind turbine installation has met DVEC Photovoltaic System and or wind turbine Interconnection Requirements, and therefore, the customer is authorized to operate the PV and or wind turbine system in parallel with the utility.

Member Signature: _____

Authorized DVEC Representative (Please Print): _____

Signature: _____

Date: _____

DVEC WILL NOT ASSUME ANY RESPONSIBILITY FOR THE PROTECTION OF THE CUSTOMER'S PHOTOVOLTAIC AND OR WIND TURBINE SYSTEM, OR OF ANY OTHER PORTION OF THE CUSTOMER'S ELECTRICAL EQUIPMENT. THE CUSTOMER IS FULLY AND SOLELY RESPONSIBLE FOR PROTECTING THEIR EQUIPMENT IN A MANNER TO PREVENT ANY FAULTS OR OTHER DISTURBANCES FROM DAMAGING THE CUSTOMER'S EQUIPMENT.

Annual Export Rate (AER) & Interconnection Agreement

By signing this application, I certify that my renewable system has been installed in compliance with IEEE standards for Utility Interface of Photovoltaic (PV) and Wind Generating Systems and the latest edition of the National Electric Code. The Photovoltaic and Wind Generating System components are Listed and Tested to UL Standard 1741 and that it is connected to the Duncan Valley Electric Cooperative grid, and meets the ACC definition of an AER Facility.

I understand and agree to the following:

- As the owner of the equipment, I am fully responsible for the unit's operation and safety. I will pay for normal system maintenance and repairs to the unit.
- I am solely responsible for ensuring that these qualifications are met and maintained for the life of my electric generating system and I am responsible for any consequences if they are not met. I understand they are needed for safe operation of my and DVEC's electrical system.
- All kWh received from the customer by DVEC (Excess Generation) will be credited on the monthly customer bill by the Cooperative at the approved AER.
- The credit shall be applied against DVEC monthly charges. No Excess Generation shall be "banked," "saved" or "rolled forward" for use in a future month.
- In the event the credit exceeds the amount due DVEC (Excess Credits), the credit shall be rolled forward and applied against subsequent Cooperative bills until used.
- After my December bill, I may request compensation for any outstanding credits from the prior year; if the outstanding credits exceed $100, a check will automatically be issued, otherwise the bill credits will carry forward to the following year.
- Copies of the Annual Export Rate (AER) are available upon request.

Name: _____

Address: _____

_____

Account No: _____

Signature: _____

Received by DVEC on (date): _____ By: _____