

Steele-Waseca Cooperative Electric

COGENERATION: SOLAR AND WIND GENERATORS

In the past years Steele -Waseca Cooperative Electric has seen a significant increase of interest in wind and solar energy from our members. Many are finding renewable energy attractive due to potential economical benefits and the low harmful impacts on the environment. SWCE was first introduced to renewable energy generators on the distribution system 25 plus years ago. While the concept of wind and solar generation has not changed, the technology and programs have.

Under state law electrical utilities are required to buy the energy produced by renewable system smaller than 40 kW at average retail rate. In SWCE's case, for every kilowatt-hour, (kWh), produced by a renewable system smaller than 40 kW that goes out on to the distribution system, SWCE will pay the owner of the generator roughly 11.5 cents. The energy produced by larger generators, (generators that produce over 39 kW), is bought by Great River Energy or any other Generation and Transmission company at a contracted rate. Other financial incentive programs for renewable energy also exist at the state and federal level.

INCENTIVE PROGRAMS

Currently the state and federal governments have incentive programs that encourage the production of energy by renewable means. These programs cover the productions of energy by wind, solar, hydro, biomass, (i.e. using farm animal waste to create energy), and other renewable sources. The current Minnesota state program offers an exemption on real and personal property of a wind energy system. A state production tax does exist in place of the property tax and the production tax has different tax level according to the size of the wind energy system. The state wind incentive program is open to any renewable generation under 2MW.

The federal government renewable incentive programs include a renewable electricity production tax credit and a 1 - 1.9 cent per kWh payment. Those interested in the production tax credit should check with their accountant to see if their renewable energy system is eligible for this tax credit program. For more information on the state and federal programs for renewable energy contact the Minnesota State Commerce Department or go to www.commerce.state.mn.us.

CONNECTING A GENERATOR TO SWCE SYSTEM

When plans to interconnect a renewable system become decided, personnel from SWCE should be contacted. A \$250 application fee is required prior to any engineering work being done to accommodate a renewable system over 20 kW on the distribution system. For large renewable system, a study may need to be performed to study the effects of the large renewable system on the distribution and/or transmission system. For small generators, a study is usually not needed.

SWCE operations personnel will also meet with you on site to discuss what may need to be done to interconnect a renewable system to the distribution system. The expense of

any improvements on the distribution system to accommodate a renewable system of any size will be at the expense of the owner of the generator. An estimate of the expenses will be provided and will act as the amount of deposit required by the cooperative before interconnection can occur.

SWCE will also provide the owner of the renewable system with a copy of the Uniform Statewide Contract for Cogeneration and Small Power Production Facilities of Less than 40kW, the Minnesota Distribution Generation Systems packet and any other necessary paperwork needed for interconnection. These documents need to be filled out and signed before interconnection can occur.

REQUIREMENTS FOR INTERCONNECTION

Some of the key requirements for interconnection include insurance, a disconnect switch, and power quality.

Currently any cogeneration system less than 40 kW is required to have at least \$300,000 in liability insurance before it can be interconnected to the distribution system. State law also states that evidence of such insurance shall be provide to the cooperative and the cooperative should be notified of any policy changes that may occur over the life of the renewable system generator.

Any cogeneration system is also required by law to have a visible disconnect switch that the cooperative's crews can easily access. During maintenance, construction, or storm conditions, while crews are working on a section of line that pertains to a renewable system, the renewable system cannot be producing electricity back out on to distribution system. To be assured that a de-energized line remains de-energized, a SWCE crew may disconnect the renewable system during the period that work is being performed. As soon as the work is completed, the renewable system will be reconnected to the electrical grid. The owner of the renewable system will be notified in advance if the renewable system is to be disconnected except in emergency or storm conditions. During emergency or storm conditions, the cooperative will notify the owner of the renewable system as soon as possible.

The operation of a renewable system is also required not to negatively affect the service to other customers or the cooperative's distribution system. SWCE has invested a significant amount of funds into the distribution system and equipment to provide all of our members with reliable power. Any corrective action required to maintain the power quality and equipment of the distribution system will be the financial responsibility of the owner of the generator.

ADDITION INFORMATION

For more information on wind generators or other cogeneration means, contact SWCE at 1-800-526-3514.