

North Star Electric Cooperative

RENEWABLE COGENERATOR

In the past year, North Star Electric Cooperative has seen a significant increase of interest in renewable energy from our members. Many are finding renewable energy attractive due to potential economical benefits and low harmful impacts on the environment. North Star Electric was first introduced to wind generators on the distribution system 30 plus years ago. While the concept of renewable generation has not changed, the technology and programs have.

Under Minnesota state law, electric utilities are required to buy the energy produced by renewable energy generators smaller than 40 KW at the average retail rate. In North Star's case, for every kilowatt-hour (kWh) produced by a generator smaller than 40 KW that goes out on to the distribution system, North Star Electric will pay the owner of the generator 10.37 cents (2011 rate). The energy produced by larger generators (generators that produce over 40 kw) is bought by Minnkota Power 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 program includes 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 NORTH STAR ELECTRIC SYSTEM

When plans to interconnect a renewable generator become decided, personnel from North Star Electric should be contacted. A \$100 application fee is required prior to any engineering work being done to accommodate a renewable source on the distribution system. For renewable generators, a study may need to be performed to study the effect of the renewable on the distribution and/or transmission system.

North Star will also meet with you on site to discuss what may need to be done to interconnect a renewable generator to the distribution system. The expense of any improvements on the distribution system to accommodate a renewable generator 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.

North Star will also provide the owner of the renewable generator with a copy of the Uniform Statewide Contract for Cogeneration and Small Power Production Facilities of Less than 40 KW, the Minnesota Distribution Generation System 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 includes insurance, a disconnect switch, and power quality.

Currently any cogeneration system that is 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

provided to the cooperative and the cooperative should be notified of any policy changes that may occur over the life of the 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 generator, the generator cannot be producing electricity back out on the distribution system. To be assured that a de-energized line remains de-energized, North Star may disconnect the generator during the period that work is being performed. As soon as the work is completed, the generator will be reconnected to the electrical grid. The owner of the generator will be notified in advance if the generator is to be disconnected except in emergency or storm conditions. During emergency or storm conditions, the cooperative will notify the owner of the generator as soon as possible.

The operation of a generator is also required not to negatively affect the service to other customers or the cooperative's distribution system. North Star has invested a significant amount of funds into the distribution system and equipment to provide all of our members with reliable power. Any correction 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 renewable cogeneration, contact North Star Electric at 1-218-634-2202 or toll-free 1-888-634-2202.