

## **RENEWABLE ENERGY POSITION**

Great River Energy is a not-for-profit electric cooperative that supplies electricity to 28 customer-owned cooperatives across Minnesota and part of Wisconsin. Our company measures its performance based on a triple bottom line: affordable rates, reliable energy service and environmental stewardship. To ensure that we deliver strong performance in each of these vital areas for the benefit of our members, Great River Energy utilizes a broad mix of energy resources, including wind, coal, natural gas, fuel oil, hydropower and biomass.

### **Renewable Energy**

Great River Energy has sufficient renewable resources in place to meet the renewable energy standard (RES) of Minn. Stat. §216B.1691 through approximately 2025.

At the time Great River Energy negotiated its renewable energy contracts, the prices were comparable to MISO market prices, and were expected to remain competitive with the market throughout the life of the agreements. However, MISO market prices have fallen to points where Great River Energy's wind resource costs are higher than the prices we can sell the energy into the MISO market. As a result, energy from renewable resources has proven to be more expensive than expected in the last few years.

In these continued difficult economic times, Great River Energy is concerned about any cost increase that will harm the economic well-being of our member-consumers. As a cooperative business, our costs increases are immediately reflected on our members' electricity bills.

Great River Energy and the state's other utilities were required to submit a rate impact analysis for activities required to comply with the RES. For 2010, the estimated wholesale rate impact of the RES requirement to Great River Energy's members was \$22 million or \$0.002/kWh. (Great River Energy's total revenue requirements for 2010 were approximately \$850 million.) The cost of compliance was determined based on purchased power agreements, owned generating resources that meet the definition of "eligible energy technologies," financial transmission rights, transmission and administration.

### **Future Impact to Member Costs**

Based on 2011 market prices, Great River Energy expects the cost of compliance with the RES requirement will be similar or greater than what we experienced in 2010. Until market prices increase, Great River Energy will likely continue to see negative effects from RES compliance costs. Great River Energy and its 28 member cooperatives urge officials to weigh the impact of further costs when considering additional regulations related to renewable energy so that our rates remain affordable.

## **Great River Energy Wind Energy Initiatives**

Great River Energy members will receive at least 7 percent in 2011 and 12 percent in 2012 of their total energy use from renewable resources, including:

- Trimont Area Wind Farm, 100 megawatts (MW) nameplate capacity
- Prairie Star Wind Farm in Mower County, 100 MW
- Elm Creek Wind Farm near Trimont, 100 MW
- Ashtabula II Wind Farm in Griggs and Steele counties of North Dakota, 51 MW
- Endeavor II Wind Farm in Osceola County, Iowa, 100 MW
- Four small wind projects in southern Minnesota, totaling 20 MW

In addition, Great River Energy utilizes wind energy to supply its members' voluntary renewable energy purchases and a portion of its headquarters' energy needs.

- Wellspring Renewable Wind Energy program allows customers to purchase wind energy from member co-ops in 100-kWh blocks for a nominal fee. More than 6,550 member-consumers take advantage of the program.
- Great River Energy's Platinum LEED certified headquarters features a 200-kilowatt wind turbine in Maple Grove.

## **Great River Energy Biomass Initiatives**

Biomass energy is created when organic plant or animal waste materials are utilized to generate electricity.

Great River Energy obtains renewable biomass energy from:

- Elk River Resource Recovery Project uses refuse-derived fuel (RDF) to generate electricity. The 35-MW power plant burns processed municipal waste, reducing the amount of waste sent to landfills by 300,000 tons annually.
- Elk River Municipal Utility Landfill produces methane gas as waste decomposes. Great River Energy purchased approximately 26,000 megawatt-hours (MWh) of electricity generated from Elk River's methane gas collection in 2010.
- Anaerobic digesters capture methane from cow manure to generate electricity. Great River Energy purchases the output from two anaerobic digesters located at dairy farms near Morris totaling more than 20,000 MWh.

## **Hydropower Initiatives**

Great River Energy purchases hydroelectric power from Manitoba Hydro, and several of our members receive hydroelectric power allocations from the Western Area Power Administration. Although hydropower is renewable and carbon-free, Minnesota does not include large hydropower as an eligible energy technology under Minn. Stat. §216B.1691.

## **Solar Power Initiatives**

Although not a major source of renewable energy in the Midwest today, solar photovoltaics (PV) have the potential to make contributions within our planning horizon. Great River Energy's headquarters building features an on-site solar PV array that produces 72 kW of electricity at full capacity.