

Lakefield Junction Station



*Lakefield Junction Station,
Martin County, Minnesota*

Great River Energy's Lakefield Junction Station is a natural gas peaking facility located near the city of Trimont in Martin County, Minnesota. The plant operates during times of peak electrical demand, such as summer periods of significant air conditioner use. In addition, the facility is called upon to support voltage on the transmission grid.

Completed in 2001, the plant has the capacity to generate approximately 500 megawatts (MW) of electricity with six simple-cycle combustion turbines fueled primarily by natural gas with fuel oil as a backup.

Lakefield Junction Station is located in an ideal location near a natural gas pipeline and a 345-kilovolt (kV) transmission line. The plant is highly automated; only seven skilled operator/technicians, an administrative assistant and a janitorial person are required to operate and maintain the plant.

How the plant works

The plant uses a simple-cycle combustion turbine process

to convert fuel into electricity. A compressor supplies compressed air to a combustor which drives a three-stage power turbine. The combustion process causes the turbine to rotate, driving both the compressor and a generator. The combustion turbine combusts fuel through a high performance, low emission process, which allows the plant to operate at high efficiencies with very low emissions.

Environmental performance

In late 2004, Lakefield Junction Station received International Organization for Standardization (ISO) 14001 certification of its environmental management system. As a certified plant, Lakefield Junction Station has an environmental management system in place to continuously evaluate and improve environmental performance.

Quick facts:

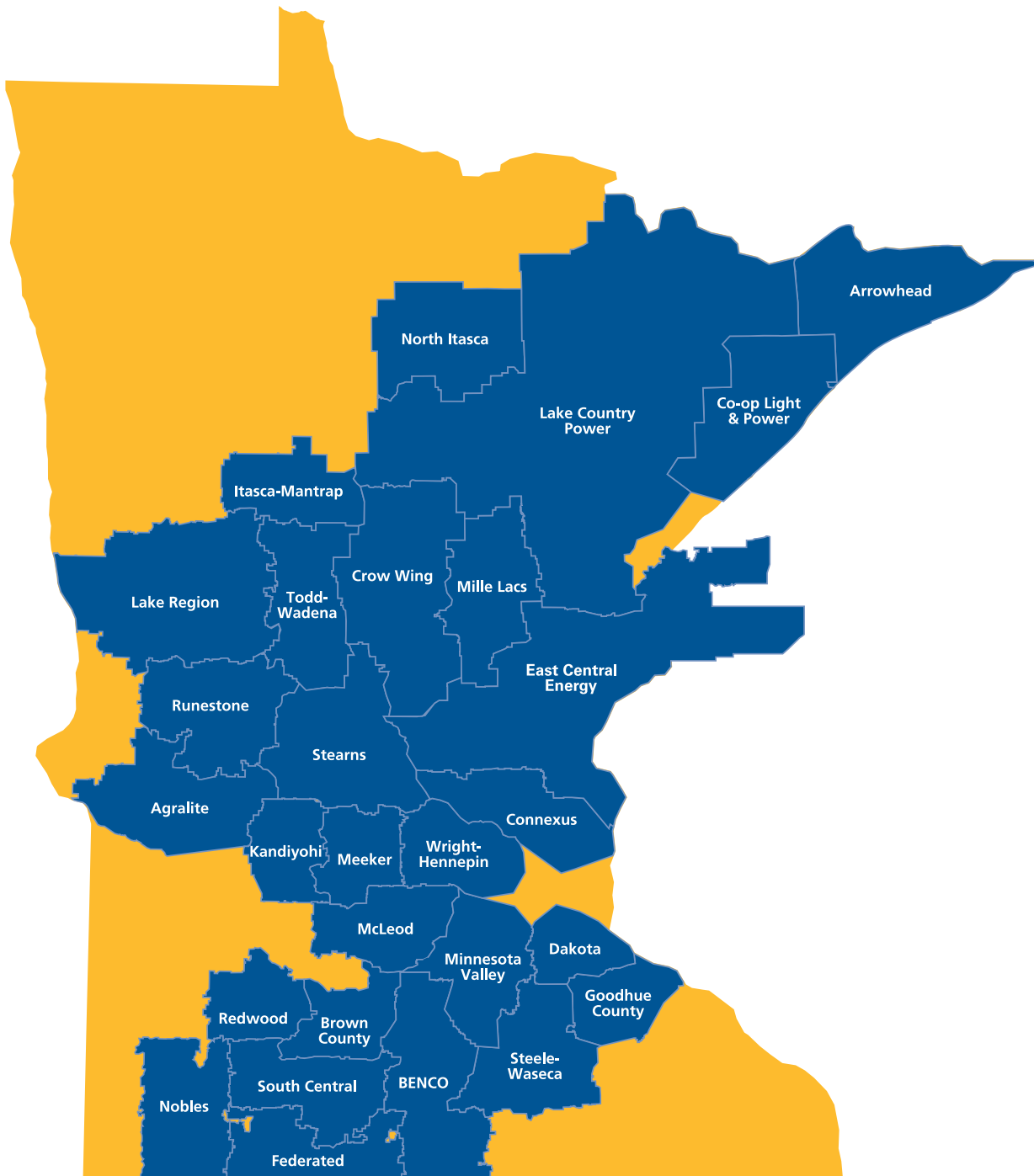
- 500 MW peaking facility
- Six single-cycle combustion turbines
- Located near the city of Trimont, Minnesota, Martin County
- Fueled by natural gas
- Interconnected with 345-kV transmission line
- ISO 14001 certified for environmental performance



About Great River Energy

Great River Energy is a not-for-profit electric cooperative owned by 28 member distribution cooperatives. Collectively, Great River Energy's member cooperatives serve approximately 645,000 member-consumers – or about 1.7 million people. Great River Energy owns and maintains a resource mix that includes 11 power plants and more than 4,500 miles of transmission lines, making it the second largest power supplier in Minnesota.

For more information, visit greatriverenergy.com.



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