

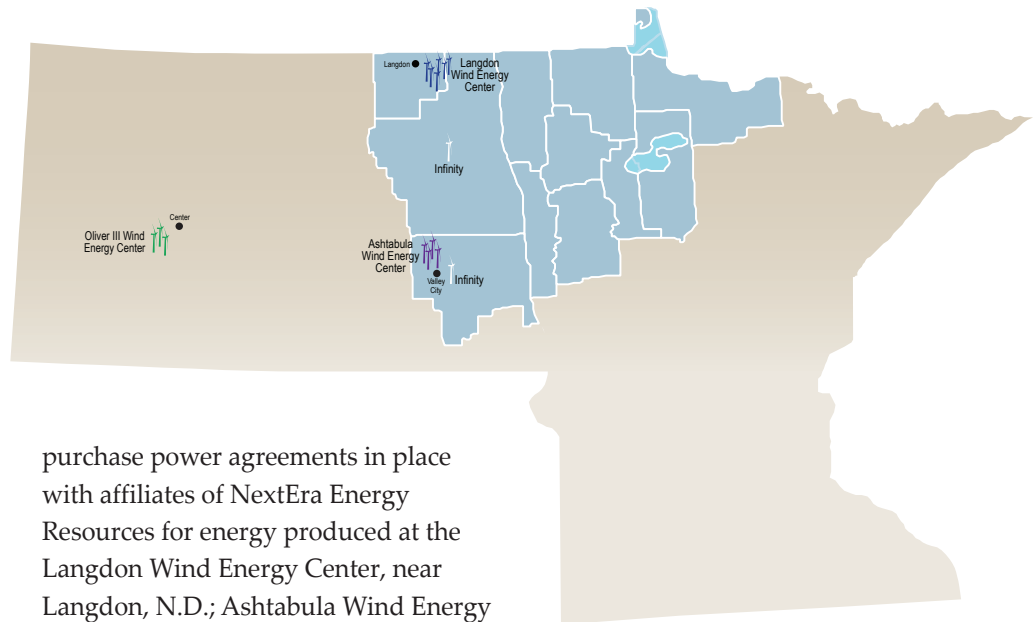
Wind Energy

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Minnkota Wind Energy Centers

The Minnkota member cooperatives and Northern Municipal Power Agency (NMPA) participants are recognized as leaders in supporting the region's wind resource development. These associated systems built the first two commercial-scale, utility-owned wind turbines in North Dakota history in 2002. The success of those projects helped jump-start significant growth in the adoption of wind energy.

Presently, about 459 megawatts of nameplate wind generating capacity is available in the Minnkota/NMPA Joint System. Minnkota has



purchase power agreements in place with affiliates of NextEra Energy Resources for energy produced at the Langdon Wind Energy Center, near Langdon, N.D.; Ashtabula Wind Energy Center, near Valley City, N.D.; and Oliver III Wind Energy Center, near Center, N.D. Minnkota owns the two Infinity wind turbines near the towns of Petersburg and Valley City, N.D.



	LANGDON WIND ENERGY CENTER	ASHTABULA WIND ENERGY CENTER	OLIVER III WIND ENERGY CENTER
Location	Nine miles south of Langdon, N.D.	15 miles northeast of Valley City, N.D.	42 miles northwest of Bismarck, N.D.
Size	199.5 megawatts (MW) Minnkota portion: 139.5 MW Otter Tail portion: 60 MW	366 megawatts (MW) Minnkota portion: 217.5 MW Otter Tail portion: 97.5 MW Great River Energy portion: 51 MW	100 megawatts (MW) Minnkota portion: 100 MW
Turbines	133 turbines, 1.5 MW each, manufactured by General Electric	244 turbines, 1.5 MW each, manufactured by General Electric	Approximately 48 turbines rated between 1.5 and 2.3 MW each
Towers	Approximately 250 feet to center of hub	Approximately 250 feet to center of hub	Approximately 262 feet to center of hub
Blades	Variable pitch – 120 feet long	Variable pitch – 120 feet long	Variable pitch – 186 feet long (average)
Delivery point	Langdon substation	Pillsbury substation	Roughrider substation
Transmission	Langdon to Hensel 115-kilovolt (kV) line	Pillsbury to Fargo 230-kilovolt (kV) line	Center to Mandan 230-kilovolt (kV) line
Start-up date	December 2007	2008/2009	January 2017



Langdon Wind Energy Center

Ashtabula Wind Energy Center

Oliver III Wind Energy Center

Infinity Renewable Energy

Receive up to 100% of your energy usage from certified renewable resources



The Infinity Renewable Energy program provides homes and businesses with an opportunity to receive up to 100% of their energy from certified renewable energy resources. Participating in the program is easy – no extra work or expensive equipment installations are required. Simply contact your local electric cooperative or municipal and select how much of your energy you want to come from renewable resources.

All renewable energy purchased through the Infinity program is derived from three different wind sites across North Dakota that collectively have the capacity to produce up to 459,000 kilowatts (kW). The wind energy is delivered to your cooperative or municipal through high-voltage power delivery infrastructure before it is distributed to homes and businesses. These wind sites have a blended capacity factor of 45%, but are positioned strategically to ensure energy is being produced at almost every hour of the year.

Infinity program participants pay a designated kilowatt-hour (kWh) energy rate on their standard bill. The record of your renewable energy purchase and proof that it was reserved for you is done through renewable energy credits (RECs). A REC is verification that electricity was generated from an eligible renewable energy resource and was integrated into the electric grid. All wind RECs purchased through the Infinity program are certified by the Midwest Renewable Energy Tracking System (M-RETS). This certification ensures that RECs are only used once. When you determine the amount of renewable energy you would like to purchase, an equivalent number of RECs will be retired on your behalf.

Contact your local cooperative or municipal today to learn more about the program and other renewable energy options in your area.

Minnkota Power Cooperative Associated Systems

Distribution cooperatives

- Beltrami Electric Cooperative
Belvidere, Minn.
- Cass County Electric Cooperative
Fargo, N.D.
- Cavalier Rural Electric Cooperative
Langdon, N.D.
- Clearwater-Polk Electric Cooperative
Bagley, Minn.
- Nodak Electric Cooperative
Grand Forks, N.D.
- North Star Electric Cooperative
Baudette, Minn.
- PKM Electric Cooperative
Warren, Minn.
- Red Lake Electric Cooperative
Red Lake Falls, Minn.
- Red River Valley Cooperative
Power Association
Halstad, Minn.
- Roseau Electric Cooperative
Roseau, Minn.
- Wild Rice Electric Cooperative
Mahnomen, Minn.

Municipal utilities

- Bagley Public Utilities
Bagley, Minn.
- Baudette Municipal Utilities
Baudette, Minn.
- Fosston Municipal Utilities
Fosston, Minn.
- Grafton Municipal Utilities
Grafton, N.D.
- Halstad Municipal Utilities
Halstad, Minn.
- Hawley Public Utilities
Hawley, Minn.
- Park River Municipal Utilities
Park River, N.D.
- Roseau Municipal Utilities
Roseau, Minn.
- City of Stephen Municipal Utilities
Stephen, Minn.
- Thief River Falls Municipal Utilities
Thief River Falls, Minn.
- Warren Municipal Utilities
Warren, Minn.
- Warroad Municipal Utilities
Warroad, Minn.

