

## Renewable Energy



Through direct investments and annual payments under renewable power purchase agreements, Basin Electric Power Cooperative (Basin Electric) has committed to or invested in spending more than \$6 billion in renewable resources. As of year-end 2021, Basin Electric has more than 2,100 megawatts (MW) of green and renewable\* capability:

- 1,775.7 MW of wind generation;
- 45.1 MW of recovered energy generation;
- 318.7 MW of hydropower (winter peaking power purchased from WAPA).

## Wind Generation

In 2011, Basin Electric commissioned the largest wind project in the nation operated by a cooperative, the 162-MW Crow Lake Wind Project, in central South Dakota. The project consists of 108 GE 1.5-MW turbines, one of which is owned by Mitchell Technical Institute (MTI) in Mitchell, South Dakota, for training wind technology students. After commissioning, the project received a software upgrade that allows the turbines to rotate faster, producing more power. The upgrade effectively increased the total project's net output to 172 MW.

Basin Electric owns two projects in North Dakota: the 77 turbines of PrairieWinds 1, and Minot Wind, which consists of three 1.5-MW turbines. Two 1.3 MW turbines were decommissioned in early 2022. Both projects are located south of Minot, North Dakota.

Basin Electric also owns and operates a small wind project at Chamberlain, South Dakota. The site has two 1.3-MW turbines.

Basin Electric purchases power from several wind projects:

- NextEra Energy Wind Energy Centers

Edgeley Wind Project (North Dakota)	40 MW
Wilton Wind Project (North Dakota)	49.5 MW
Wilton Wind 2 (North Dakota)	49.5 MW
Baldwin Wind Project (North Dakota)	100 MW
Hyde County Wind Project (South Dakota)	40 MW
Day County Wind Project (South Dakota)	99 MW
Brady 1 Wind Project (North Dakota)	150 MW
Brady 2 Wind Project (North Dakota)	150 MW
Northern Divide Wind Project (North Dakota)	197.9 MW

\*The actual renewable energy attributes (aka green tags or RECs) of much of that generation was allocated to members or sold to others. No claims of environmental attributes may be claimed for any part of Basin Electric's power supply, unless those attributes are assigned to the power claimed as green or renewable.



- Corn Belt Power Cooperative wind resources in Iowa:

Iowa Lakes Electric Cooperative	
• Superior Wind Project	10.5 MW
• Lakota Wind Project	10.5 MW
Hancock County	7.3 MW
Crosswinds	16.8 MW

- Wind projects owned by others in South Dakota and Minnesota.
- Other contracts for long-term wind purchases totaling 348 MW, which have started since 2015.

Consolidated Edison, Inc. Campbell County Wind Project (South Dakota)	94 MW
Onward Energy Sunflower Wind Project (North Dakota)	104 MW
Enel Green Power Lindhahl Wind Project (North Dakota)	150 MW

As of June 2021, Basin Electric purchases the output from 312 wind and solar projects owned by member-consumers throughout the cooperative's service territory. The output totals approximately 12 MW.

## Recent Additions

Since 2014, Basin Electric has been committed to purchasing additional wind. As of the end of 2020, Basin Electric has 1,777 MW

of wind in its portfolio, nearly doubling the cooperative's wind generation since 2015. In 2019, Basin Electric executed a power purchase agreement for another 142 MW expected to begin Jan. 1, 2023. This will bring the anticipated total at that time to 1,905 MW of wind capability, accounting for approximately 24% of its total generating capability.

## Other Renewable Generation

Recently, due to feedback from members and more favorable economics, Basin Electric committed to purchasing 318 MW of utility-scale solar and will continue to investigate additional options. So far, the committed projects include two separate projects in South Dakota and three in Montana.

Basin Electric purchases the output from eight recovered energy generation sites along the Northern Border Pipeline: Culbertson, Montana; Manning, St. Anthony, and Zeeland, North Dakota; Wetonka, Clark, and Estelline, South Dakota; and Garvin, Minnesota.

Each generates 5.5 MW of renewable energy from exhaust heat produced by the pipeline's compressor stations. The sites produce power with virtually no incremental emissions and are considered carbon-free generation. They are owned and operated by subsidiaries of Ormat Technologies of Reno, Nevada.

Visit Basin Electric's website for answers to frequently asked questions about building wind projects: [www.basinelectric.com/facilities/wind](http://www.basinelectric.com/facilities/wind)