

Village of Cascade

Location Village of Cascade,
Wisconsin

Description NET metered dual 100 kW
distributed wind generation system at
a wastewater treatment plant.

Annual electrical consumption
254,000 kWh

Major load center Aerators, pumps,
controls, etc.

Average wind speed 5.5 m/s (12.4
mph)

Wind incentives \$400,000 (FOE and
WE Utilities combined)

Current utility rate 11 cents

Powering Wastewater Plants with Wind—A Smart Investment

Faced with rising power costs and a volatile energy future, the Village of Cascade trustees were determined to offer forward thinking solutions to the same dogged question—how to pay for their community’s assets? The answer was apparently blowing in the wind and across a small hill where the village’s wastewater treatment plant is located. Two community friendly Northern Power™ 100 turbines were purchased to generate all the energy required to power the facility’s aeration system, making it the first net-zero energy wastewater plant in the state of Wisconsin. The Village of Cascade will save approximately \$30,000 a year with their two Northern Power 100 turbines, a significant amount for a community with an annual town budget of \$330,000.

“With these two turbines, the Village of Cascade has taken a giant step toward energy independence. Its prudent investment in wind will enable the community to control its budget, saving money for current and future residents.”

— MICHAEL VICKERMAN, EXECUTIVE DIRECTOR OF RENEW





Community Models Wind Energy Solutions for Students and the State

Aside from the financial benefits of this project, the Village of Cascade trustees also understood the educational importance of this type of renewable energy project for local students as well as other municipalities in Wisconsin. They were embracing new long term energy solutions and moving swiftly to implement them. If their small community of 700 residents could do it, why not others?

Local teachers and students can track real time turbine performance, output and environmental offsets by accessing the Northern Power 100's PublicView web portal part of the "Wind for Schools" program offering—an engaging and hands on way to link the renewable energy resource directly with the residents that are benefiting from it.

“It’s a source of pride for the community and it’s something we want to show off. Hopefully...it will be something other communities can follow.”

— JOE HARRISON, VILLAGE TRUSTEE

Results*

Energy produced per year	295,000 kWh
Electricity savings	\$29,718
Economics	12.5 years
Estimated carbon emissions offset	393,824 pounds per year**

*These are projected results based on average wind speeds in a specific area. Wind speeds vary and therefore, actual results may vary.
**CO₂ offset estimated by using EPA's eGRID 2007

The Right Choice

The advanced gearless design of the Northern Power 100 ensures its' quiet and reliable operation for 20 plus years. With anticipated increases in electrical rates, The Village of Cascade will save close to a million dollars by producing their own clean, domestic energy while reducing their carbon footprint.

Furthermore, its low height profile and sleek design make the Northern Power 100 a welcome addition in most community settings—making it the top choice for resorts, hospitals, grocery stores, churches and farms from Alaska to Italy.

