Distributed Wind Deployment: Public School

Rural school installation of five 10-kilowatt wind turbines

The town of Drummond received an Oklahoma Department of Commerce Energy Efficiency and Conservation grant to install five wind turbines next to the public school. The funding was key to the successful completion of this project. *Photo by Pieter Huebner*

Project description: Located in Drummond, Oklahoma, the five-turbine project was installed in fields adjacent to the Drummond Public Schools agriculture education shop and classroom and the town's fire station. The area features open space and access to a strong wind resource. The project was originally designed to feature a single 50-kilowatt (kW) turbine, but the model was no longer commercially available upon project approval. Instead, Drummond Public Schools installed five 10-kW turbines that were manufactured in Oklahoma.

Installation date: May 2013

Type of customer: School

Utility: Month-to-month net-metering project; the interconnection is with investor-owned utility Oklahoma Gas & Electric Services.

Estimated production: 90,000 kilowatt-hours (kWh)

Actual production: 88,312 kWh or an average of 17,662 kWh per turbine (2017)

Percentage of electricity offset: Approximately 85% of agriculture education shop and classroom's needs

In Their Words

As an experienced installer, why did you think this installation would be successful?

"The project was bound to be successful from the beginning. Drummond, Oklahoma, is an ideal wind site. It's wide open, and the facility has the appetite for the energy. The community was behind the project, and we had a lot of positive feedback from locals."

- Pieter Huebner, master installer, Off Grid Enterprises

What was the driving force behind your decision to move forward with this project, and what do you think will make it successful?

"Education in Oklahoma has withstood withering cuts for the past several years, leaving finances strained and lacking. It is always a struggle to make ends meet in a small, rural school, so when we saw the opportunity of offsetting some of our energy costs with wind energy, we jumped on it. Through an Oklahoma Department of Commerce Energy Efficiency and Conservation grant, Drummond was able to install five Bergey wind turbines that produce 50 kilowatts of energy, which is enough to operate our agriculture education shop and classroom and put nearly $6,000 per year back into our building fund for operations. Accessing wind energy as an alternative to conventional sources put more money in Drummond classrooms for the kids."

- Mike Woods, superintendent, Hennessey Public Schools

The Drummond turbines are installed on 120-foot self-supporting towers. *Photo by Pieter Huebner*