

## Shaktoolik Wind Construction

<b>Grantees</b>	Alaska Village Electric Cooperative (Utility-Cooperative)
<b>Technology Type</b>	WIND
<b>Region</b>	Bering Straits
<b>AEDG Project Code</b>	10200

### REF Grants Received

Round	App	Grant Title	Grant #	AEA Project #	Phase	Start Date	End Date	Status
5	871	Shaktoolik Wind Construction	2195463	410053	Construction	12/23/10	12/31/12	Closed
		Shaktoolik Surplus Wind	7050871	410081	Construction	7/1/12	12/31/15	Active
		Energy Recovery for Water System Heat						

### Grant 2195463: Shaktoolik Wind Construction

**Project Scope:** This is a grant for a construction project to install two Northwind 100-kilowatt turbines, plus secondary heat loads, load controllers and new switchgear. The project used an alternative pre-cast / post tension concrete foundation design to support the wind turbine structures.

**Project Status:** The wind turbines are installed and functional. Turbine 1 was installed 230' SE of originally chosen location due to "borrowing" from the gravel at the chosen site. The distribution line is complete. All AVEC Operations outstanding punch-list items were completed as of July 6, 2012. The integration of the new control module with the existing AVEC power plant was completed as of July 15, 2012. The two Northwind Wind Turbines were fully commissioned, remotely monitored and controlled as of July 15, 2012. The newly up-graded AVEC power systems are fully functioning and operating according to design as of August 15, 2012. The grant is closed out.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	\$2,465,633.00	\$2,465,633.00
Other State Funding	\$0.00	\$0.00
<b>Total State</b>	<b>\$2,465,633.00</b>	<b>\$2,465,633.00</b>
Required Local Match	\$262,263.00	\$262,263.00
Federal Grant Funding	\$0.00	\$0.00
<b>Total Project Costs</b>	<b>\$2,727,896.00</b>	<b>\$2,727,896.00</b>

### Grant 7050871: Shaktoolik Surplus Wind Energy Recovery for Water System Heat

**Project Scope:** The Alaska Village Electric Cooperative (AVEC), in collaboration with the Alaska Native Tribal Health Consortium (ANTHC), will design and construct a secondary load(s) to capture excess energy from the existing wind farm in Shaktoolik. The secondary loads will be used to provide heat for the water treatment plant and drinking water storage tank. ANTHC will provide the match.

**Project Status:** The grant is in place. The Collaborative Project Agreement between AVEC and ANTHC is also in place. The final design was approved June 6, 2014 by AVEC. AEA accepted the design June 12, 2014 and has released procurement and construction funds. Construction has been completed and commissioning is under way. Interference between the radio communications of the power plant, wind turbines, and secondary loads has caused a delay in the final inspection. A site inspection was performed on April 28, 2015 by AEA. All components were installed and the system was functioning in automatic mode upon departing. On receipt of as-built drawings, the project will be closed out.