

AVEC Wins 2007 Wind Co-op of the Year Award!



Selawik, AVEC's first wind farm, has four AOC 65-kW turbines with a generating capacity of 260 kW. Total wind-diesel generating capacity is 1,647 kW.



Kasigluk has three Northwind 100 100-kW turbines with a generating capacity of 300 kW. Total wind-diesel generating capacity is 1,624 kW. Power is also provided to the community of Nunapitchuk through a distribution intertie.



Toksook Bay has three Northwind 100 100-kW turbines with a generating capacity of 300 kW. Total wind-diesel generating capacity is 1,618 kW. Power is provided to the community of Tununak through a distribution intertie. A tieline is also being built between Toksook Bay and Nightmute.

Alaska Village Electric Cooperative (AVEC) recently received the 2007 Wind Cooperative of the Year Award from the U.S. Department of Energy's (DOE) Wind Powering America Program. This award recognizes AVEC for leadership, demonstrated success and innovation in our wind power program, which was developed in response to rising fuel costs for our 48 prime diesel power plants.

"Rural Alaska's extremely challenging geographic and climatic conditions limit the options for generating electricity. Diesel fuel can be shipped and stored and the technology is very well known. There simply are no viable alternatives," said Meera Kohler, AVEC's President and CEO. "Wind generation, on the other hand, is also an old technology but, until recently, was not up to the challenge of remote Arctic conditions."

"Despite only a few years of actual field experience, we are enthusiastic about the successes we have seen and hope that wind can play a meaningful role in many of our villages," Kohler said. "In a best-case scenario though, wind can only be expected to produce about 30% of a community's annual electricity so diesel will continue to be the workhorse for the foreseeable future."

AVEC has wind turbines in three communities with interties to two other communities, so residents in five communities reap the benefits of having some of their power generated by wind. In 2007, turbines in these three communities generated 1,100,000 kWh (net) and displaced 81,481 gallons of diesel fuel. At an average cost of \$2.75/gallon (with Selawik having the highest fuel cost at \$3.30/gallon), these five communities saved more than \$200,000 dollars in diesel generating costs.

AVEC staff pioneered the integration of wind into our isolated village diesel systems and it has been a major learning experience. Selawik has the distinction of being the first integrated wind turbine farm AVEC built and served to help work out design and performance challenges involved with this new sophisticated system. Wind resources vary by village and affect overall output. Wind in Selawik provided an average net wind generating capacity of about 5% of total kWh generated in 2007; Kasigluk's wind turbines generated an average of 16.23% while Toksook Bay realized an average of 23.53% net wind versus total kWh generated.

With the assistance of funding partners like the Denali Commission, Rural Utilities Service, Coastal Villages Region Fund and others, AVEC has been able to develop a successful wind program that will provide benefits to our members and our environment for many years. As future funding becomes available, AVEC will continue to build on this solid foundation to expand our successful wind program into other communities with feasible wind resources.