



Wind Energy

Alaska has abundant wind resources available for energy development. Volatile-priced fossil fuel generation and improvements in wind power technology make this clean, renewable energy resource attractive to many communities.

Alaska is a leader in designing, planning, constructing and operating integrated wind energy systems in small microgrid systems. AEA works to identify economic wind resources for potential development, support research and development efforts for rural and Arctic wind applications, establish best practices and educate consumers to the benefit of utilities and ratepayers to offset electrical and heating needs.

Current Status:

AEA currently manages 47 active wind projects funded by the Renewable Energy Grant Fund (REF) and closed out 34 projects funded by both the REF and Denali Commission. The State's REF has invested approximately \$91.5 million in wind projects which is approximately 35 percent of the total REF funding.

The wind program is engaging communities through our Anemometer Loan Program (Copper River Region, Craig, Goodnews Bay, Haines, Hughes, Hydaburg, Ketchikan, Kotlik, Sitka, Tanana, Wrangell) to generate wind resource maps, select potential wind measuring sites, collect meteorological data and coach communities on how to approach and manage a wind energy project. The wind program also remains active in community and industry outreach through attendance, coordination and presentation in technical workshops, wind working group meetings, energy fairs and conferences.

A LiDAR (Light Detection and Ranging) based wind measuring unit is currently undergoing cold weather demonstration and evaluation in Delta. This system could be used in place of or in conjunction with meteorological towers for the measurement of a wind regime at heights up to 200 meters above ground, studying wind characteristics across the entire rotor swept area of today's largest wind turbines.

AEA is soliciting proposals for the reinstatement and facilitation of the Alaska Wind Working Group and Wind Program Advisory Committee (WPAC). The WPAC will advise the AEA Wind Program on all matters regarding the wind industry, including but not limited to, policies, priorities, and technical issues.

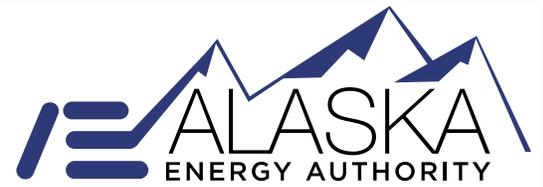
Program Highlights:

The AEA wind program re-instituted the Anemometer Loan Program in 2013 with funding from the U.S. Department of Energy. The program loans 10-meter and 34-meter meteorological towers, anemometers, vanes and data loggers to communities to collect wind data in locations where viable wind regimes are expected. This gives participating communities reliable wind resource data when applying for Renewable Energy Fund grants.

(over)

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The LiDAR unit testing will run through 2016 at the Delta Wind Farm with a final report to be compiled. Following a successful evaluation, the unit will be made available to the ACEP, wind project developers, and existing wind farms in the state

AEA received a prototype wind data logger from Halus Power Systems in early July. After bench testing in the office, the unit was set up on a test tower at the Musk Ox Farm in Palmer for a week of field testing. With testing complete, Alaska wind resource studies will be able to use a robust data logger that is easier to install, collects higher-resolution data, exports results to a convenient data format and costs one-fourth the amount of our current standard equipment. The unit collects wind speed from three separate anemometers, direction from one vane and temperature from an integrated sensor.



Delta Wind Farm

Reviewed: September 14, 2016

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