



National Park Service
U.S. Department of the Interior

Cuyahoga Valley
National Park

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Cuyahoga Valley National Park News Release

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Demonstration 2kW Wind Turbine Powers Wind Station in Cuyahoga Valley National Park

Brecksville, Ohio – A newly erected demonstration wind turbine is now operational at the Cuyahoga Valley Environmental Education Center (CVEEC) located in Cuyahoga Valley National Park (CVNP). The turbine will power the Wind Station located in the November Lodge Media Center. The station hosts four Cuyahoga Valley National Park Association (CVNPA) laptops, 1 dedicated NPS weather/wind data laptop, a task light, and dedicated electrical outlets—all using battery power generated by the turbine.

CVNP is one of the first national park sites to have a fully functional wind turbine, although four other national park sites are planning for this renewable energy source.

The mono-pole wind turbine is a Skystream 2.4kW Wind Turbine System distributed by LTI Power Systems, Inc. located in Elyria, Ohio, a company visited by President Obama in 2009.

The project received grant funding from The University-National Park Energy Partnership Program (UNEPP), a program that pairs universities with parks for energy-related projects. Dee Strickland, Facility Operations Specialist at CVNP, reached out to The University of Akron College of Electrical & Computer Engineering to identify long-standing engineering issues in the park that could function as senior design projects. Students Joe Ayoub, Johnny Luu, and Ryan Aultman were tapped to carry out the two-semester project under the supervision of faculty advisors Drs. Iqbal Husain, Yilmaz Sozer, and Tom Hartley.

The students designed the project, selected the wind generating system, and fabricated the educational display unit. CVNP personnel provided active support in required compliance, wind generator site selection, electrical infrastructure, and other related activities.

Wind turbine Facts:

- The 2.4KW unit generates 2,400 watts of power - stored in two deep-cycle 12v batteries.
- If storage batteries reach capacity, the turbine 'locks' until there is a power draw; batteries can recharge while power is being pulled.

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- If winds are less than 8 mph, the blades also 'lock' and batteries continue to provide power.
- Turbine can be shut down manually during periods of migration.
- Utility power automatically kicks in if required.
- The new Wind Station in the November Lodge Media Center consists of four CVNPA laptops, one NPS laptop, and a task light, all powered by the turbine. Each laptop draws 66 watts. The laptops are used by interns and teacher workshop participants for project work.

CVNP encompasses 33,000 acres along the Cuyahoga River between Cleveland and Akron. Managed by the National Park Service, CVNP combines cultural, historical, recreational, and natural activities in one setting. For more information about the park, visit www.nps.gov/cuva/ or www.dayinthevalley.com/ or call (330) 657-2752 or (800) 445-9667.

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