EAPC SODAR Services

A SODAR (**SO**nic **D**etection **A**nd **R**anging) measurement campaign is a cost-effective solution for the acquisition of horizontal and vertical wind speed and direction data through the rotor sweep.

Benefits and Uses of SODAR

- Validate the upper-level shear profile
- Characterize the wind resource throughout the site
- Reduce uncertainty in energy production estimates
- Provide comprehensive data for turbine suitability studies
- Characterize site turbulence in greater detail
- Indentify vertical wind speed and inflow angles
- Measure directional shear (wind veer) across the rotor sweep
- Assure the highest quality wind turbine generator layout
- Investigate wind turbine power curve performance

Fast, Flexible, Reliable, and Economical

- Fast installation and easy transportation
- Deployable in remote areas
- Potential for reduction in number of on-site monitoring towers
- Deploy in difficult terrain where monitoring towers are not feasible
- Collect data through icing and light snow events

Customizable Deployments

- Determine appropriate locations and times for deployment
- Short-term deployments – as little as three months per site!
- Long-term deployments (6+ months) available for larger sites or in cases where tower installation is not possible

Data Analysis and Quality Control Techniques

- Closely monitor incoming data to ensure minimal data loss
- Quickly deploy local trained crews to correct any malfunctions
- Compare tower and SODAR data to determine instrument performance and to identify icing / rain events
- Build statistical relationship with on-site monitoring towers to determine wind shear characteristics or other needs

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Grand Forks, ND

3100 Demers Avenue
Grand Forks, ND 58201
701.775.3000
wind@eapc.net

EAPC Wind Energy

Norwich, VT

256 Farrell Farm Road
Norwich , VT 05055
802.649.1511
info@eapcwindenergy.com