



Community Wind Energy

Locally-owned utility-scale
wind energy projects

Community-Owned Wind Project

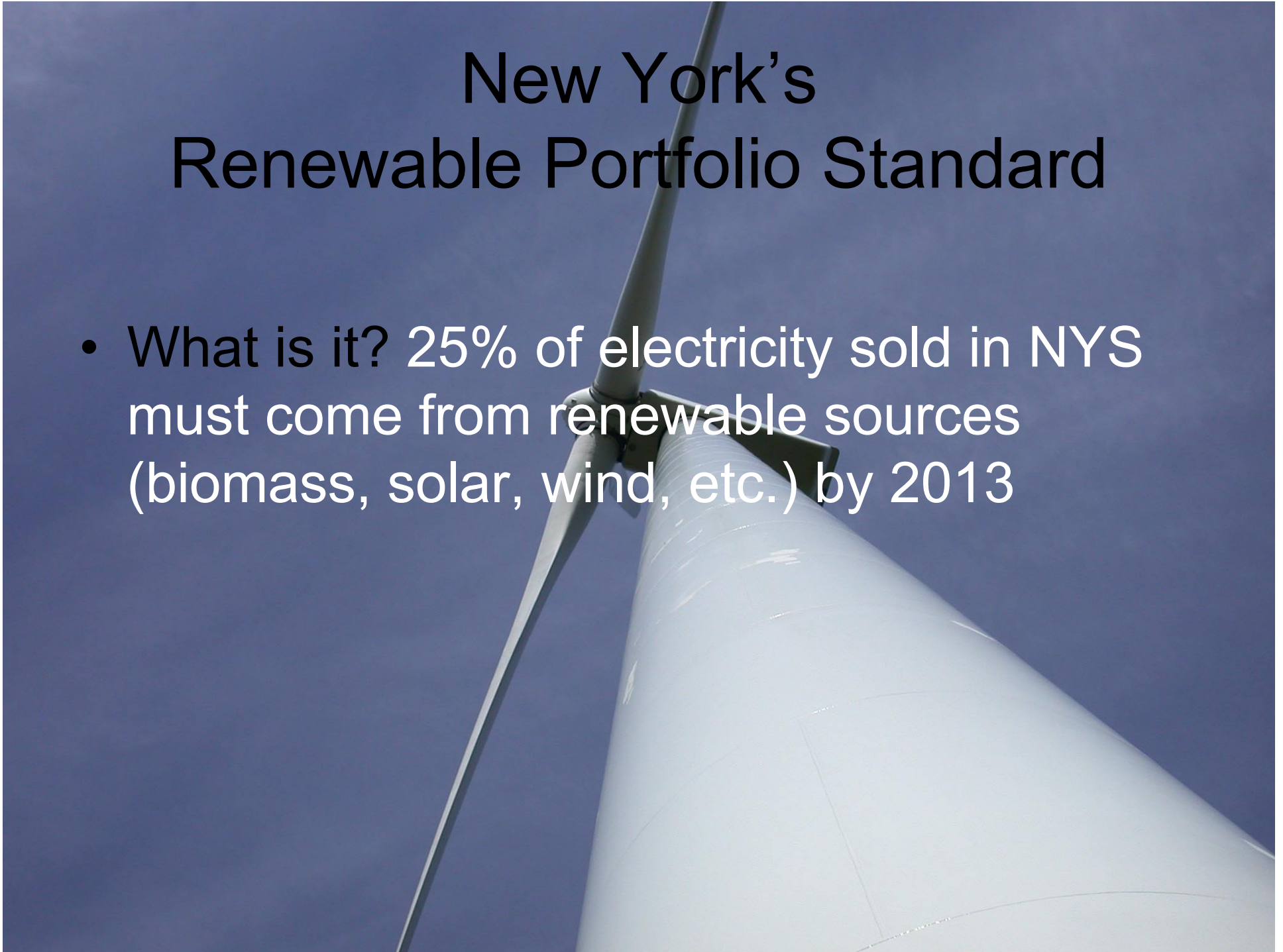
- Definition - locally-owned utility-scale wind projects connected to the grid, selling electricity on the wholesale market
- To learn more: www.helderbergwind.org Or www.hilltownswind.org
 - View previous presentations
 - Informational links about wind energy

Community wind compared to “outside” developer

- “outside” developer:
- Larger projects (40 MW or more)
- Project size and type determined by business needs of developer
- Payments in lieu of taxes (PILOTS) + landowner leases
- Community wind:
- Smaller-scale (10 MW or less)
- Locally-owned
- More revenue can stay in the community
- Local control over the size and type of project

New York's Renewable Portfolio Standard

- What is it? 25% of electricity sold in NYS must come from renewable sources (biomass, solar, wind, etc.) by 2013





Community wind in the Hilltowns:

A NYSERDA project funded under PON-787

- Site prospecting
- Resource Assessment
- Assessing and Building Community Support
- Permitting and Environmental Assessment
- Business Prospectus

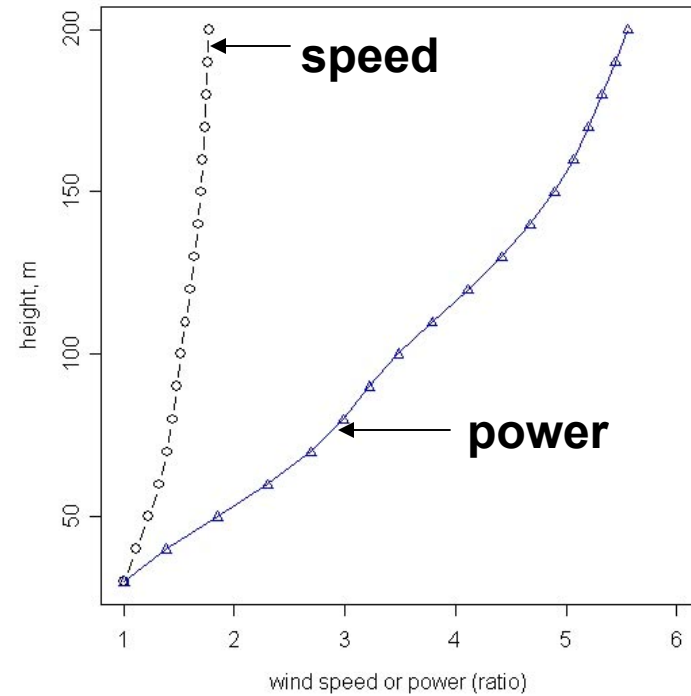
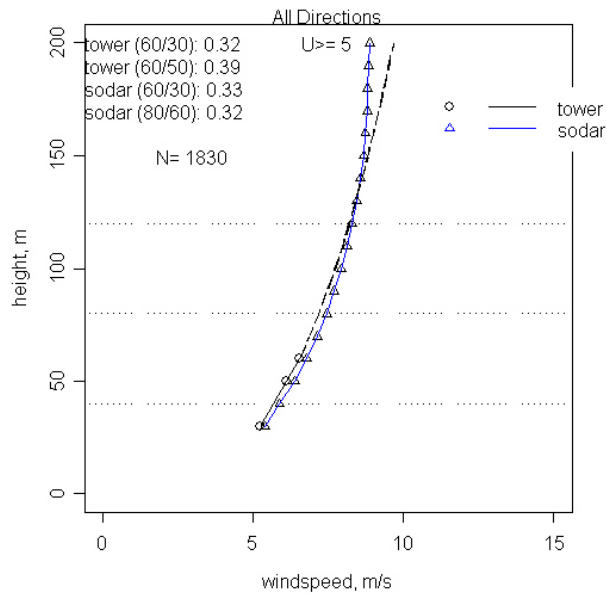
Wind Resource Assessment Process

- Measure wind speed, direction, shear, turbulence, temperature
- Correlate data with long-term reference station
- Estimate energy yield
- Account for losses—availability, severe weather, etc.
- Account for uncertainty




$$\text{Power} = \text{Density} \times \text{Speed}^3 \times \text{Area}$$

- Obtain most accurate wind speed possible at 2 or 3 heights up to 50 m
- Use sodar to get information about upper levels
- Measure shear, turbulence, temperature
- Seek to minimize uncertainty in energy yield analysis



“putting a wind turbine on too-short a tower is like putting a solar panel in the shade”

Environmental Assessment



- Bird/bat study
- Noise study
- Visual impact assessment
- Other potential impacts

Assessing Community Support

- Survey constructed and distributed
- Results indicate a high level of community interest and support

