

Distributed Rural Electric Cooperative Wind System Application

Consumer-Owned Utilities Making
Wind Part of the Solution

Electric Cooperative Wind Project
Case Studies Webinar
Sept. 23, 2009



Why Should A Utility Get Involved?

- Stimulate Rural Economic Development
- Environmental Benefits
- Push Renewable Energy Development
- Promote Technology Changes
- Still Create a Financially Feasible Project?

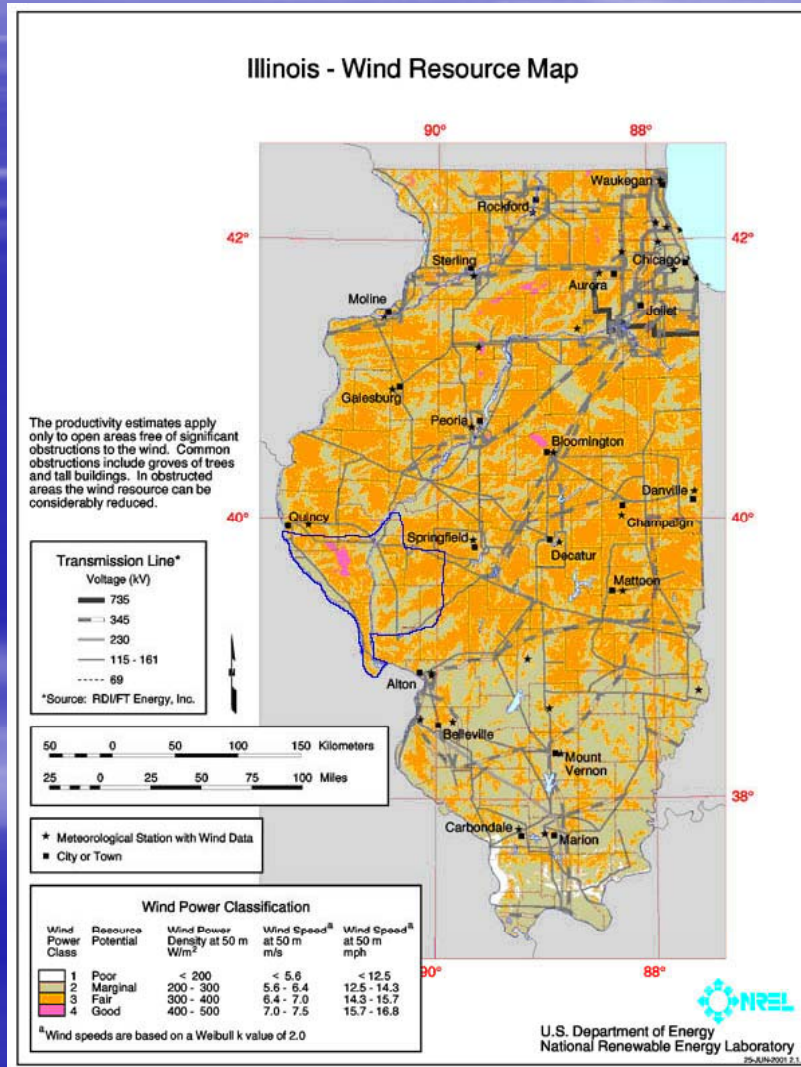


First Things First!

- Identify Key Issues
 - Where is the wind (and what is it)?
 - Where is the interconnection?
(transmission/distribution)
 - What is the scope & size of the project?
 - Where does the money come from?



Where Is The Wind (where to start)?



Where Is The Wind?

- Still must measure your own wind
- Close proximity to site
- Measure at approx. height
- Several years of data
- Correlate with other data
- Use data to select hardware



Where Is The Interconnection?

- Transmission?
 - Interconnection agreement
 - Proximity To Lines
 - Sell to line owner?
 - Wheel through?



Where Is The Interconnection?

- Distribution
 - Close to substation
 - 2-3 miles away
 - Rebuild lines
 - Dynamic VAR
 - Enough load at low loading/high wind
 - Expand substation area
 - Compensate for voltage issues
 - Interconnection issues
 - SCADA



What Is The Scope & Size?

- Interconnection, Siting, Existing Contracts, and Internal Limitations?
- Economy of Scale
- Other Logistics?



Where Does The Money Come From?

- Grant and Incentives
 - USDA
 - IL DCEO
 - IL Clean Energy Comm. Foundation
- PTC (tax liability)
- CREBs
- Others?



Other Issues to Address

- Environmental Concerns
- Permitting (local, FAA, etc.)
- Zoning Issues
- Landowner Relationships
- Turbine Manufacturer Selection
- Size and Type of turbine(s)
- Capacity Factor
- Dispatch Storage Issues



Reasons for Getting Involved

- If other utilities don't get involved, industry will not take off (especially in Illinois)
- Get word out that this can work for small to medium sized utilities
- Keep utilizing grants & incentives to maintain needed funding for project feasibility
- Economic Development Options
- Public Education Opportunities



Public Response?

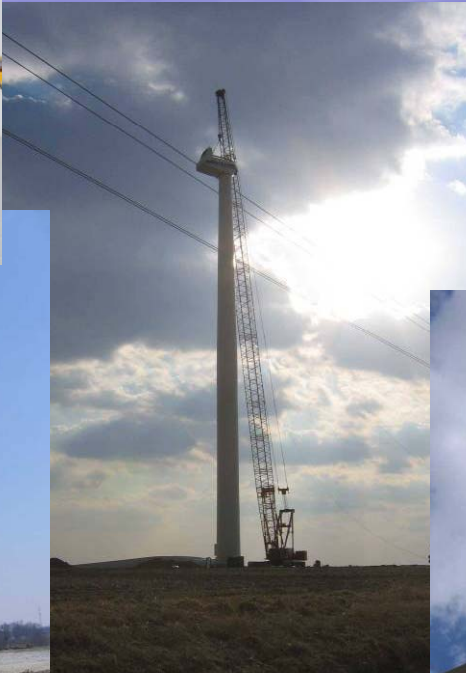
- Overwhelmingly Positive
- Questions Answered
- Up Close Experience Now
- Watchful Eyes



Status Today

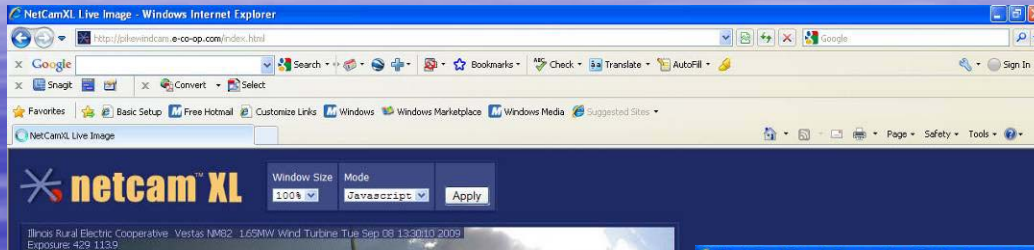


Status



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Questions?

