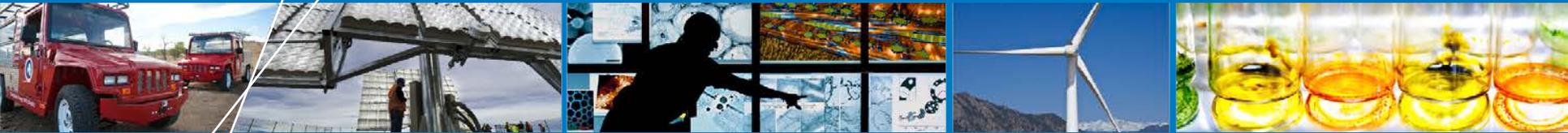


New Regional Partnerships and Resources



Suzanne Tegen

Small Wind Conference

June 18, 2014

Stevens Point, Wisconsin

NREL/PR-5000-62207

Overview

- **DOE WINDEXchange**
- **New Regional Resource Centers**
- **Distributed wind challenges**
- **Resources from DOE and NREL**



Photo from NREL/PIX 13311

A New Focus for the Current Market

In the early 2000s, the DOE deployment focus was to introduce a technology that had become mainstream in other parts of the world to an American energy market that had little experience – essentially “bringing wind power to America.”

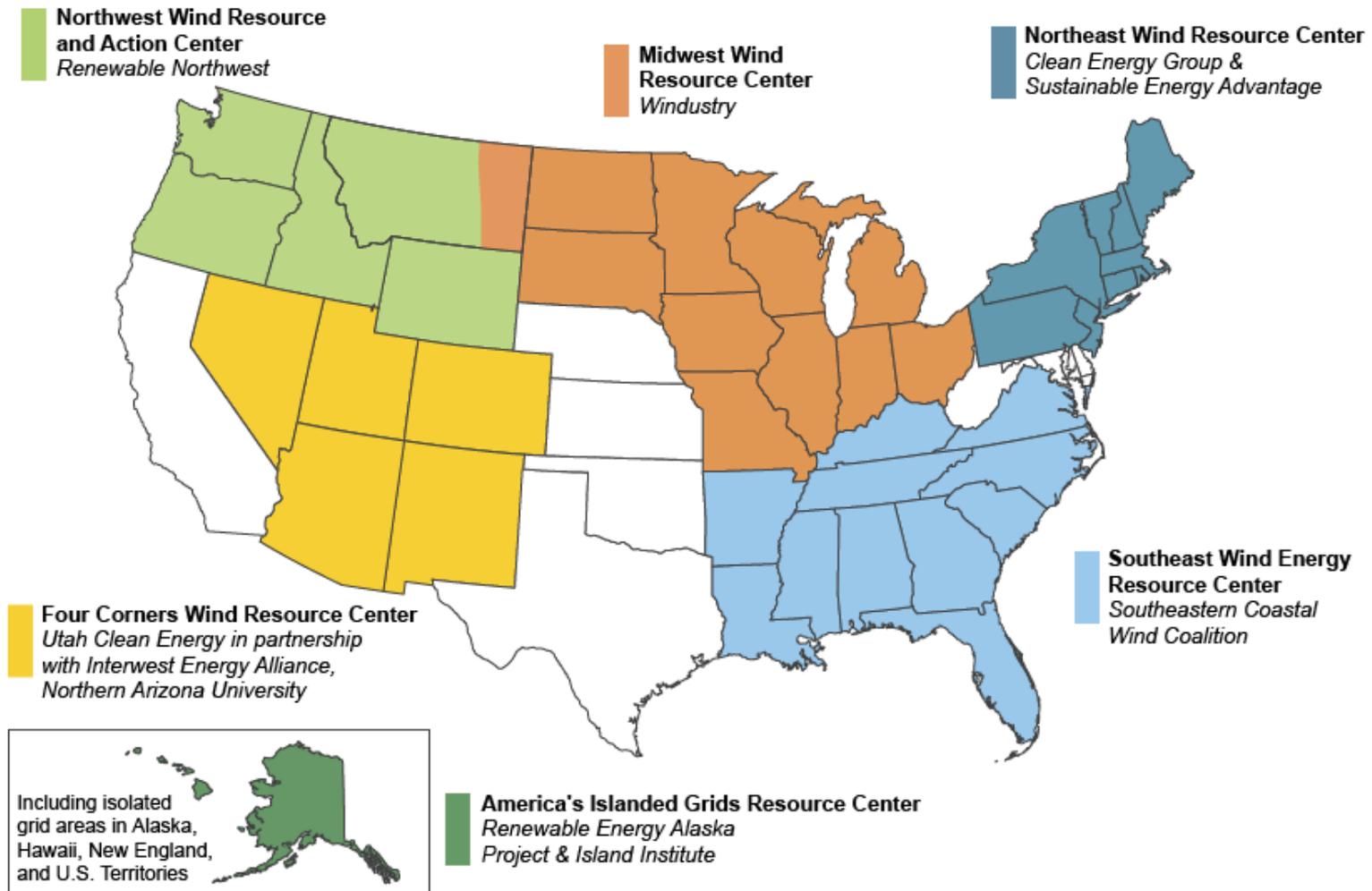
In 2014 DOE focused a new effort to provide fact-based information about wind deployment:



Provides wind energy information that is fact-based, relevant, and actionable so that:

- Individuals and communities can make informed decisions about the benefits and impacts of wind energy.
- Decision-makers involved in wind energy planning and permitting are supported with current and credible information.

Six New DOE Regional Resource Centers



Regional Resource Centers

- **Provide information about small wind, distributed wind, utility-scale wind, offshore wind.**
- **Evaluate jobs and economic impacts from distributed wind.**
- **Strategize with regional partners to provide information to decision-makers about how to appropriately install wind turbines/projects.**
- **Reach out to audiences from governors offices to local zoning boards with, for example, train-the-trainer programs, outreach to media, and fact-based information.**

- **Jobs and Economic Development Impacts (JEDI)**
- **Small + Midsize + Community = Distributed**
- **Evaluates jobs and other economic effects from distributed wind (DW) projects**
- **Shows one of the benefits of DW for the nationwide picture**
- **Sizes currently include:**

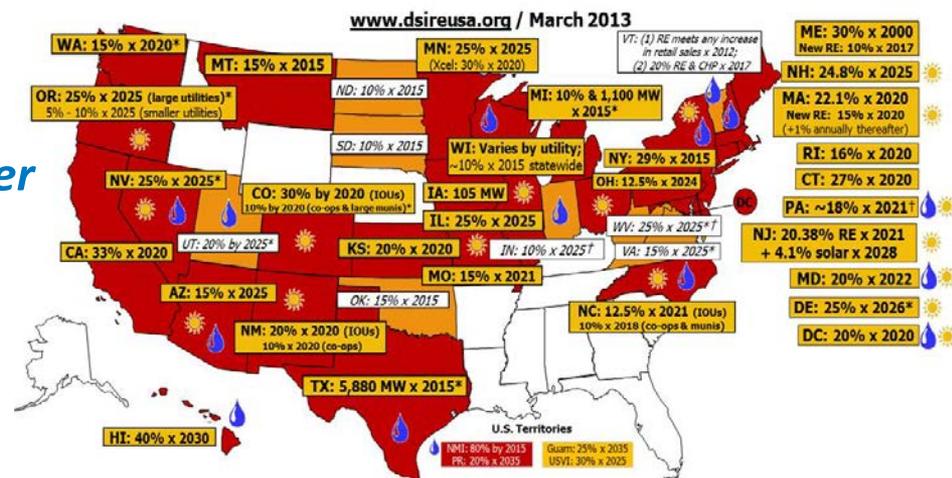
Small	Midsize	Utility-scale
2.5 kW	200-300 kW	1500 kW
10 kW	600-800 kW	and others
50 kW	800-900 kW	
100 kW		

Regional Stakeholder Assessments

In 2011, six regional focus group meetings were convened to explore wind deployment obstacles and facilitate discussion.

The 200 wind industry participants representing 35 states and territories identified the following challenges, *in order of importance*:

- Lack of state markets to motivate expanded wind deployment
- Permitting and zoning issues
- Transmission issues
- Social acceptance issues
- Lack of funding for outreach activities
- Utility wind integration
- Permitting and access to federal lands/water
- Technical and regional competition
- Environmental impacts
- Poor understanding of wind resource.



Source: DSIRE USA, accessed June 2014
www.dsireusa.org

State Renewable Portfolio Standards that are built out (completed) or watered down combined with no national policy and low natural gas costs weaken the markets for even very low-cost wind.

Distributed Wind Deployment Challenges

- Inconsistent, unclear zoning
- Unpredictable permitting process
- Lack of financing options
- Low power-purchase rates
- Inconsistent and changing national and state incentives and policy
- Technology availability and reliability
- Lack of general awareness of technology as an option
- Small number of poor examples for community projects poisoning markets
- Lack of community understanding of the positive impacts that community-scale projects can bring
- Lower-cost solar options with better financing schemes.



Photo credit: NREL PIX database 16729
Medford, MA

DOE/NREL Distributed Wind Activities & Tools

- **WINDEXchange website**
energy.gov/eere/wind/windexchange
- **30-m wind maps**
- **National Association of Farm Broadcasting podcasts**
- **WINDEXchange webinars**
- **Community Wind Handbook (all sizes – small is complete)**
 - A guide for communities to evaluate whether a community wind project development is appropriate.
- **OpenEI Small Wind Guidebook**
 - http://apps2.eere.energy.gov/wind/windexchange/small_wind.asp

DOE encourages using turbines certified for safety and performance by an accredited U.S. certification organization

More DOE Tools and Information

2012 Market Report
on Wind Technologies
in Distributed
Applications

August 2013



Annual Wind Technologies in Distributed Applications Market Report

- <http://energy.gov/eere/wind/distributed-wind>
- annual report on U.S. wind power in distributed applications--expanded to include small, mid-size, and utility-scale installations--including key statistics, economic data, installation, capacity, and generation statistics, and more.

Distributed Wind Policy Comparison Tool

- <http://www.eformativeoptions.com/dwpolicytool/>
- State and utility policy makers, county officials, and other interested stakeholders can explore ways to improve the bottom line of consumer-owned wind turbines.

Utility Variable-Generation Integration Group (UVIG) – Distributed Generation Evaluation Toolbox

- <http://variablegen.org/toolbox/>
- A set of engineering software application tools to aid utility distribution and planning engineers in analyzing wind generation at the distribution system level.

Coming Soon from DOE/NREL

Small Wind Site Assessor Guidance Manual

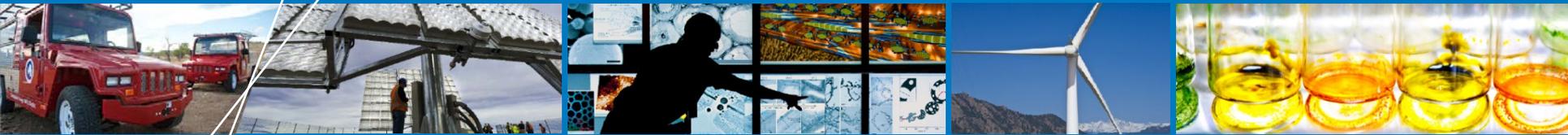
- Will provide a standard check list and site assessment report template

Distributed Wind Deployment System

- Distributed wind scenario modeling tool will help size the distributed wind market potential and prioritize topics most impacting deployment.

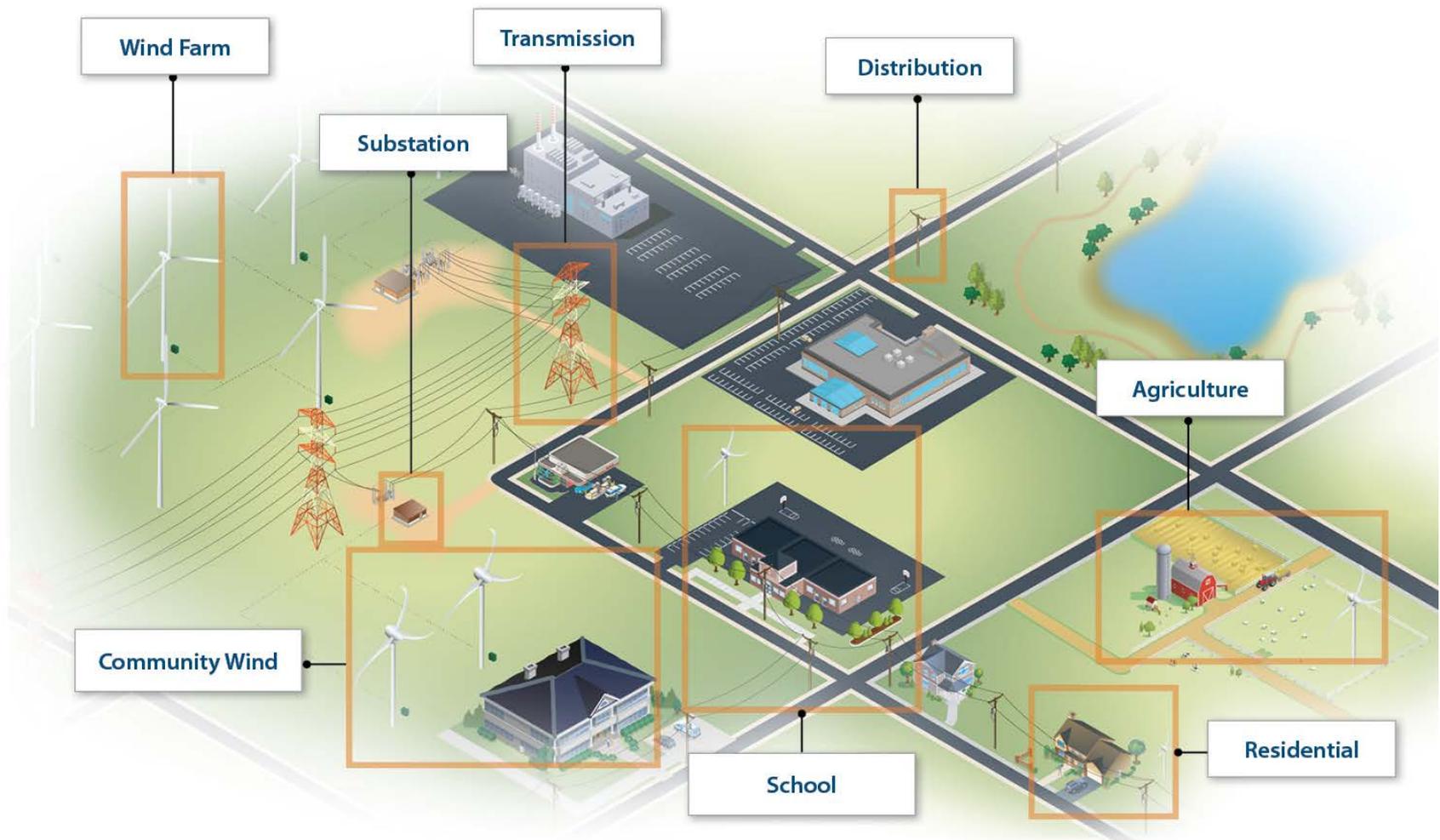
Request For Information: *Accelerating Distributed Generation from Distributed Wind Energy Systems*

- DOE invites input from the public regarding it's shift in perspective and the Wind Program's present research and development focus areas, which include Wind Resource Characterization & Assessment; Turbine Technology; Distributed Grid Integration; and Soft Cost Reduction.
- Comments that can be used to evaluate DOE's new perspective on distributed wind and research and development focus areas will help inform future activities and priorities. Check here soon: eere-exchange.energy.gov



Thank you.
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DOE Distributed Wind Definition



Distributed wind energy systems are commonly installed on residential, agricultural, commercial, institutional, and industrial sites connected either physically or virtually on the customer side of the meter (to serve on-site load) or directly to the local distribution or micro grid (to support local grid operations or offset nearby loads).