National Association of State Utility Consumer Advocates

2013 Annual Meeting

November 19, 2013

Christy Omohundro

State Policy, East

American Wind Energy Association

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Over last 5 years American wind has:

- ***Attracted over $15 billion annually in private investment to the U.S. and up to $25 billion in a single year (2012).***
- ***Added 36.5% of all new power capacity in the U.S., right behind natural gas. In 2012, wind was largest single source of new electric generating resources in the U.S., installing 42% of all new capacity***
- ***Grown its domestic manufacturing base, now encompassing more than 550 manufacturing facilities employing 25,000 people, with total jobs over 75,000***
- ***Grown American manufacturing of wind turbines from less than 25% to over 70% today***
- ***Nine states now get more than 10% of their electricity from wind, including two states that get more than 20% from wind***
- ***Through technology advances, now generates 30% more electricity per turbine – all while driving down costs.***

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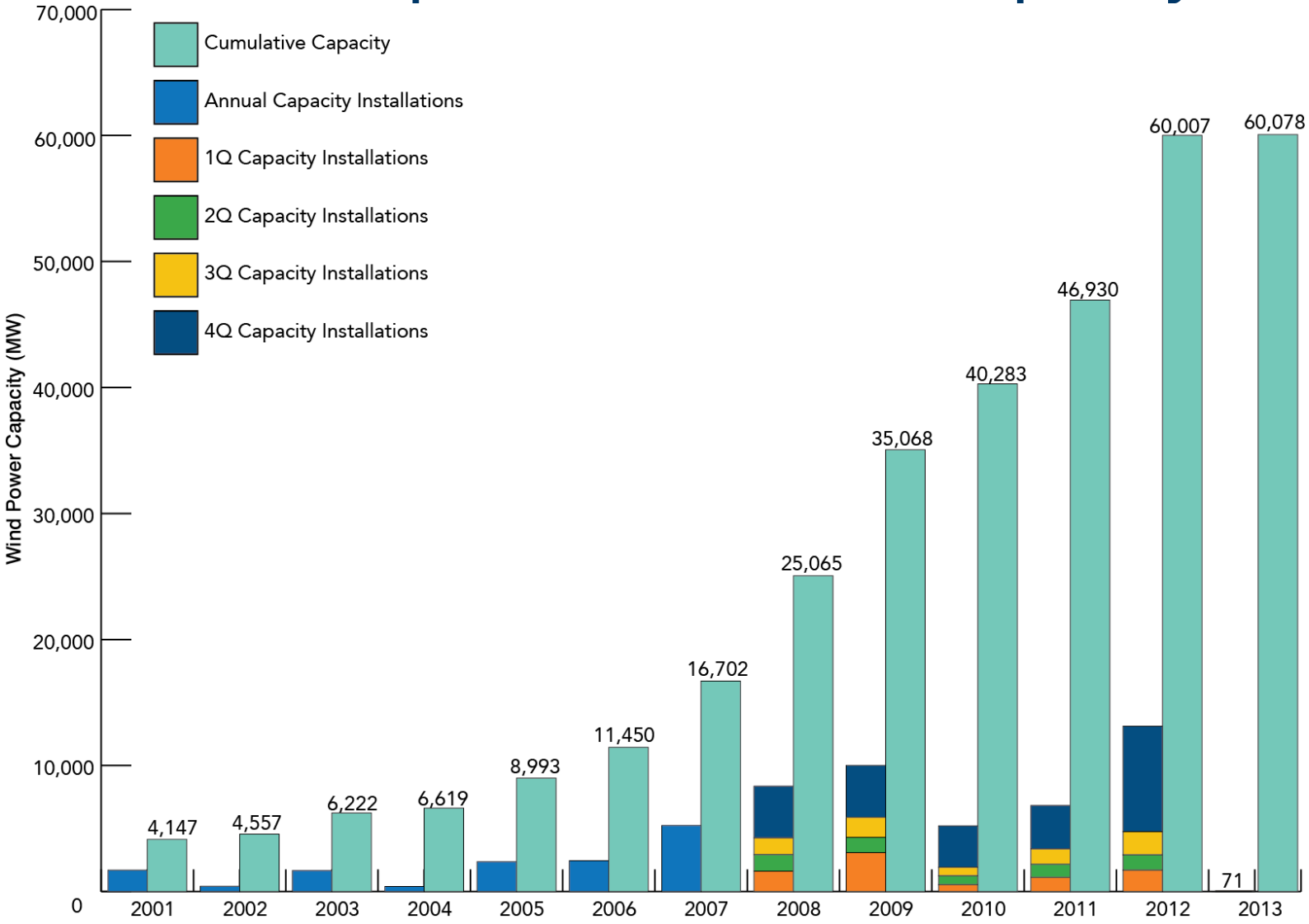
AWEA Market Update: Installed Capacity



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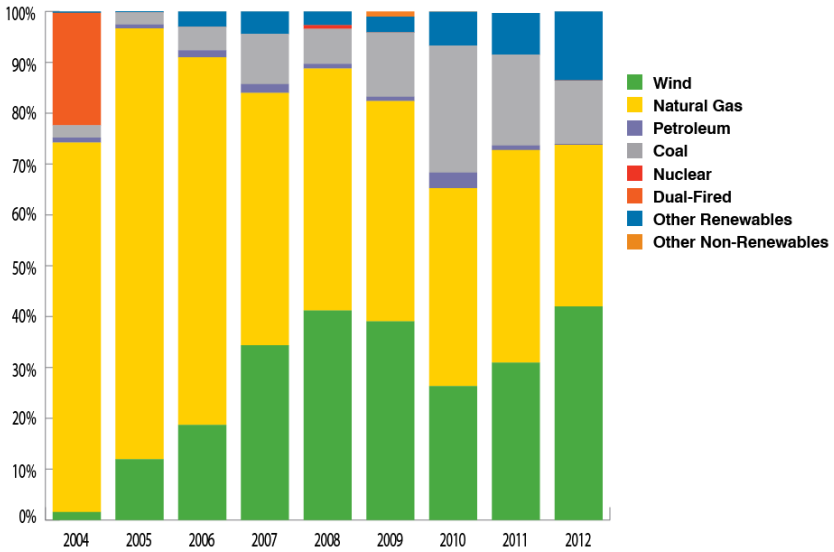
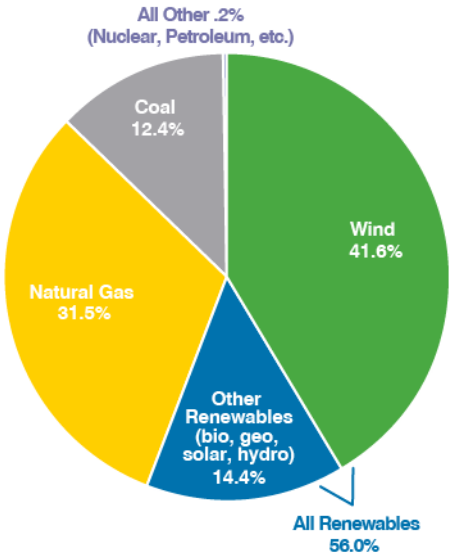
Wind Power Capacity Additions

Power Capacity Additions over Time



- Over the past 5 years, wind power has provided 36.5% of all new generating capacity in the U.S.

Power Capacity Additions during 2012



- In 2012, wind power was the #1 source of new electric generating capacity – with 42% market share.
- All renewables capture a 56% market share

Data Source: AWEA, EIA, SEIA, SNL

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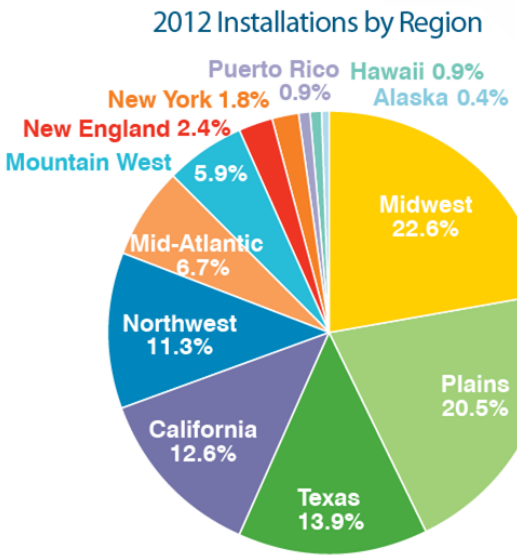
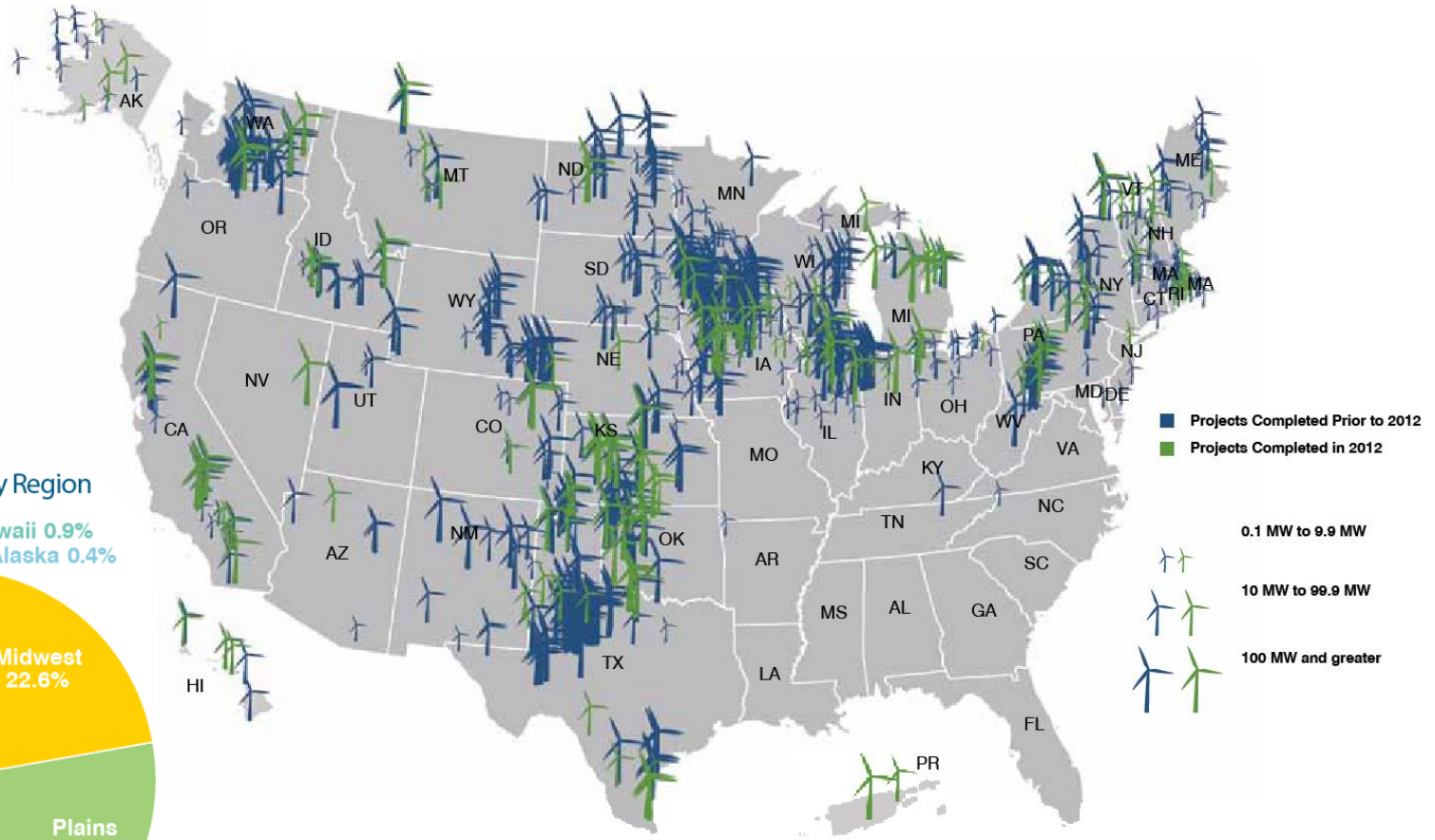
Map of Wind Power Projects





Source: AWEA U.S. Wind Industry Annual Market Report 2012

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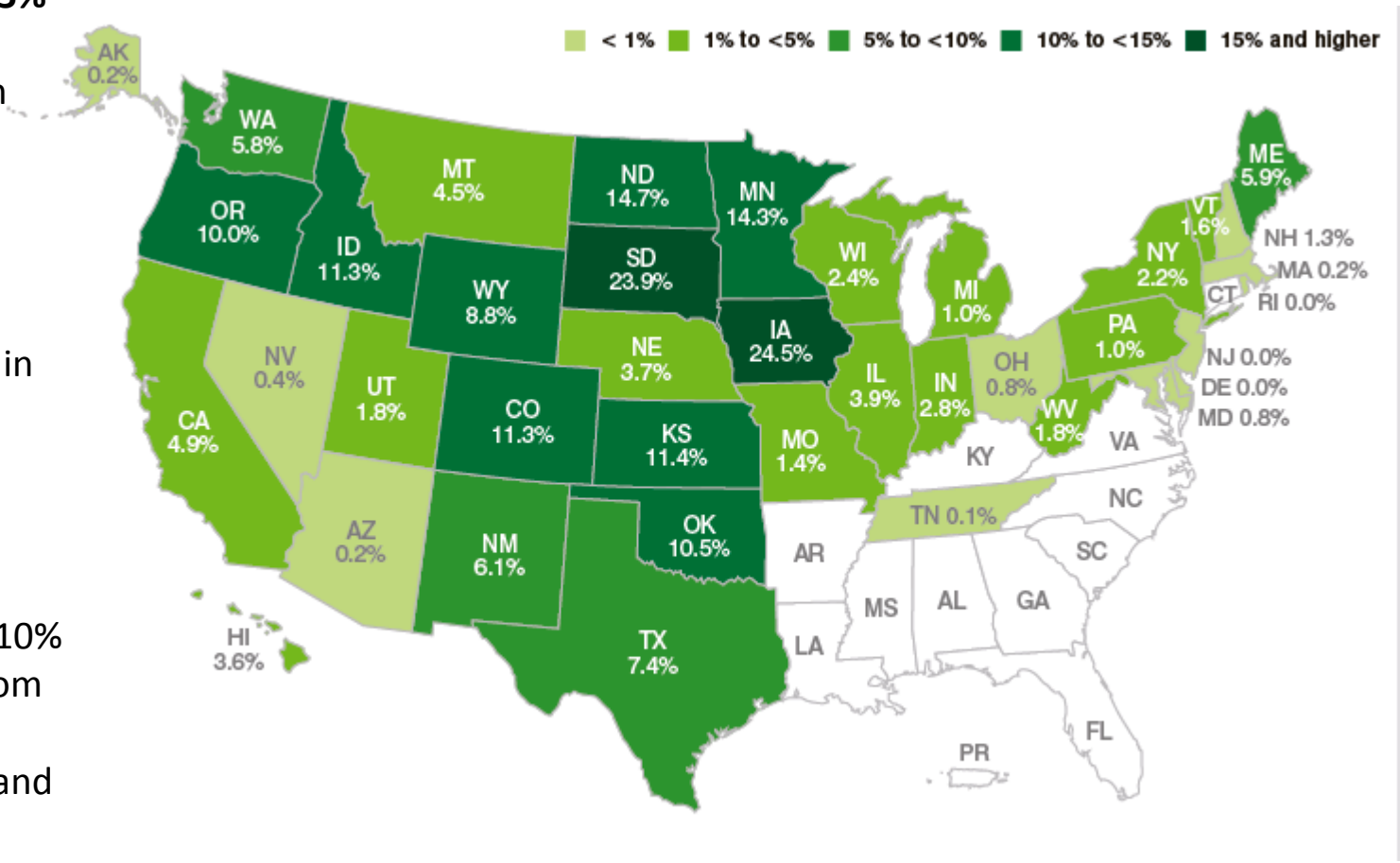
Wind Energy Share of Electricity Generation, by State

- The U.S. generated **3.5%** of its electricity from wind in 2012, up from 2.9% in 2011.
- In 2012, wind energy generated more than 20% of the electricity in both Iowa and South Dakota.
- In 2012, nine states produced more than 10% of their generation from wind energy, up from only 5 states in 2011 and only 1 state in 2007.



Data Source: EIA

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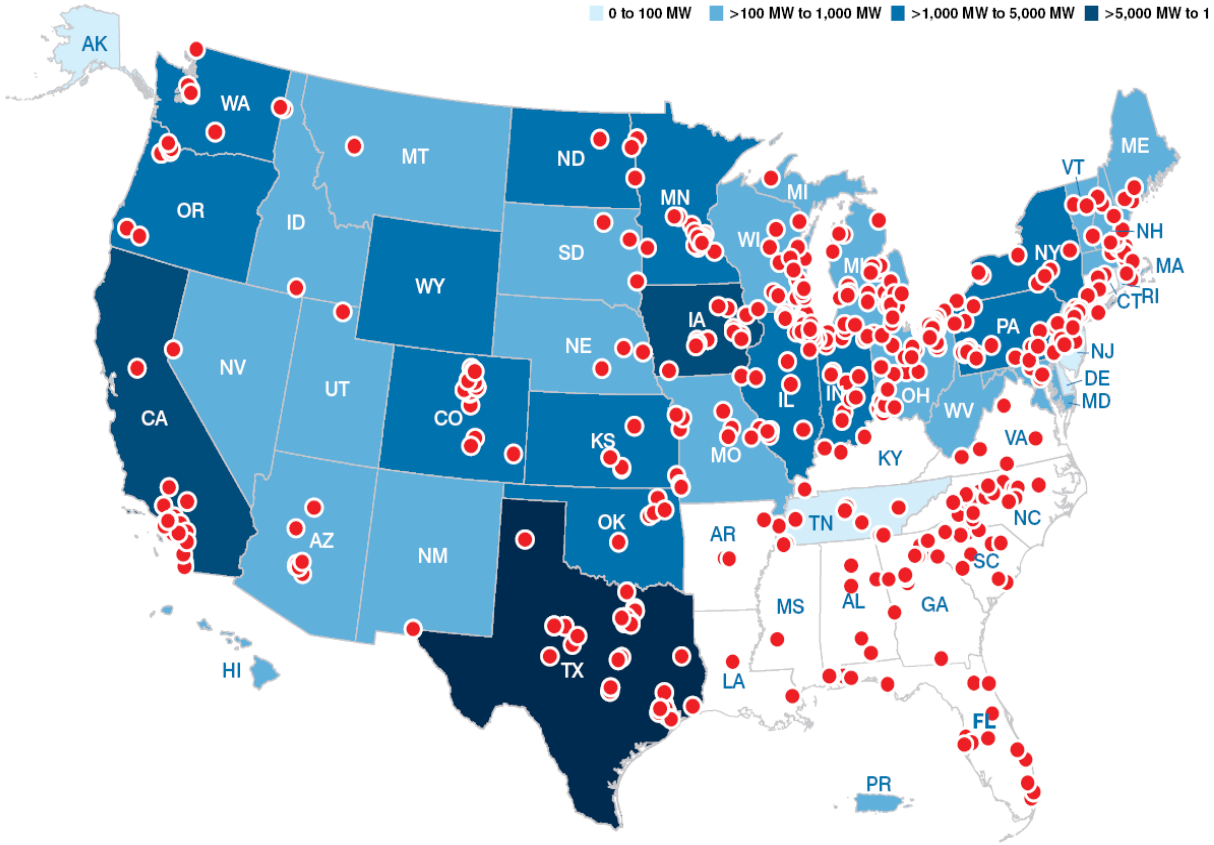
Manufacturing in the U.S



During 2012 at least 559 wind-related manufacturing facilities produced a product for the U.S. wind energy industry across 44 states.

The U.S. wind energy supply chain contains 13 utility-scale blade facilities, 12 tower facilities, and 12 turbine nacelle assembly facilities, all spread across 18 states.

The domestic content of wind turbines has grown from less than 25% prior to 2005 to approximately 72% at the end of 2012, according to U.S. International Trade Commission data and analysis from the U.S. Department of Energy.

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Rural Benefits of Wind Power

Landowners can realize **lease payments of up to $120,000** over a twenty-year period for each wind turbine installed on their property.

Wind energy brings **taxes and other revenues for rural communities** - benefiting county and local services including schools, health care facilities, and roads.

Wind energy reduces water consumption for thermal power generation, which may compete in drought-ridden regions for agricultural uses

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Why Wind?

- ✓ **Hedge:** Wind energy contracts can be used as a **long-term hedge** against volatility in fossil fuel prices and environmental regulations.
- ✓ **Environment**: Wind is a zero polluting and non-carbon emitting energy resource that uses no water to produce power.
- ✓ **Security:** Enhancing energy security by diversifying the electric generation portfolio.
- ✓ **Price:** Wind energy is providing **prices that are competitive** with other new generation options, and has been shown to reduce prices to consumers.
- ✓ **Economic Development**: Billions have been invested as a result of wind development producing jobs, increased tax base for schools and local communities in many states across the U.S.

Wind Energy Is Cost Competitive With New Generation

Source: Lazard, 2012

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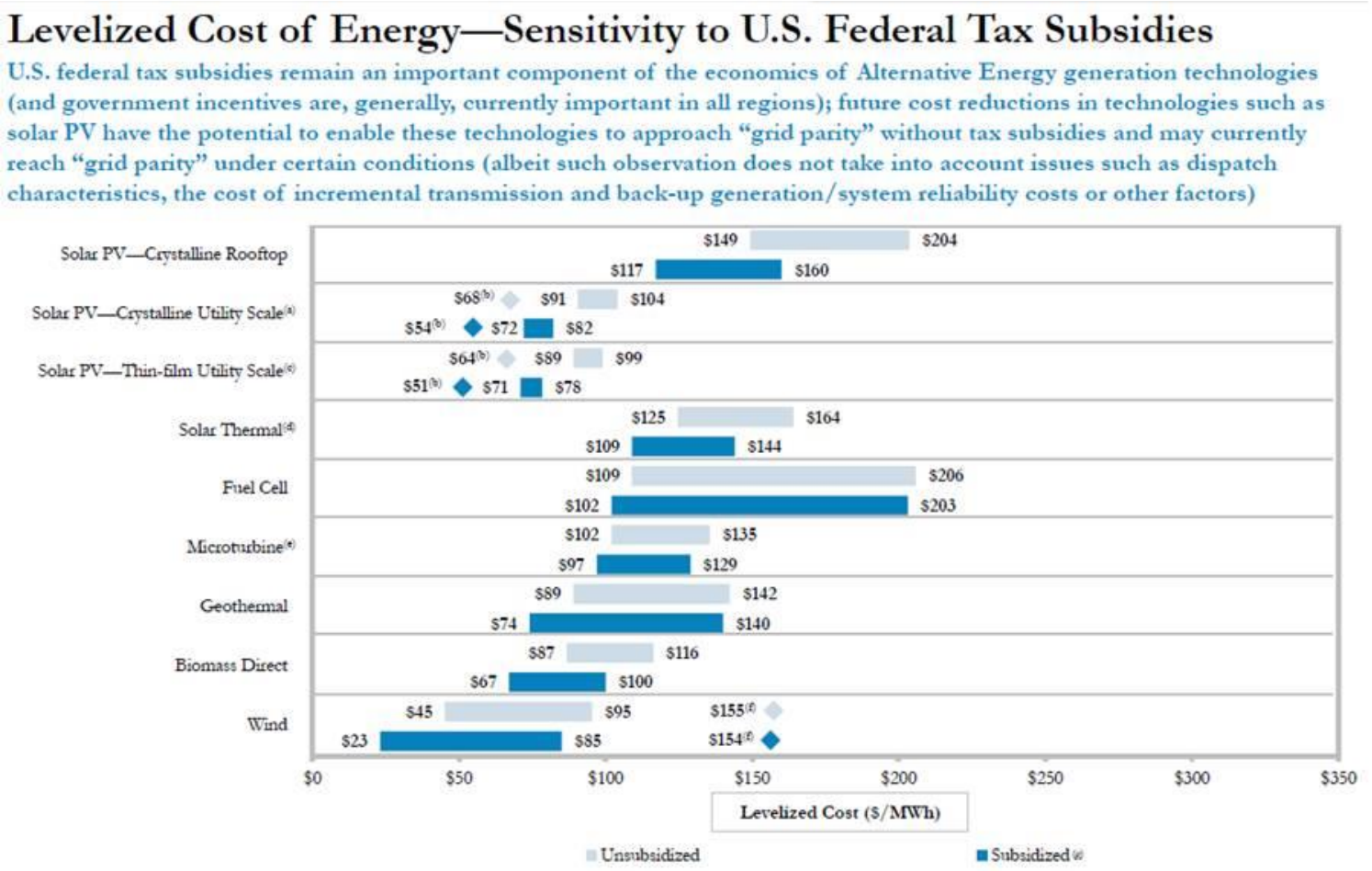
Wind Prices



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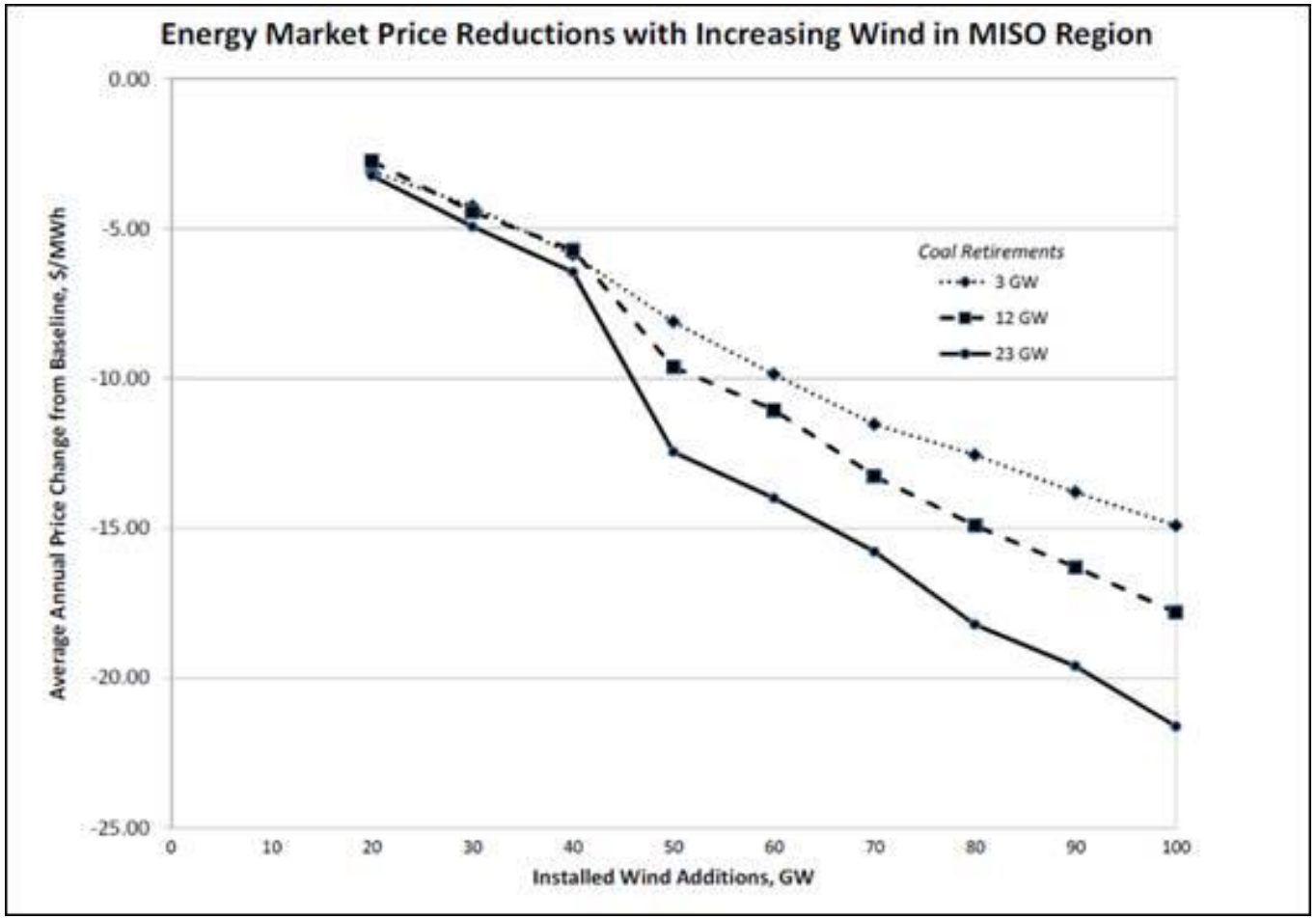
Wind Reduces Power Prices



Wind has been shown to reduce overall energy costs for consumers, saving ratepayers $63 to $147 per year in the MISO footprint

Prices of wholesale electricity will, on average, decrease $18.16/MWh in MISO as wind increases.

Source: Synapse Energy Economics

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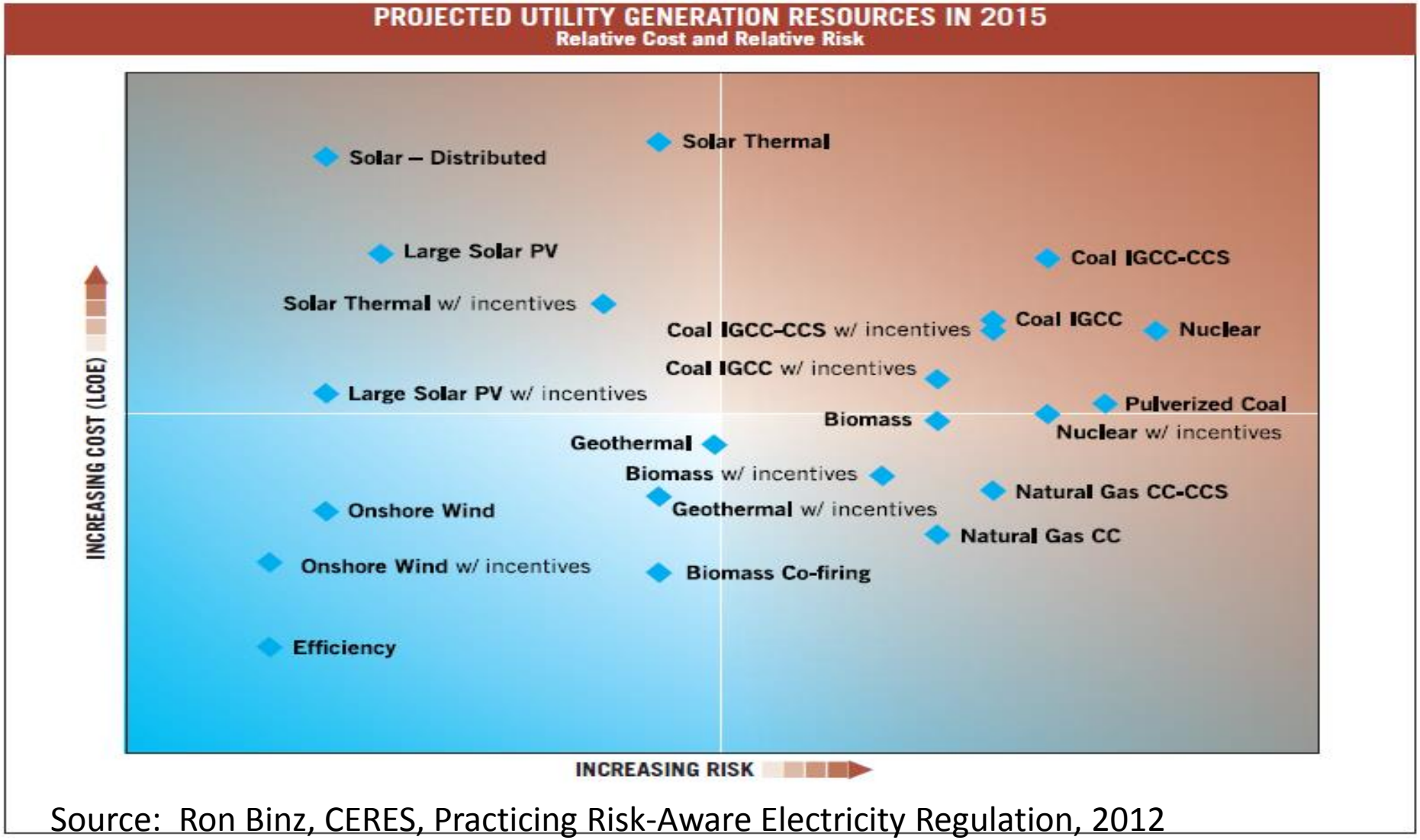
Wind Best on Cost and Risk



Source: Ron Binz, CERES, Practicing Risk-Aware Electricity Regulation, 2012

Wind is Good for Consumers

- ✓ For fuel diversity

  “Adding additional wind energy to our generation mix underscores our commitment to a diverse portfolio that offers clean, safe, reliable, sustainable and low-cost electricity for years to come.”

  - Paul Bowers, president & CEO of Georgia Power after signing 2 PPAs for Georgia Power’s first wind contracts . April 23, 2013

- ✓ As a hedge against volatile fuel prices

  "The latest addition of 150 megawatts of low-cost wind energy provides AECC with a hedge against fluctuating natural gas energy prices […] We will continue to pursue energy options that allow AECC’s member cooperatives to provide reliable electricity at the lowest possible cost.”

  - Duane Highley, president & CEO of Arkansas Electric Cooperative Corporation after signing a 150 MW contract July 22, 2013

- ✓ To save consumers money

  “We started shopping for more wind energy in March after seeing some very good prices on the market […] We are making these acquisitions purely on economics and the savings we can deliver to our customers.”

  - Riley Hill, president & CEO of Xcel Energy’s Southwestern Public Service Company after announcing on July 10, 2013 nearly 700 MW that will save customers more than $590 million in fuel costs over 20 years

- ✓ For cost competitiveness

  “Wind prices are extremely competitive right now, offering lower costs than other possible resources, like natural gas plants. These projects offer a great hedge against rising and often volatile fuel prices.”

  - David Sparby, president & CEO of Xcel Energy’s Northern States Power announcing 600 MW of new wind power contracts on July 16, 2013

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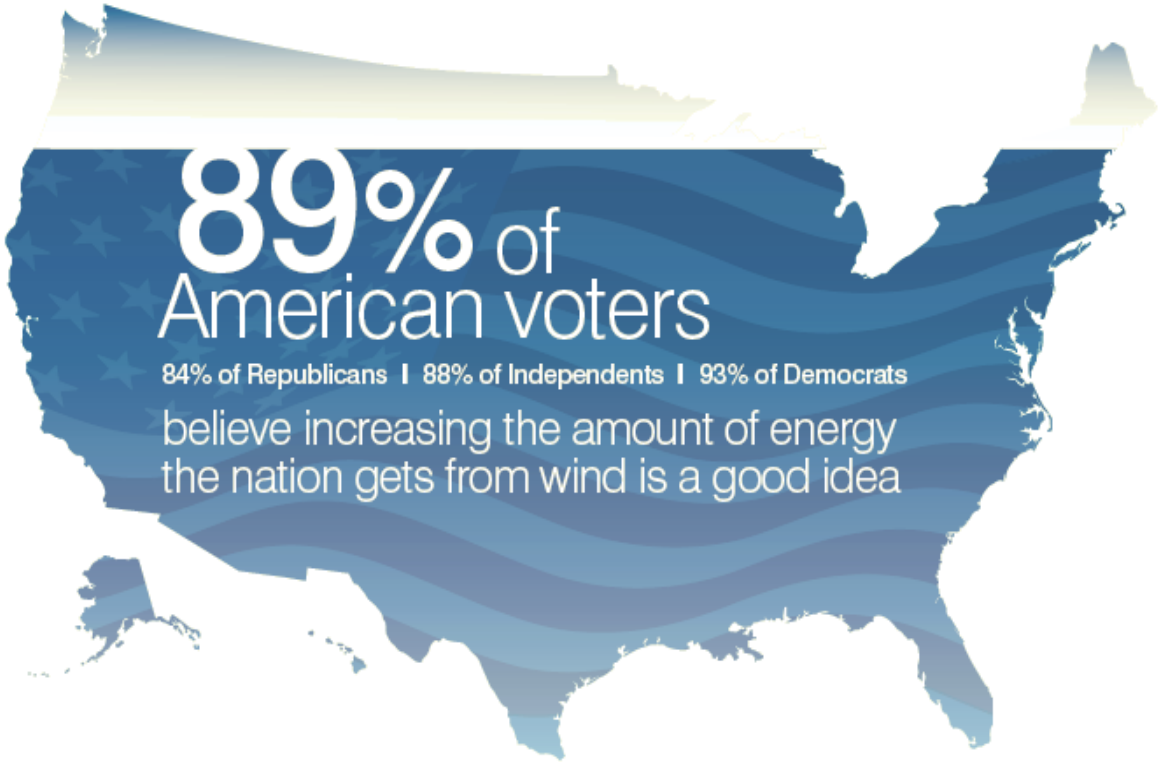
Public Overwhelming Supports Wind

Over 90% drop in the price of wind power since 1980, benefiting utilities and consumers.



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Energy Security and Economic Development Benefits

Upcoming AWEA Events

2013

AWEA Wind Resource & Project Energy Assessment Seminar
December 10-11 | Las Vegas, Nevada

2014

AWEA Wind Project O&M and Safety Seminar
January 15-16 | San Diego, California

AWEA Wind Project Siting Seminar
January 29-30 | New Orleans, Louisiana

AWEA Regional Wind Energy Summit – Northeast
March 25-26 | Portland, Maine

AWEA WINDPOWER 2014 Conference & Exhibition
May 5-8 | Las Vegas, Nevada

www.awea.org/events

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