



WIND: ARKANSAS' PRESENT AND FUTURE



Little Rock
12 March 2012



NORDEX GROUP AT A GLANCE

- **26 years experience**
- **Headquartered in Germany (Hamburg)**
 - **listed on the Frankfurt Stock Exchange**
- **Exceptional revenue growth track record and strong future growth potential**
 - **2004 Revenue: € 214m / \$ 289m***
 - **2009 Revenue: € 1,183m / \$ 1,597m***
 - **2010 Revenue: € 1,007m / \$ 1,359m***
- **2,504 employees as of Dec 2010**
- **Total installations: > 7,100 MW /**
- **> 4,500 Wind turbines**



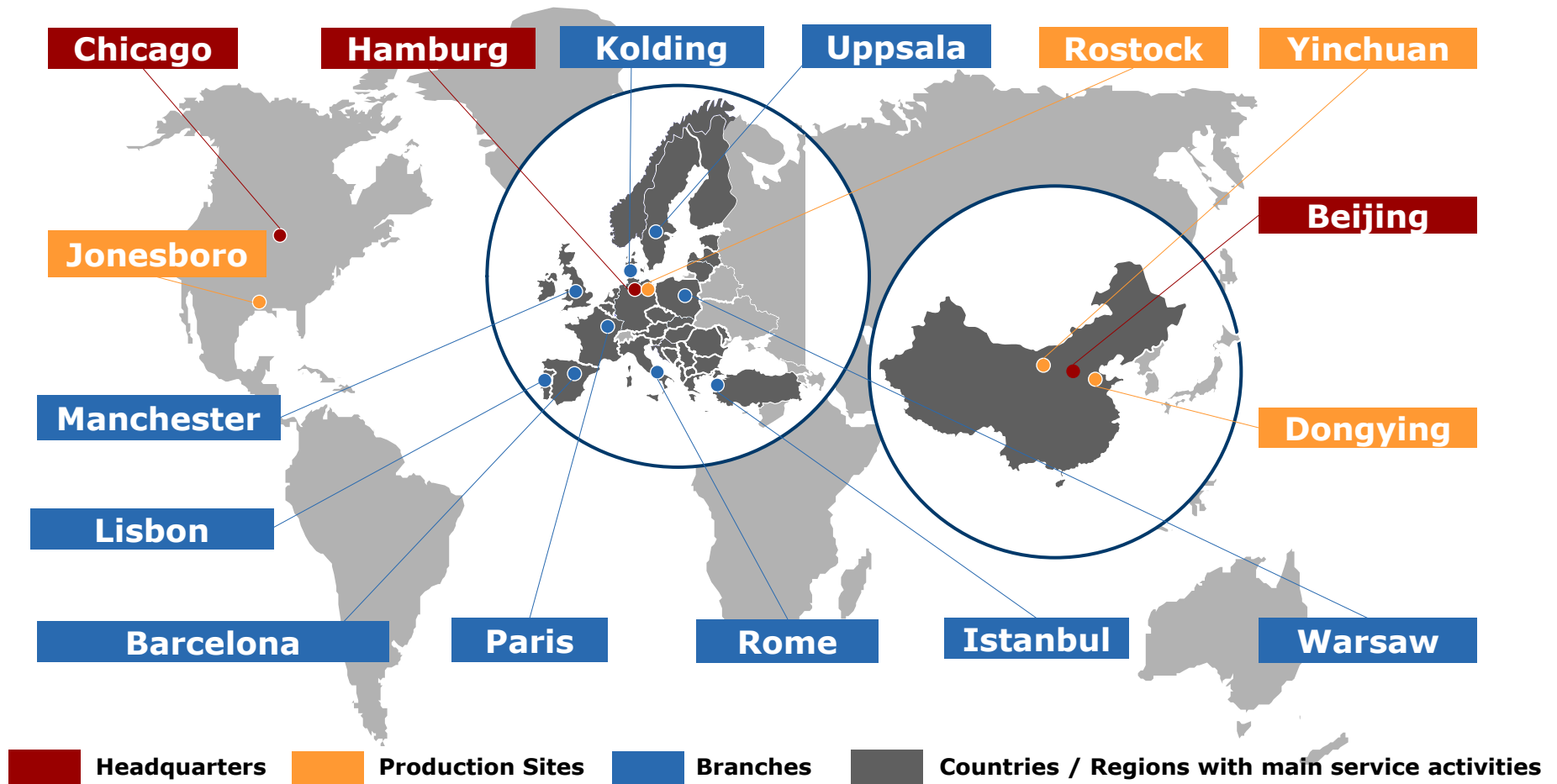
“ Nordex is an experienced player in the wind power industry, manufacturing wind turbines since 1987.”

GL-Garrad Hassan

*** based on an exchange rate of \$ 1.35 / €**

GLOBAL & NORTH AMERICAN PRESENCE

NORDEX LOCATIONS WORLDWIDE

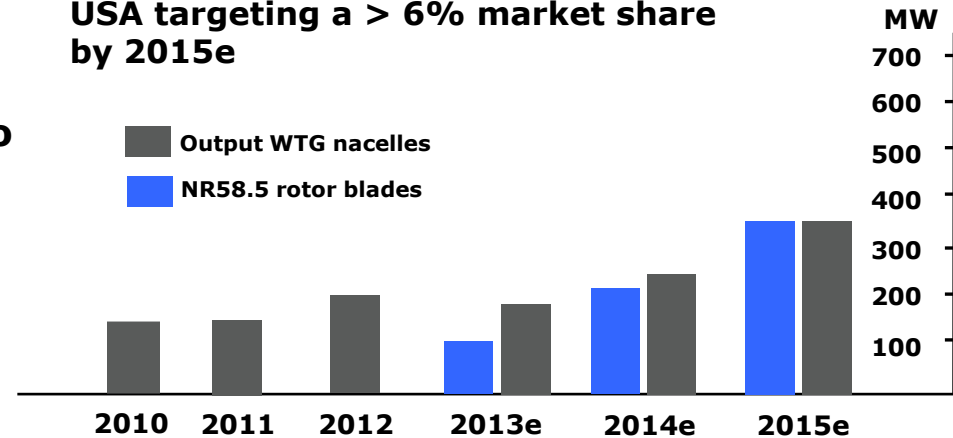


NORDEX USA AT A GLANCE

- **US headquarters in Chicago, IL;**
Production (Oct. 2010) in Jonesboro
- **Investment (Plant): ~ \$ 42 million**
- **Headcount at end of 2011: 220**
- **Organizational set-up in the US:**
 - Engineering
 - Procurement & Supply Chain
 - Production
 - Project Management
 - Service
 - Health & Safety
 - Sales
 - Project Development



Local production / installation in USA targeting a > 6% market share by 2015e



GLOBAL & NORTH AMERICAN PRESENCE

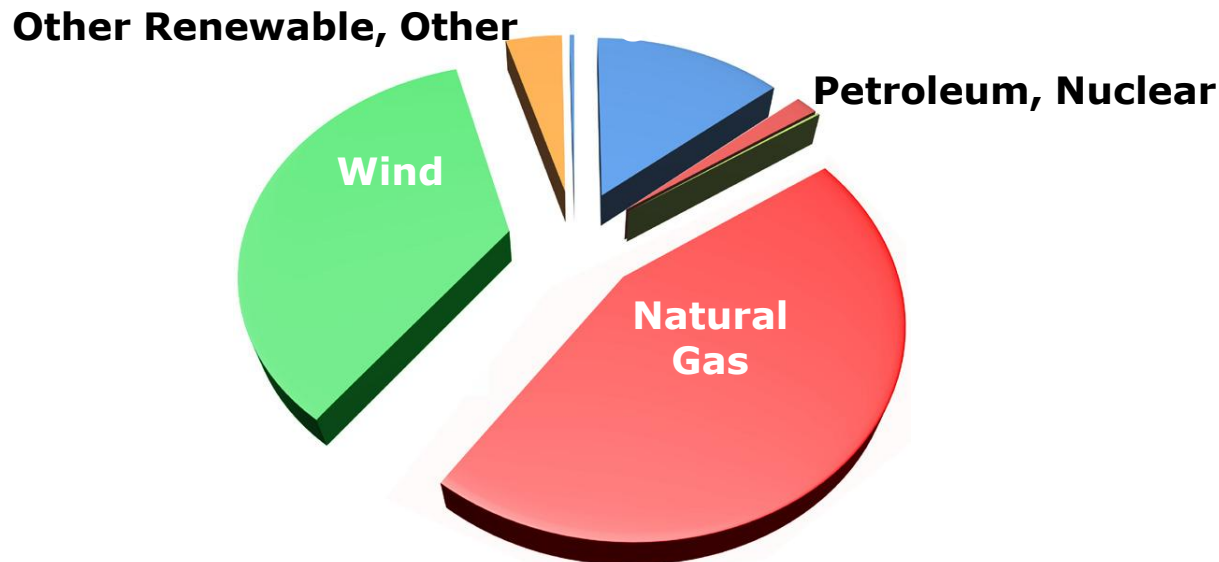
US FACILITIES & INSTALLATIONS



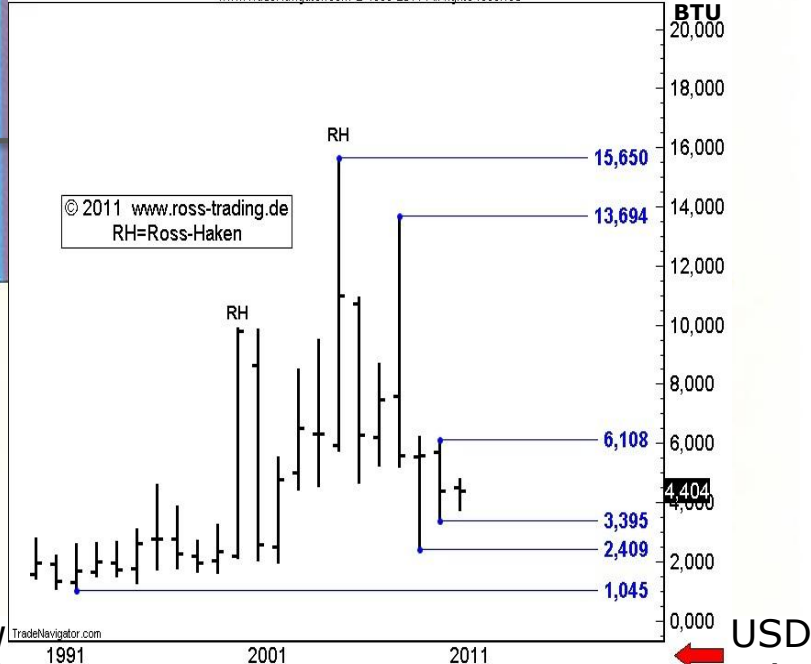
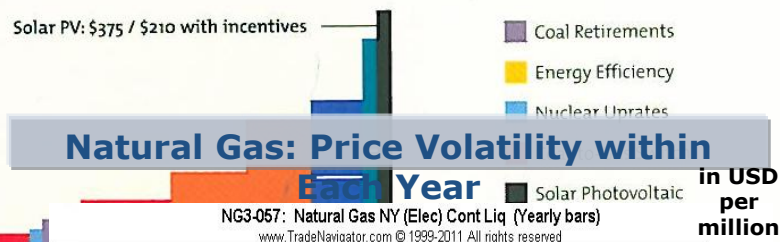
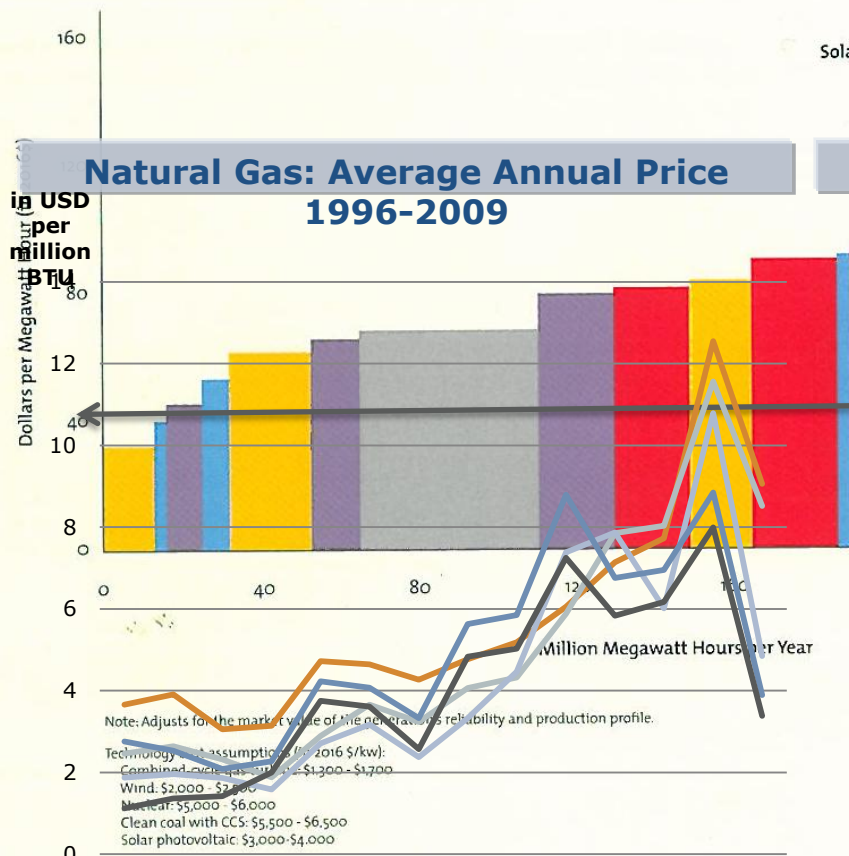
- ★ Headquarters/Production Facility
- Installation
- 2012 Installation

- ❑ USA has one of the best wind resources in the world
 - ❑ Potential to supply more than 37 trillion kWh of electricity – 10 times current need
 - ❑ Currently about 47,000 MW of wind power installed

Wind provided 35% of all new USA electrical generating capacity, 2007-10



Levelized Cost of Energy for GHG Abatement Options in PJM



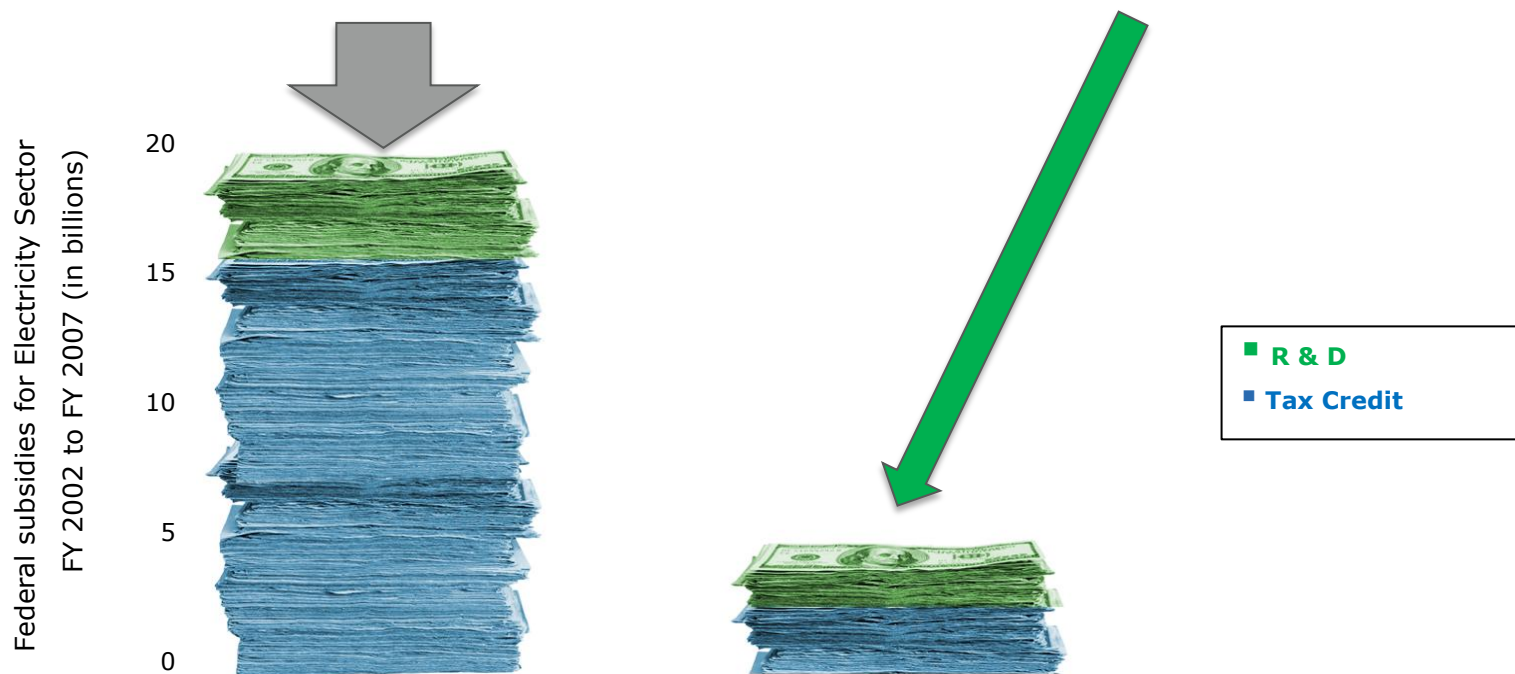
★ current Nordex customers have 20-year Pow 40.-/MWh with a 1% escalator (in areas such as Iowa, quite close to the load centers) plus USD 21.-/MWh from Federal Production Tax Credit (PTC). In very windy regions in Kansas or the Dakotas even USD 29.-/MWh can work economically.

Sources: German Federal Statistical Office; German Federal Office of Economics and Export Control (BAFA); Heren Energy Ltd.; Natural Gas Week, Energy Intelligence Group

Sources: www.ross-trading.de; Chicago Mercantile Exchange data

- ❑ Wind is competitive despite an uneven playing field

Fossil Fuels Enjoy Permanent Incentives 5x Those of Renewables

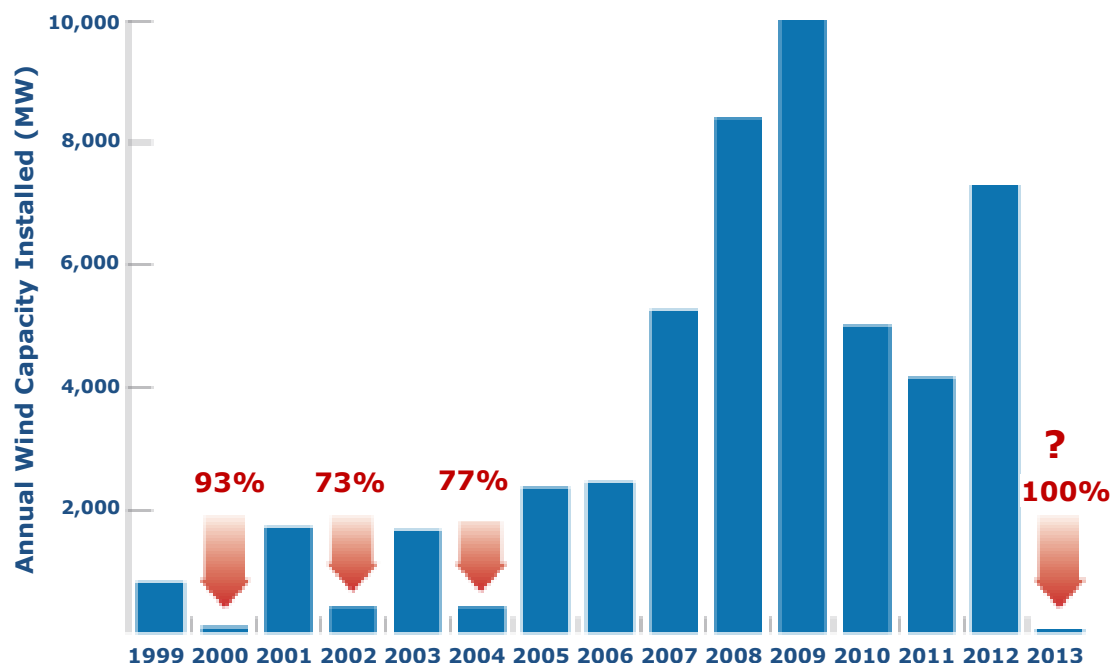


Source: Government Accountability Office, October 2007

Why is the PTC so important ?

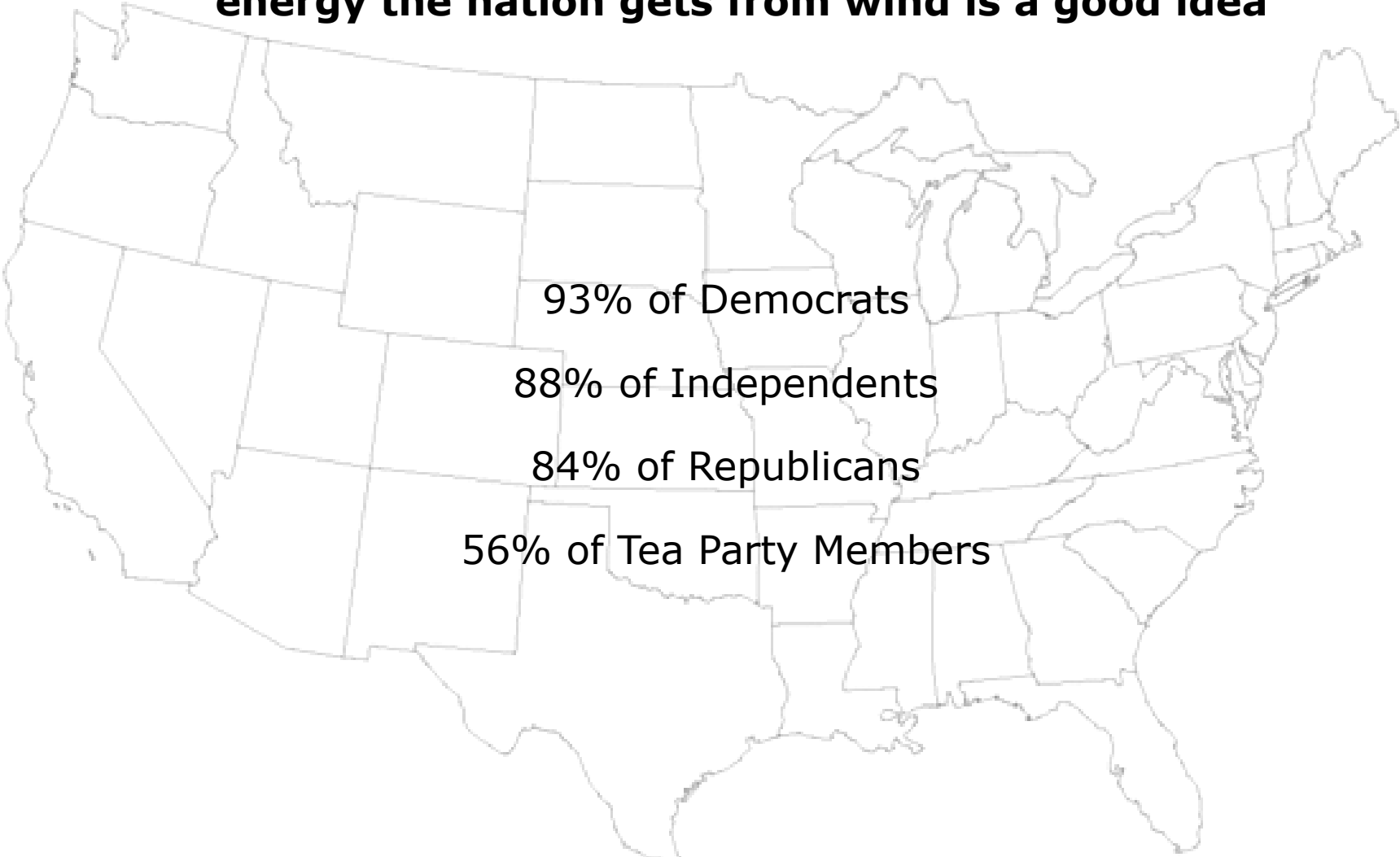
- ❑ Equipped with the PTC, the cost of wind power has dropped by almost 50% since 2008, benefiting utilities and consumers.
- ❑ PTC has been successful in encouraging the growth of a cost-competitive American industry.
- ❑ A vote for a PTC extension is a vote for creating American jobs and investing in proven clean energy technology. Without a longer term policy, we are seeing these jobs go to China and Europe.
- ❑ Failure to extend the PTC beyond 2012 will roll back progress that we have made as a nation to diversify the U.S. electricity portfolio.

Historic Impact of PTC Expiration on Annual Wind Installation



Previous expirations of PTC have affected wind installations considerably. The dramatic increase in US employment by the sector since 2007 means that an expiration now will cost jobs: high quality manufacturing jobs that can revitalize the economy.

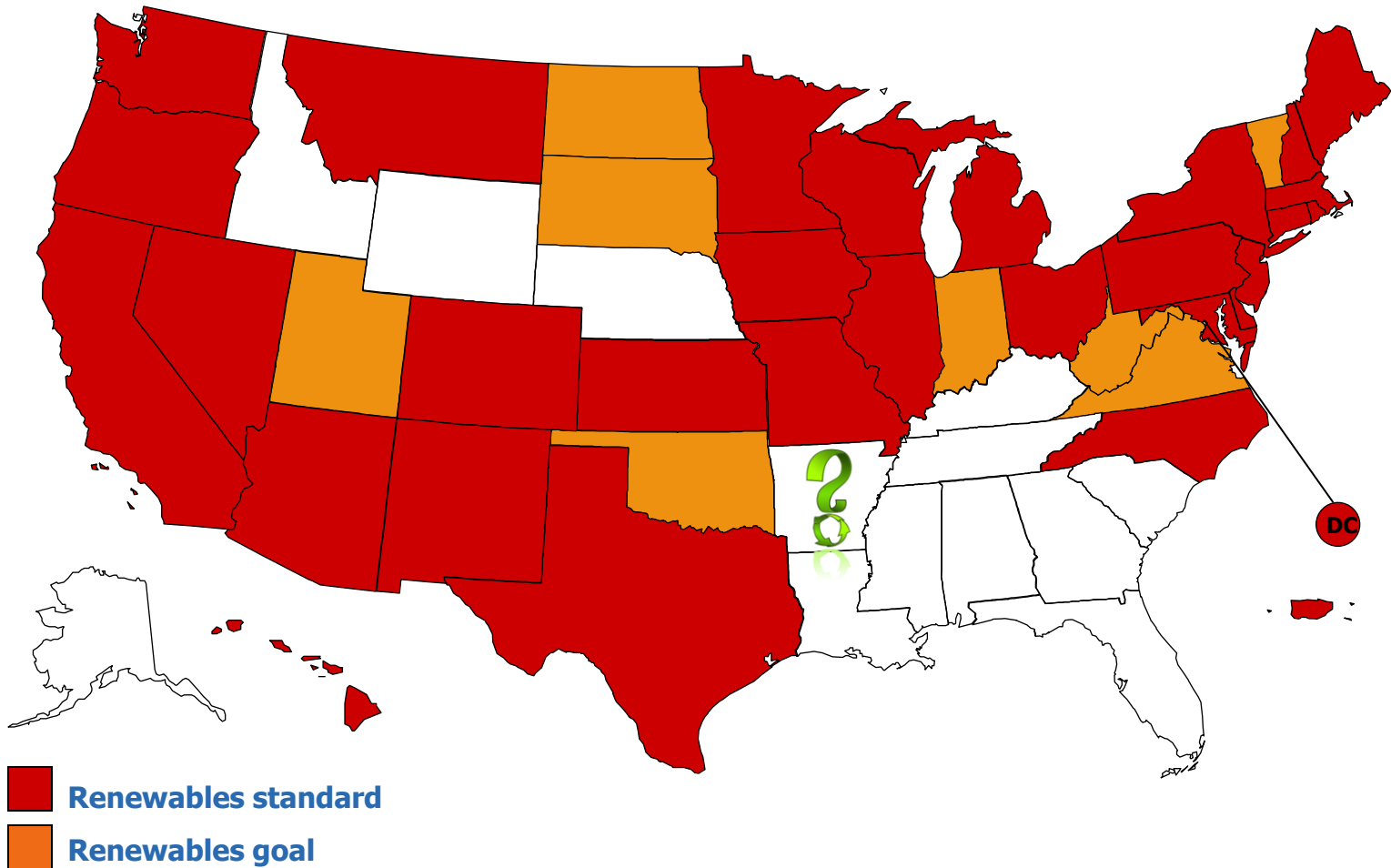
89% of American Voters believe increasing the amount of energy the nation gets from wind is a good idea



93% of Democrats
88% of Independents
84% of Republicans
56% of Tea Party Members

Source: March 2010 survey by Neil Newhouse, Public Opinion Strategies, Anna Bennett, Petts & Normington

29 States have renewable standards; 8 have renewable goals



Source: Database of State Incentives for Renewables & Efficiency – www.dsireusa.org - June 2011


www.platts.com

Electric Power Daily

Thursday, September 8, 2011

State regulators OK Alabama Power 202-MW wind PPA

The Alabama Public Service Commission approved a 20-year, 202-MW wind power purchase agreement on Wednesday that Alabama Power reached with TradeWind Energy.

The power the Southern Company subsidiary agreed to buy from TradeWind will be generated by the developer's planned Chisholm View wind farm, which will be built at a site in Garfield and Grant counties in north-central Oklahoma by the end of 2012, Alabama Power spokesman Michael Sznajderman said.

The PPA is believed to be the largest renewable energy PPA entered into by any Southeastern utility. It narrowly eclipses the 201-MW wind PPA the Tennessee Valley Authority reached — also with TradeWind — in October. TVA's PPA is tied to a wind project in Elk County, Kansas.

Financial terms of Alabama Power's PPA were not disclosed, but Sznajderman said the wind power will cost less than its avoided cost and would not increase retail rates. More stringent environmental regulations, rising fuel costs and other factors would likely increase Alabama Power's avoided costs over time, he said, making the wind PPA an increasingly better deal for customers.

"...the wind power will cost less than its avoided cost and will not increase retail rates."

"...making the wind PPA an increasingly better deal for customers."

AEP SWEPCO Signs Wind Power Purchase Agreements

- ☐ Capacity from wind projects in Texas, Oklahoma and Kansas
 - ☐ energy is being shipped to the South, a region that many have inaccurately assumed cannot benefit from wind power, at rates that are highly favorable
-
- ☐ Tennessee Valley Authority has contracts for up to 1,352 MW of wind energy from wind farms in Iowa, North Dakota, South Dakota, Illinois and Kansas
 - ☐ TVA serves customers in Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee and Virginia

SOUTHERN COMPANY/ALABAMA POWER SIGNS DEAL FOR WIND

- ❑ 202 MW FROM OKLAHOMA
- ❑ "LESS THAN AVOIDED COST, WON'T INCREASE RETAIL RATES"

KEY ELEMENTS:

- ❑ 20-year Power Purchase Agreement (PPA)
- ❑ TradeWind Energy's Chisholm View wind farm in north-central Oklahoma, begins commercial operation in Dec 2012
- ❑ Interconnect directly to transmission line owned by OG&E

ASSUMPTIONS:

Cost of energy at Chisholm View:
\$25/MWh

Cost of transmission capacity for 202 MW (based on 100% usage):
\$7.50/MWh

Cost of transmission capacity (based on 50% usage "capacity factor" for wind):
\$15/MWh

Total Cost: \$40/MWh = \$0.04/kWh

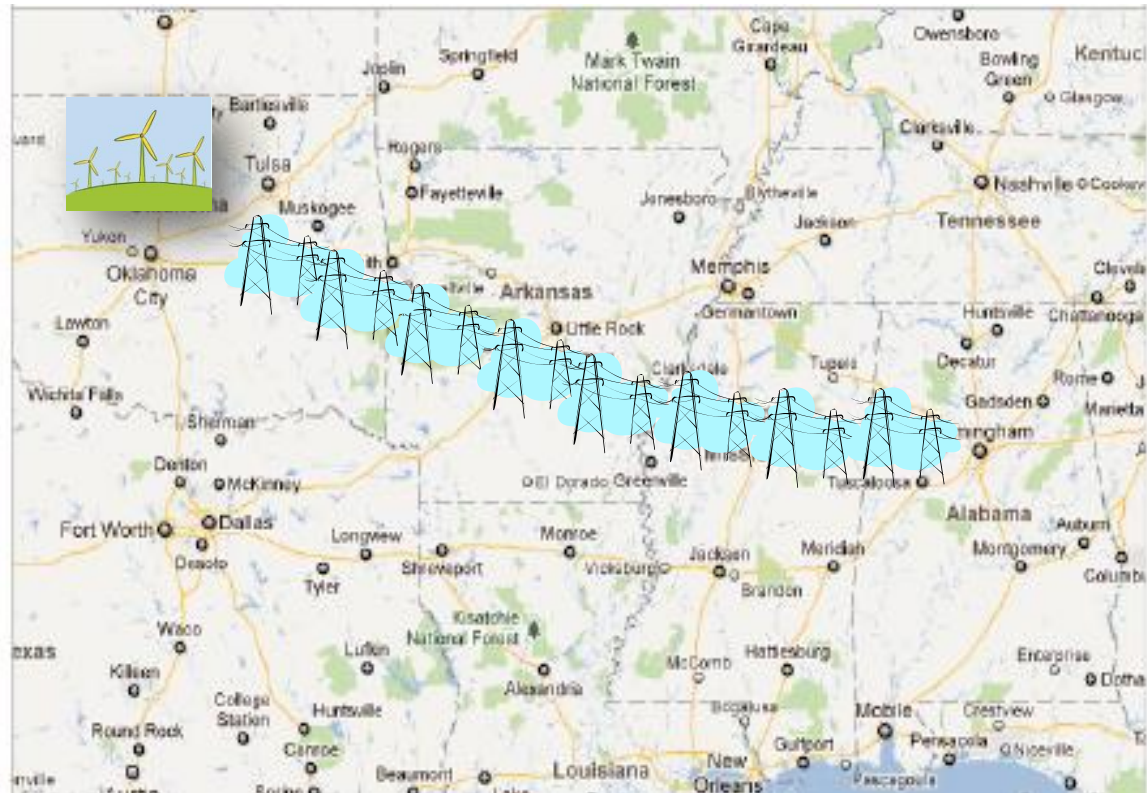
ADVANTAGES:

Guaranteed, known cost, with zero fuel cost for 20+ years

Flexibility to use 50% balance of transmission line (based on a 50% capacity factor for the wind farm) for spot purchases or other less costly electric supply

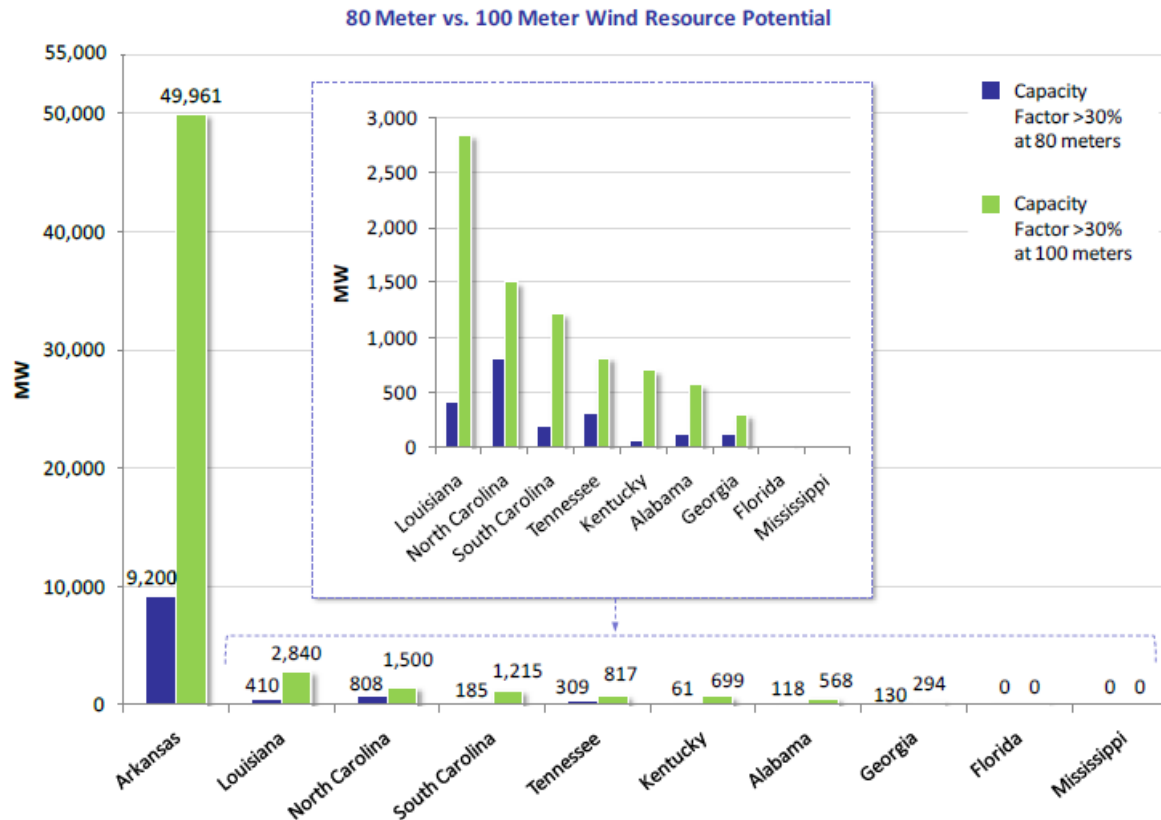
Diversified generation mix

Hedge against future cost rises and price volatility of fuel and against more stringent environmental regulations



ARKANSAS' OWN RESOURCES: "SOUTH WIND"

WIND RESOURCES AT 80 METERS AND AT 100 METERS



- Up to **9 GW** of wind resources on 80 m hub height
- Up to **50 GW** of wind resources on 100 m hub height
- Up to **27,000 GWh** of wind generated electricity covering **58% of** current electric **demand**

Note: *Regional capacity factor calculations based on analysis of 759 MW of wind projects in New York: 1,992 MW in PJM and Iberdrola's 350 MW Desert Wind project in North Carolina
Source: National Renewable Energy Laboratory (NREL), IHS Emerging Energy Research

THE PRESENT

- ❑ Arkansas has chosen wind
 - ❑ LM Wind Power
 - ❑ Mitsubishi Power Systems
 - ❑ Beckman Vollmer
 - ❑ Nordex USA
- ❑ Jobs
- ❑ New Manufacturing Industry and Supply Chain
- ❑ Education and Training for Tomorrow's Workforce
- ❑ International Trade and Exports

THE FUTURE ... DEPENDS ON YOU

- ❑ Arkansas supports the industry it has chosen
 - ❑ Renewable Energy Standard for utilities
 - ❑ Feed-in Tariff
 - ❑ State energy policy with clear targets and goals

Arkansas Wind