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– National Renewable Energy Laboratory

COMPETITIVE MARKETS:

The Most Fertile Environment for Renewable Energy

The question of how we power our lives is becoming increasingly complicated, and competitive electricity markets are finding smart answers. By restructuring electricity markets to foster competition, states like Texas and Pennsylvania are leading the nation in finding creative solutions, including the construction of diverse sources of power like wind.

It is no accident that wind power has grown disproportionately in organized regional competitive markets. As of 2007, about 74% of wind resources are located in the RTO markets, despite the fact that only 44% of wind energy potential is found in those areas.

And, two recent reports (featured inside) by the U.S. Department of Energy and the National Renewable Energy Laboratory unambiguously confirm that competitive markets are the most fertile environment for the growth of clean energy sources such as wind. Competitive markets are still evolving, but it is clear that customers in the states and regions that continue to support competitive electricity markets are seeing the benefits.

Sincerely,
Ron Kirk & Don Nickles



COMPETE
Electricity Competition **IS** the Public Interest

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NEW U.S. GOVERNMENT REPORTS CONFIRM THAT ORGANIZED MARKETS FACILITATE WIND ENERGY

The growth of wind power is a vital step to ensure a diverse energy supply and address concerns about climate change. Electricity competition is helping us meet these challenges today.

Last month, the U.S. Department of Energy (DOE) released a report, *20% Wind Energy by 2030*, highlighting the benefits of competitive markets for wind development, and also notes the broader benefits of these markets for a reliable and efficient generation portfolio to serve consumers. Also, the National Renewable Energy Laboratory (NREL) recently released a technical report, *Facilitating Wind Development: The Importance of Electric Industry Structure* that endorsed energy markets as beneficial to both wind and conventional generators.

Highlights from both reports:

Department of Energy – *20% Wind Energy by 2030*

Geographic Scope of Markets Facilitates Wind Energy Use:

- “Broad geographical markets and inter-area trading... have been shown to reduce the variability of wind plant output on a large scale, which makes a market-based approach and trading system all the more worthwhile.” (p. 100)
“The market allows energy from all generators across the area to be dispatched based on real-time prices. When wind blows strongly, the real-time price falls, signaling more controllable generators to reduce their output and save costly fuel. Conversely, when wind drops off, real-time prices rise and dispatchable generators increase their output. As an example, the Midwest ISO covers a footprint of 15 states, so there is a deep pool of generators that can ramp up and down in response to wind output.” (p. 92-93)

Market Price Signals Encourage Wind Integration:

- “Experience has shown that using well-functioning hour-ahead and day-ahead markets and expanding access to those markets are effective tools for dealing with wind’s variability. A deep, liquid real-time market is the most economical approach to providing the balancing energy required by wind plants with variable outputs.” (p. 92)

Customer Choice Facilitated by Market Structure Will Support Future Wind Development:

- “Technology and regulatory options that enable customer energy management are gaining momentum because of increasing support from electricity regulators, regional transmission organizations (RTOs), and retail electricity providers. Several customer-driven energy trends could have a significant impact on wind development.” (p. 93)

National Renewable Energy Laboratory – *Facilitating Wind Development: The Importance of Electric Industry Structure*

- Of the various utility structures operating in the U.S. today, ISOs and RTOs provide the best environment for wind generation development. They provide electrically and geographically large open markets for wind integration.
- Markets help economically and reliably integrate wind both in how they treat wind generators and in how they treat conventional generators. Markets that allow variable resources to sell excess energy or purchase shortages at transparent and fair prices accommodate the natural characteristics of wind while reflecting the true real-time cost of maintaining reliability.
- Wind integration studies typically show lower wind integration costs for ISO and RTO markets than for non-ISO/RTO areas. In general, the studies show lower integration costs in ISO/RTOs than in smaller, single-utility service areas.

About COMPETE

COMPETE represents over 230 electricity stakeholders, including customers, suppliers, generators, transmission owners, trade associations, and economic development corporations – all of whom support well-structured competitive electricity markets for the benefit of consumers. For more information, please visit www.competecoalition.com

