

Kentucky Wind Energy Opportunities

Kentucky has great potential for wind energy development within the state.

Advanced wind turbine technology and reduced costs have now made wind energy economically feasible throughout Kentucky. A wind project in Kentucky could provide beneficial economic development opportunities for local communities.



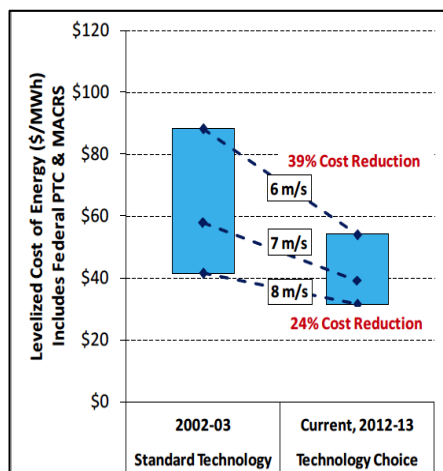
Credit: Duke Energy

Advanced Turbine Technology

In the past five years, wind turbine technology has greatly evolved. Wind turbine towers can reach up to 459 feet (140) meters in height. **Taller turbines and longer blades are capable of capturing more wind, thus harnessing more electricity and reducing wind energy prices.** As turbines increase in hub height, Kentucky contains a much greater area of land viable for development.

Reduced Costs

Wind energy is now one the least expensive sources of new power generation in the country. Costs have declined by 39% over the past decade for lower wind speed areas like Kentucky (averaging 13.4 miles per hour, or 6 meters per second). As technology improves, wind energy costs will continue to drop.



Source: Adapted from National Renewable Energy Lab 2013

Economic Development Opportunities

Kentucky is currently home to 9 wind energy-related manufacturing facilities serving the domestic and international wind industry markets. Developing land-based wind in the state could greatly add to local economic benefits and create more wind energy-related jobs.



Credit: Dennis Schroeder / NREL

Based on the Jobs and Economic Development Index model,* developed by the National Renewable Energy Laboratory (NREL), developing 1,000 MW worth of wind energy capacity in Kentucky could:

- Generate approximately 4,229 full-time equivalent jobs during construction periods with a total payroll of \$205 million
- Support approximately 127 ongoing operation jobs with a total annual payroll of \$6.26 million
- Produce approximately \$3 million in extra income for farmers/households or others who lease their land to developers

Wind energy is currently an untapped resource in Kentucky. Yet, with advanced turbine technology and lower costs, **wind energy development could greatly boost Kentucky's economy and provide homegrown and affordable energy.**

*Jobs and Economic Development Impact (JEDI) model, developed by the National Renewable Energy Laboratory (NREL). More information about the JEDI model can be found at: <http://1.usa.gov/XpVcWY>

Sources:

American Wind Energy Association (April 10, 2014). "State Wind Energy Statistics: Kentucky." <http://bit.ly/10eT074>
Joseph Owen Roberts (September 2013). Presentation, Land-Based Wind Potential Changes in the Southeastern U.S., NREL