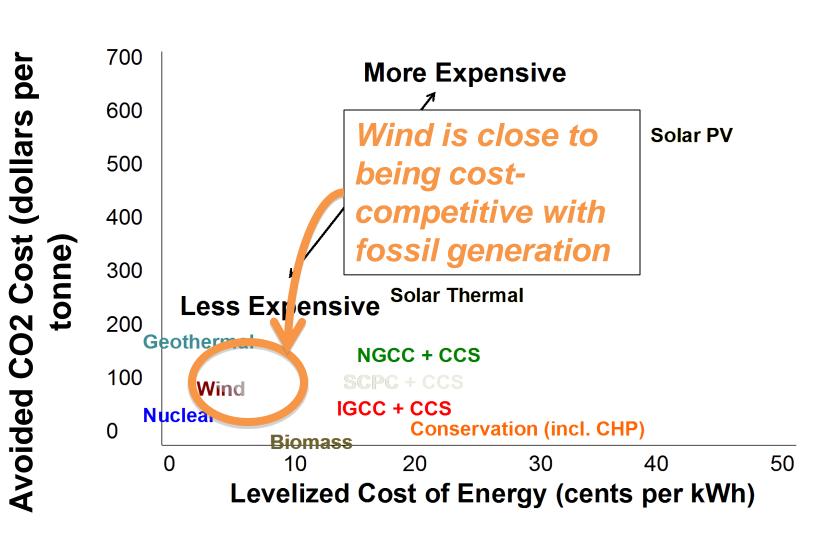
Wind Energy Economics

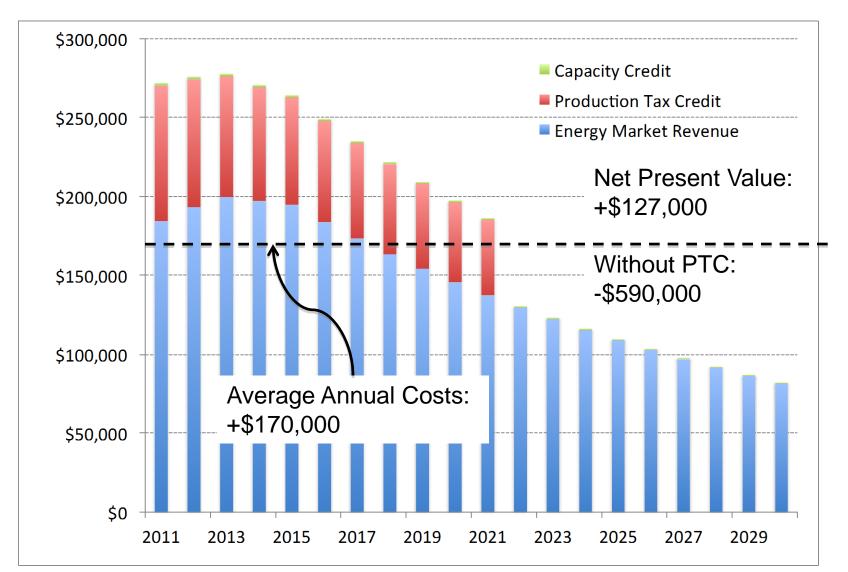
Seth Blumsack
Leone Family Department of Energy and Mineral
Engineering
Pennsylvania State University
blumsack@psu.edu

14 March 2011

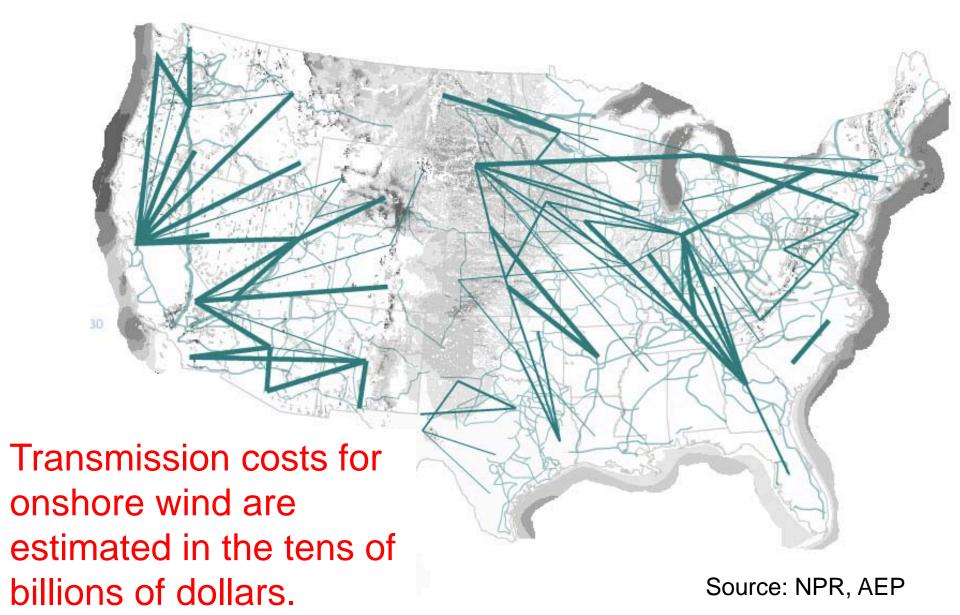
Wind has lower costs compared to some other renewables...



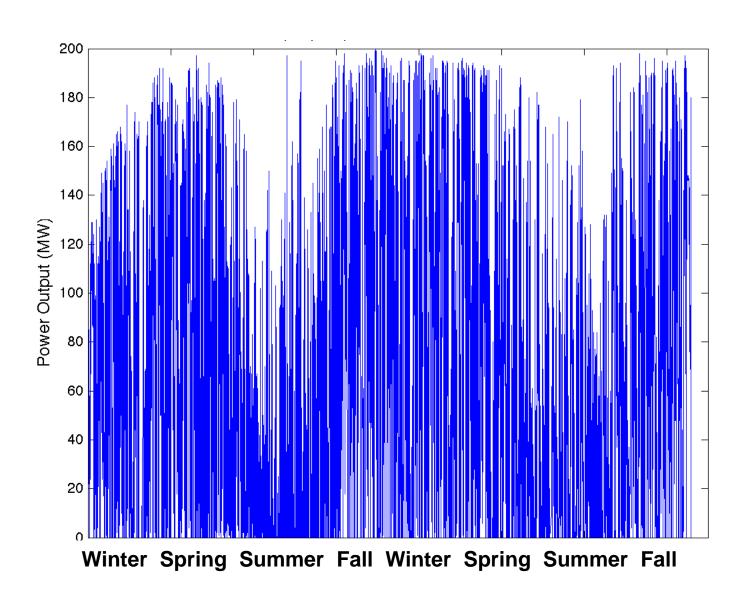
...But subsidies and incentives are probably required for most sites.



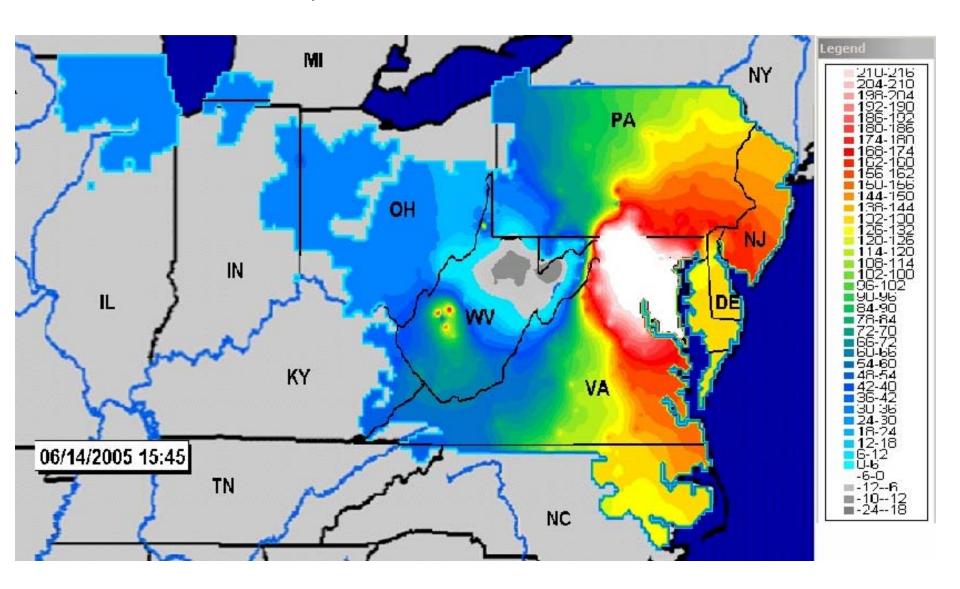
The Onshore "Wind Grid"



One Wind Farm for Two Years

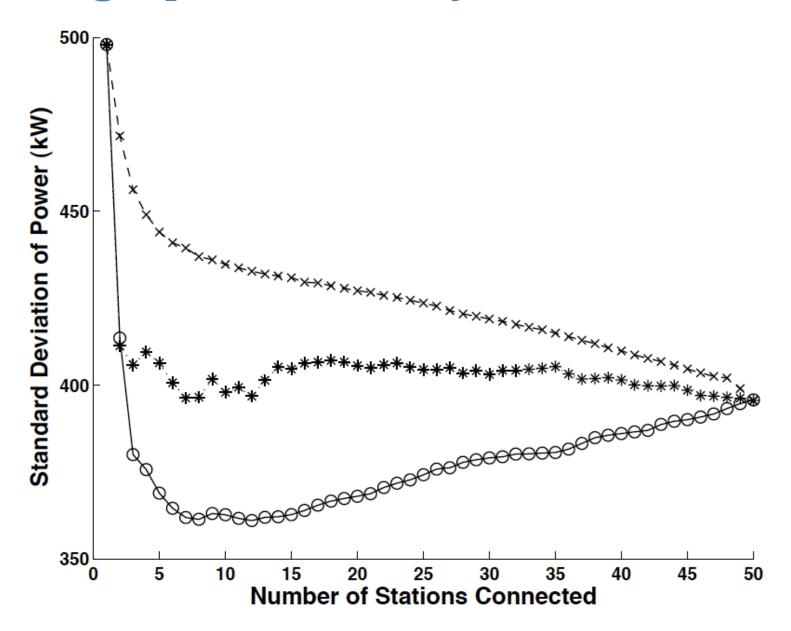


PJM Market Prices



Source: PJM e-Tools

Geographic Diversity Lowers Volatility



Thank You! Questions?

Seth Blumsack
Leone Family Department of Energy and Mineral
Engineering
Pennsylvania State University
blumsack@psu.edu

14 March 2011