

Inside Energy

Published by the Caesar Rodney Institute Center for Energy & Environment

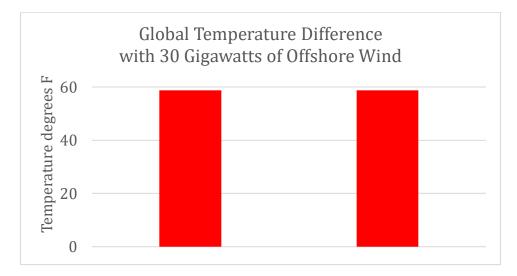
RE: Offshore Wind at What Cost: Part 5 Financial Cost DATE : 8/23/2021

David T. Stevenson, Director

President Biden has set a goal to build industrial offshore wind to reduce carbon dioxide emissions to combat climate change. So far no one is answering the question of whether this is a good use of resources. Here we compare the financial benefits to the cost. This is the fifth in a series of articles to show the true cost of building offshore wind.

The net cost to taxpayers and electric customers over the twenty year contract life of 30 gigawatts of offshore wind may be \$600 billion dollars, with \$250 billion sent to Europe. As many as 154,000 jobs may be lost. At best the economic benefit of 30 gigawatts of offshore wind might be \$150 billion with about 26,000 permanent jobs based on a scaled analysis of work done for the Maryland Public Service Commission¹. Cost may exceed benefits by four to one.

The primary targeted benefit is the reduction of global warming in the future by avoiding 78 million tons a year of carbon dioxide emissions. The Environmental Protection Agency (EPA) created a calculator that shows the impact of such cuts. Building 30 gigawatts of industrial offshore wind would reduce global temperature by four one-thousandths of a degree Fahrenheit². We will ignore the fact the actual emissions savings will only be about half that amount using real data from the eight impacted states. The chart below shows the before and after impact of the emissions reduction. Can you tell which is the "before" and which is the "after"?



Electric power from the recently approved Vineyard Wind offshore project will cost about 10 cents/kilowatt-hour over its expected 20 year life according to the National Renewable Energy Laboratory³. That is over three times as much as the average regional wholesale price of power at 3 cents. Using that cost differential for the President's entire 30 gigawatt target, electricity cost will go up \$8.4 billion a year, or \$168 billion in direct cost over 20 years, multiplied by a 2.2 factor to consider indirect and induced cost for a total of <u>\$370 billion</u>, and perhaps 110,000 jobs.



Inside Energy

Published by the Caesar Rodney Institute Center for Energy & Environment

A study by the Federal Energy Regulatory Commission⁴ estimates total construction cost for the 30 gigawatts to be \$80 billion with another \$20 billion for transmission upgrades. Most of that will be spent on buying European made turbines, delivered and installed by European vessels manned by European crews. In addition developers will get a 24% US federal tax credit for their investment. Combining the purchase of turbines, shipping, and installation, with tax credits, and electric premiums as much as <u>\$250 billion</u> will be sent to Europe.

Large negative impacts are expected on the tourism and fishing industries. Studies⁵ suggest tourism might drop 15% to 38% on beaches from North Carolina to Massachusetts, an impact similar to the impact of the recent pandemic. A study of New Jersey tourism⁶ comparing 2019 to the pandemic year of 2020 showed the number of visitors fell by 25%. Tourism dollars fell by \$8 billion from about \$20 billion, or 43%, and employment fell by 28,000, or 24%. Similar studies from other states indicate New Jersey accounts for about half the total beach economy from the Outer Banks to Martha's Vineyard. A 15% loss in visitors might lead to the east coast beach economy falling \$10 billion a year or <u>\$200 billion</u> over 20 years with perhaps the loss of 34,000 jobs.

Commercial fisheries in the same east coast states totals about \$25 billion a year according to a NOAA Fisheries report⁷. In the Record of Decision⁸ for the approval of the Vineyard Wind project the Bureau of Ocean Energy Management states it is likely commercial fisherman will voluntarily abandon offshore wind lease areas over concerns about equipment loss, navigation, and increased insurance cost. For 30 gigawatts of wind power that is an area about the size of Connecticut. I have seen no forecast of potential losses in commercial fishing, but even a 5% reduction in catch would cost <u>\$25 billion</u> over twenty years with a potential loss of 10,000 jobs.

Along with lower carbon dioxide emissions wind developers claim air pollution may also fall. However, a consultant for the Maryland Public Service Commision¹ determined air pollution from offshore wind may actually be higher than the onshore wind it replaced. The EPA establishes National Ambient Air Quality Standards for seven air pollutants. The standards are set based on a review of the best available science with a significant health safety margin built in. In the eight impacted states only Maryland, Connecticut and New York have counties above the standard⁹. All the high readings are at Air Quality Monitoring stations a few hundred feet downwind of Interstate 95 suggesting the high readings are most likely caused by motor vehicles not power plants that might be closed if offshore wind is built.

What we see is a willingness to spend over half a trillion dollars to reduce future global temperatures by an insignificant amount. What a waste.

Learn more, and fight back at www.saveourbeachview.com

Reference:

 Maryland PSC Staff consultant Levitan & Associates, Inc., "Evaluation and Comparison of US Wind and Skipjack Proposed Offshore Wind Project Application", Revised March 17, 2017, <u>https://www.psc.state.md.us/search-results/?q=9431&search=all&search=case&x.x=14&x.y=11</u>, item 85



Inside Energy

Published by the Caesar Rodney Institute Center for Energy & Environment

- Science & Public Policy Institute, Paul Knappenberger, MAGICC: Model for the Assessment of Greenhousegas Induced Climate Change Results from Cessation of Carbon Dioxide Emissions, <u>http://scienceandpublicpolicy.org/images/stories/papers/originals/state_by_state.pdf</u>
- 3) National Renewable Energy Laboratory, "The Vineyard Wind Power Purchase Agreement: Insights for Estimating Costs of U.S. Offshore Wind Projects", Philipp Beiter, Paul Spitsen, Walter Musial, and Eric Lantz, February, 2019, <u>https://www.nrel.gov/docs/fy19osti/72981.pdf</u>
- Greentech Media, "A Looming Transmission Crunch for the US East Coast's Offshore Wind Ambitions, <u>A Looming Transmission Crunch for the US East Coast's Offshore Wind Ambitions</u> | <u>Greentech Media</u>
- 5) U.S. Bureau of Ocean Energy Management, University of Delaware, "Atlantic Offshore Wind Energy Development: Values and Implications for Recreation and Tourism", March 2018, Authors: George Parsons and Jeremy Firestone, <u>https://www.boem.gov/espis/5/5662.pdf</u>, North Carolina State University, "The Amenity Costs of Offshore Wind Farms: Evidence from A Choice Experiment", March 216, Lutzyer ET. al., <u>https://cenrep.ncsu.edu/cenrep/wpcontent/uploads/2016/03/LPT_Offshore</u>
- 6) Tourism Economics, Economic Impact of tourism in New Jersey 2020, <u>2020-nj-economic-impact 5-</u> 6-20.pdf.pdf (visitnj.org)
- 7) NOAA Fisheries, Fisheries Economics of the United States, 2016, <u>Fisheries Economics of the United States</u>, 2016 | NOAA Fisheries
- 8) BOEM Vineyard Wind Record of Decision, <u>VW1-OCSLA-Compliance-Memo-ROD-Appendix-B.pdf (boem.gov)</u>
- 9) US Environmental Protection Agency, "8-Hour Ozone (2015) Designated Area/State Information", 8-Hour Ozone (2015) Designated Area/State Information | Green Book | US EPA