Offshore Wind in the U.S. Gulf of Mexico

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Abstract

This presentation summarizes the technical challenges and economics of developing offshore wind in the GOM, including hurricane design for turbines and substructures, as well as turbine solutions to overcome lower wind regimes. In addition, advantages to offshore wind development in the GOM are described including proximity to oil and gas supply chains. Economic analysis using established cost models at the National Renewable Energy Laboratory identified hypothetical project locations where net value of offshore wind was highest, and the levelized cost of energy (LCOE) was calculated for three sites: Port Isabel, Port Arthur, and Pensacola. Offshore wind LCOE in the GOM was found to be higher than wind speed sites in the North Atlantic but decreasing cost trajectories indicate the possibility of economic viability for locations in Texas and west Louisiana after 2030.