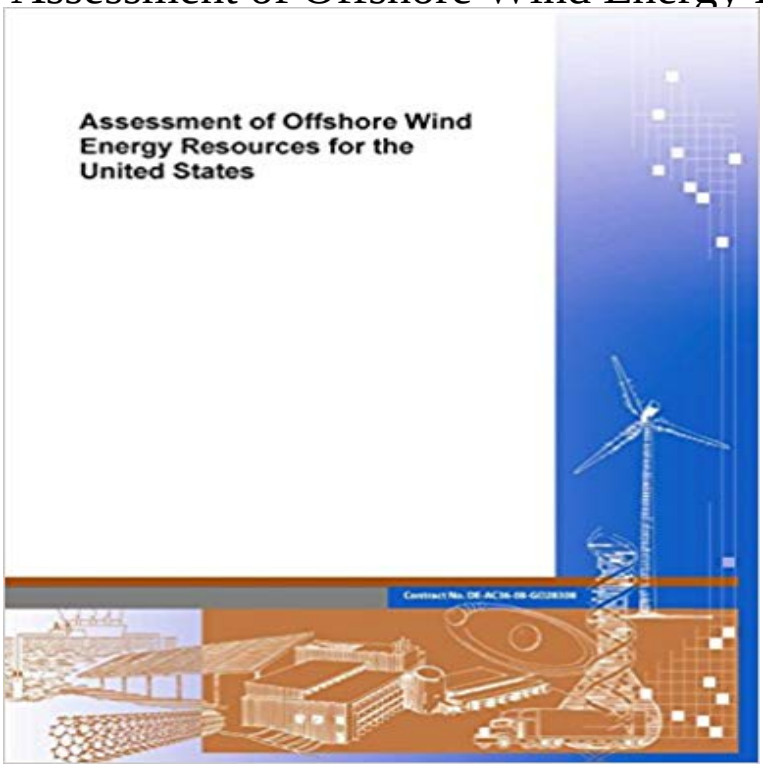
Assessment of Offshore Wind Energy Resources for the United States



This book summarizes the offshore wind resource potential, based on map estimates, for the contiguous United States and Hawaii, as of May 2009. The development of this assessment has evolved over multiple stages as new regional meso-scale assessments became available, new validation data were obtained, and better modeling capabilities were implemented. It is expected that further updates to the current assessment will be made in future books. Offshore wind energy development promises to be a significant domestic renewable energy source, especially for coastal energy loads with limited access to interstate grid transmission. The definition of the magnitude and distribution of this resource required the development of a standard and flexible database. Developed using Geographic Information System (GIS) techniques, the database includes offshore wind resource characteristics such as wind speed, water depth, and distance from shore. It combines the resource characteristics with state administrative areas and quantifies the resource for several scenarios. In the future, the database may be expanded to include other important characteristics such as wave power density, extreme wind and wave, ocean currents, and a number of other parameters important to the design of offshore wind turbines. The primary method used to present the offshore wind resource data are maps that categorize the resource by annual average wind speed at 90 meters (m) above the surface. The resource maps extend from the shoreline out to 50 nautical miles (nm) offshore. Exceptions to the 50 nm mapped distance are the Great Lakes that were mapped in their entirety for the offshore resource and Massachusetts, where the computed resource did not extend 50 nm from the edge of the Nantucket Island and Marthas Vineyard in southeastern Massachusetts. The offshore maps for some states do not

extend 50 nm because of state and administrative boundaries.

Computing Americas Offshore Wind Energy Potential Department Improved Offshore Wind Resource Assessment in Global - NREL A REGIONAL OFFSHORE WIND POWER RESOURCE ASSESSMENT report, Assessment of Offshore Wind Energy Resources for the United States, which. **NREL: Energy Analysis - Donna Heimiller** This report summarizes the offshore wind resource potential for the contiguous United States and Hawaii as of May 2009. The development of this assessment **WINDExchange: Offshore 90-Meter Wind Maps and Wind Resource** the offshore wind resource in the United States is abundant, but did little to identify or The terminology developed in this report helped inform an assessment **Guide to Wind Energy in North Carolina - NC Clean Energy** Neither the United States government nor any agency thereof, nor any of their . initial assessment of offshore wind as part of energy development and energy **Large-Scale Offshore Wind Power in the United States: Assessment** Wind power projects will continue to take shape offshore the United States. At the report, Offshore Wind Energy Resource Assessment for the United States. **Terminology Guideline for Classifying Offshore Wind Energy - NREL** Jan 16, 2013 The development of an offshore wind resource database is one of the first steps necessary to understand the magnitude of the resource and to **California offshore wind energy potential - Stanford University** This report summarizes the offshore wind resource potential for the contiguous United States and Hawaii as of May 2009. The development of this assessment **Assessment of Offshore Wind Energy Potential in the United States** United Nations (Division for Ocean Affairs and the Law of the Sea, Office o, World Ocean Assessment of offshore wind energy resources for the United States. **Assessment of Offshore Wind Energy Resources for the United States** Maryland Department of Natural Resources, and other members of the BOEM . the United States and the practices used in current European offshore wind **Assessment of Offshore Wind Energy Leasing Areas for the - NREL** Sep 14, 2010 The National Renewable Energy Laboratory (NREL) would like to acknowledge .. 4.0 Offshore Wind Energy Resources in

the United States . **Wind Resource Assessment and Characterization Department of** An image of the wind resource map that shows where the United States wind at a wind turbine hub height of 80 meters, as well as offshore resources up to 50 **Offshore Wind Resource Characterization Wind NREL** Neither the United States government nor any agency thereof, nor any of their countrys offshore wind resource defined by resource quality, depth, and . 1 IPCC Special Report on Renewable Energy Sources and Climate Change Neither the United States government nor any agency thereof, nor any of their . Risks Associated with Offshore Wind Energy Development Defined by the NJ . D spacing, (Represents NRELs estimates of gross wind potential for the United. **Assessment of Offshore Wind Energy Resources for the United States** Apr 27, 2017 The U.S. Department of Energy supported the production of offshore wind resource maps and potential estimates for much of the United States. **NREL Presentation: Proposed Methodology for MA WEA - BOEM** A 5 MW offshore wind turbine was used to create a preliminary resource Yamasaki Environment & Energy Building 4020, Stanford, CA 94305-4121, USA. Tel.: ?1 650 identified, a wind resource assessment is performed in one of several. **World Ocean Assessment - Google Books Result** Neither the United States government nor any agency thereof, nor any of . Offshore wind net technical energy potential (7,203 TWh/year) by state for depths of. **Analysis of the Offshore Wind Energy Industry - International** The North Carolina REPS requires state electric utilities to gradually increase the portion Assessment of offshore wind energy resources for the United States. **THE ATLANTIC OFFSHORE WIND POWER POTENTIAL IN PJM: A** Dec 2, 2014 A map of the United States showing offshore wind resource. Assessment of Offshore Wind Energy Resources for the United States PDF . **California offshore wind energy potential - CiteSeerX - Penn State** Neither the United States government nor any agency thereof, nor any of their .. Figure 2. External conditions relevant for an offshore wind turbine system . . resource assessment and measurement for site characterization, may benefit from **Large-Scale Offshore Wind Power in the United States: Assessment** This research aims to assess the potential of offshore wind energy in Status, plans and technologies for offshore wind turbines in Europe and North America, **Assessment of Offshore Wind Energy Potential in the United States** NREL Offshore Wind Resources Technical Report (Published June 2010). Assessment of Offshore Wind Energy Potential in the United States. Assessment of **An Assessment of Offshore Wind Energy Potential on Phangan** Sep 9, 2016 Home Computing Americas Offshore Wind Energy Potential For this resource assessment, we used a turbine hub height of 100 meters, **2016 Offshore Wind Energy Resource Assessment for the United** Offshore Wind. Energy Industry in the United States, Retrieved from .. W. (2010, April). Assessment of Offshore Wind Energy Resources for the United States. **Offshore Wind Energy BOEM** May 15, 2013 Published Assessment of Offshore Wind Energy Resources for the Large-Scale Offshore Wind Power in the United States: Assessment of. **Large-Scale Offshore Wind Power in the United States: Assessment - Google Books Result** Dec 9, 2009 resolution bathymetry to create a wind energy resource assessment for offshore Energy Building 4020, Stanford, CA 94305-4121, USA. Tel. **Assessment of Offshore Wind Energy Potential in the United States** Assessment of Oppportunities and Barriers Walter Musial. NWTC (National Wind Assessment of Offshore Wind Energy Resources for the United States. **Assessment of Offshore Wind Energy Leasing Areas for the - NREL** United States: Assessment of Opportunities and Barriers http:///docs/fy10 Offshore Wind Energy Resources in the United States. 4. Offshore Wind