

## **Final Summary Report**

### **Em-Powering Coastal States and Utilities through Model Offshore Wind Legislation and Outreach**

For this research project, we created two model documents to facilitate offshore wind power development in state waters: A Model Request for Proposals (RFP) and Model Access Legislation, the latter of which built on our previously-devised access framework for state waters. We also examined Feed-in-Tariffs (FITs) as an alternative to RFPs. Although FITs are a promising option to RFPs, and have led to great success in some European countries, they have not gained much traction in the United States. They are however worth a second look, particularly given the recent success of the Ontario FIT. A recent interpretation by the Federal Energy Regulatory Commission (FERC) of existing US law also may open the door wider for renewable energy FITs. Yet, because projects will likely be limited to 80MW or perhaps smaller that FERC action is unlikely to advance large-scale offshore wind, although it may play a greater role in near-shore, demonstration-scale projects that are being proposed for state waters (e.g., Fishermen’s Energy Atlantic City, NJ project and Deepwater Wind’s Block Island, RI project).

Turning to the Model RFP, the base RFP is for a single-source offshore wind RFP, with required modifications noted should a state or utility seek multi-source bids (e.g., all renewables or all sources). The model is premised on proposals meeting threshold requirements (e.g., a MW range of generating capacity and a range in terms of years), RFP issuer preferences (e.g., likelihood of commercial operation by a date certain, price certainty, and reduction in congestion), and evaluation criteria, along with a series of plans (e.g., site, environmental effects, construction, community outreach, interconnection, etc.).

For evaluation criteria, the Model RFP places the most weight on project risk (45%), followed by project economics (35%), and environmental and social considerations (20%). It does so because, offshore wind projects, particularly at the proposal stage, are likely to vary minimally on the first and third criteria (and/or those considerations are likely to be subject to a high degree of uncertainty). More importantly, in this early stage of offshore wind project development, project risk, particularly in terms of a respondent’s ability to finance and decommission a project and depth of experience, is paramount.

In the event that multi-source bids (e.g., land-based wind, solar, coal, natural gas, nuclear, hydropower, etc.) are sought, we recommend several modifications to the weighting scheme. First, the “Project Economics” category should include an additional criterion for price stability, as many may value stable prices as much or more than initial price. Second, the “Environmental and Social Considerations” category should include health impacts. Third, the sponsor of the RFP should either

add per-MWh technology-specific, life-cycle climate (CO<sub>2</sub>), environmental and health impact costs to bid prices under the “Project Economics” category or it should increase the “Environmental and Social Considerations” category to 50%. In such a case, respondents also would be required to submit additional information on environmental and health effects. For those parties proposed offshore wind, this information would include but not limited to, estimated CO<sub>2</sub> displacement, human health benefits (avoided mortality and morbidity), reduction of cooling water from existing power plants and associated reduction in biological morbidity.

Lastly, we consider model legislation, focusing here on two aspects, compensation for use of ocean space and environmental assessment. In particular, the model legislation recommends the adoption of a rent and royalty scheme that is premised on high rent and low royalties in order to stimulate qualified bids from developers who are motivated to begin production as early as possible and to discourage sham bidding. The model legislation also includes a provision that sets royalties at a lower rate in the early years of project operation, and that provides states with the discretion to waive or defer rent and/or royalties for a period of time to meet the goals and objectives of energy independence, job creation, reduced emissions of conventional pollutants and greenhouse gases and increased state requirements for electricity from renewable sources.

In calculating a royalty the model departs from the formula put forward by the US Department of the Interior (USDOI), which is based on anticipated power generation and wholesale electric power prices. USDOI’s formulation is problematic in that it ties royalties of a price-stable form of electricity generation to electricity rates that are primarily based on the price of volatile fossil fuel prices. Further, it leads to the anomalous result that royalties for a carbon-free generation technology are based in part on the price of emission of carbon dioxide, as those costs are/will be included in those prices to the extent that carbon market mechanisms are placed on the generator or further upstream (e.g., the coal mining company). The model thus recommended that States create a formula that precisely calculates royalties based on the actual power purchase rate, either as a percentage of the yearly PPA price (which would adjust upward as the PPA price increases) for energy and capacity or based on the first year of the PPA, and then increased year over year by some percentage such as 2.5%. The model does not recommend basing the royalty on the price of environmental attributes such as RECs for much the same reason it does not base royalties on the market price of carbon.

The goal of preparing an environmental impact assessment (EIA) is to provide a systematic and interdisciplinary evaluation of the potential positive and negative **life-cycle effects** of a proposed offshore wind project on the physical, biological, cultural and socio-economic attributes of the project. The EIA needs to be sufficiently broad to inform the public and the decision-makers on the all phases of the project: construction, operation and decommissioning and on the comparative life-cycle effects of the project. The life-cycle analysis of the environmental impacts, should include, but not be limited to, effects on human health, and the comparative

impact of alternative and/or traditional means of electric generation to the offshore wind facility on a per kWh basis. To ensure public and community consultation, the draft EIA would be made available to the public for review and comment for a period of at least 30 days. Finally, to the extent feasible, the state should coordinate review with the federal government to eliminate duplicative efforts and ensure the efficiency of the environmental evaluation process.