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April 12, 2012

Senator Michael D. Thibodeau, Senate Chair
Representative Stacey Allen Fitts, House Chair
Joint Standing Committee on Energy, Utilities and Technology
115 State House Station
Augusta, ME 04333

Dear Senator Thibodeau and Representative Fitts:

As required by Public Law, Chapter 615, 124th Legislature (S.P. 710 – L.D. 1810 – *An Act to Implement the Recommendations of the Governor's Ocean Energy Task Force §A-7*), the Governor's Office of Energy Independence and Security (OEIS) is required to undertake a review of terms and conditions for long-term contracts for renewable ocean energy. The OEIS requested an extension from the Joint Standing Committee on Energy, Utilities and Technology so that this review can be conducted by an expert consultant under the terms of a competitive Request for Proposals. Boston Pacific Company, Inc. prepared the attached *Review of Terms and Conditions for Long-Term Contracts for Renewable Ocean Energy* (Ocean Energy Review) and the OEIS urges the Committee to consider its analysis and recommendations.

According to the requirement:

No later than January 15, 2012, the Executive Department, Governor's Office of Energy Independence and Security shall make a recommendation to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters regarding terms and conditions for long-term contracts for installed capacity and associated renewable energy and renewable energy credits produced by renewable ocean energy projects, except for those addressed in section 8. For the purposes of this section, "renewable ocean energy project" has the same meaning as in the Maine Revised Statutes, Title 12, section 1862, subsection 1, paragraph F1. In making a recommendation under this section, the office shall, at a minimum, consider the following issues:

- 1. Risks to ratepayers associated with fossil fuel price volatility over the next 20 years;*
- 2. State goals for the reduction of greenhouse gas emissions established in Title 38, section 576;*
- 3. State wind energy generation goals under Title 35-A, section 3404, subsection 2; and*
- 4. Other potential benefits attributable to the development of offshore wind, tidal and wave energy projects, including but not limited to public health, job creation and other economic benefits and energy security.*

Maine's statutory goals for wind power development include the following:

- At least 2,000 Megawatts (MW) of installed capacity by 2015;
- At least 3,000 MW of installed capacity by 2020, with potential to produce 300 MW or more of offshore wind power;
- At least 8,000 MW by 2030 including 5,000 MW located in coastal waters.

There has been much interest in developing both land- and ocean-based wind and tidal energy development projects in Maine due to the excellent wind resources, potential development of transmission, many operational wind energy projects and interest in renewable energy generation and reduction of greenhouse gas emissions. There are numerous wind energy projects currently in development and others in the discussion phase. The OEIS released its *Maine Wind Energy Development Assessment – Report and Recommendations, March 2012* to the Committee on March 28, 2012. The assessment and supporting and accompanying documents, can be found at <http://www.maine.gov/oeis/alternativeenergy.html>. The Ocean Energy Review should be added to these documents for the Committee's overall consideration of wind policy issues.

Two significant laws provide the foundation for Maine's renewable ocean energy industry. First, Public Law 2009, chapter 270 contains several provisions to facilitate research and development and testing of renewable ocean energy technologies. Public Law 2009, chapter 615 sets the aggressive state goals for installation of offshore wind energy capacity - 5,000 megawatts of offshore wind by 2030; streamlines state permitting and leasing laws; and directs the Maine Public Utilities Commission (PUC) to issue a request for proposals for price-capped, long-term contracts for up to 25 MW of deep-water offshore wind power and 5 MW of tidal power. The MPUC issued this RFP on September 1, 2010 seeking proposals for "long-term contracts to supply installed capacity and associated renewable energy and renewable energy credits from one or more deep-water offshore wind energy pilot projects or tidal energy demonstration projects." Bidders selected will enter into long-term contractual arrangements with one or more of Maine's investor-owned transmission and distribution utilities: Central Maine Power (CMP), Bangor Hydro Electric Company (BHE) and Maine Public Service Company (MPS). Initial proposals have been submitted and updated. All information can be found at http://www.maine.gov/mpuc/electricity/rfps/standard_offer/deepwater2010/.

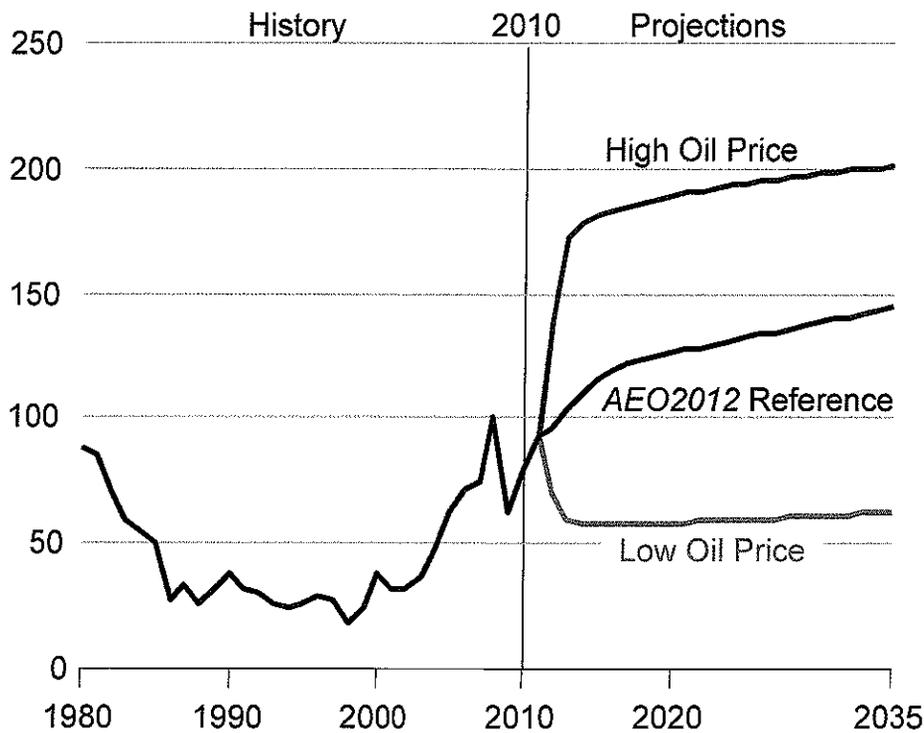
While the State's ocean wind goals are ambitious, the Governor and OEIS believe additional analysis is required to help us deliver economic, energy and environmental benefits on behalf of Maine's residents and businesses. Achieving these goals, or enacting legislation revising the goals to reflect new information and data, will require thoughtful planning and balanced decision-making in order to tap into the State's significant wind and tidal resources, protect Maine's quality of place and deliver clean, affordable power. We recognize that achieving these goals is not entirely within our control and will depend on factors such as technology developments, future energy costs, federal policies and other factors. Ocean energy is one part of a broad energy portfolio that may help to achieve reduction of dependence on fossil fuels; creation of jobs and other economic benefits; generation of renewable energy; reduction of greenhouse gas emissions; and creation of additional economic opportunities.

The Ocean Energy Review explores long-term contracting opportunities and terms and conditions for the development of ocean energy production in a manner that achieves reliable, cost-effective, sustainable energy production. The goals of long-term contracts include

providing lower electricity supply costs for Maine consumers, increasing renewable capacity and granting a hedge against volatile electricity market prices. Since 2006, the MPUC has considered several long-term contract proposals. According to current law, capacity resources can only be authorized for a long-term contract if the MPUC finds: 1) that a long-term contract is the least cost means to address an identified local grid reliability need and is necessary for the capacity resource to be developed or for its operation to be maintained; 2) that a long-term contract is necessary for the capacity resource to be developed or for its operation to be maintained, that the existence of the capacity resource will significantly lower the cost of capacity requirements to Maine ratepayers, and that the price for the capacity resources is expected to be no higher than market prices over the term of the contract; and 3) that the price of the capacity resource under the long-term contract is significantly below the expected market value of the capacity over the term of the contract. Proposals must demonstrate how objectives and priorities are to be achieved.

It is important to review the potential for ocean energy and appropriate terms and conditions for long term contracts in the context of risks to ratepayers associated with fossil fuel volatility over the next two decades. In 2011, prices for crude oil ranged between \$85 and \$110 per barrel. The U.S. Energy Information Administration (EIA) Annual Energy Outlook 2012 shows crude oil prices rising to \$120/barrel in 2016 and \$145/barrel in 2035 (in 2010 dollars, or about \$230 per barrel in nominal dollars) as the world economy recovers and grows and demand increases faster than available supplies of petroleum.

Average annual world oil prices in three cases. 1980 – 2035



AEO2012 Early Release Overview, U.S. Energy Information Administration

At the same time, average annual prices for natural gas are predicted to remain below \$5 per thousand cubic feet (2010 dollars) through 2023 in the AEO2012 Reference case due to increased production. After 2023, prices are expected to generally increase as the number of wells drilled increase to meet growing domestic demand, reaching \$6.52 per thousand cubic feet in 2035.

Natural gas and oil are currently the primary fuels for more than 60 percent of the existing generating capacity in New England and about 70 percent of the capacity in Maine. Petroleum is imported into the New England region and is subject to price and supply fluctuations or changes and demand and the political climate worldwide. The cost of offshore wind energy may remain stable over time because the majority of costs are fixed upfront. This gives wind energy generators somewhat of an advantage to offer long-term contracts as an effective hedge against rising and volatile wholesale electricity prices that are tied to volatile fossil fuels which have historically fluctuated significantly. However, the United States is projected to become a net exporter of liquefied natural gas (LNG) in 2016, a net pipeline exporter in 2025, and an overall net exporter of natural gas in 2021 (EIA, Annual Energy Outlook 2012). The outlook reflects increased use of LNG in markets outside of North America, strong domestic natural gas production, reduced pipeline imports and increased pipeline exports, and relatively low natural gas prices in the United States compared to other global markets.

Evaluation of long-term contracts necessarily entails a certain amount of analysis and forecasting of future energy prices, an approach that carries an inherent risk despite the potential benefit. The OEIS certainly supports pursuing all cost-effective energy efficiency opportunities and encouraging renewable, indigenous energy sources. But, in order to invest in cost effective renewable generation and increase the generation of renewable power into the State of Maine's electricity portfolio, we must closely examine directives that attempt to achieve these public policies, such as long-term contracts. The Ocean Energy Review serves as another resource for the Committee to consider as it reviews the State wind energy policies and potential proposals to improve upon those policies.

Thank you and please let me know if you have any questions.

Sincerely,



Kenneth C. Fletcher

Director
Governor's Office of Energy Independence and Security