STATE OF MAINE
PUBLIC UTILITIES COMMISSION

Docket No. 2010-00235

February 26, 2013

MAINE PUBLIC UTILITIES COMMISSON
Ocean Energy
Long-Term Contracting

ORDER APPROVING TERM SHEET

WELCH, Chairman; LITTELL and VANNOY, Commissioners

I. SUMMARY

Through this Order, we approve the Term Sheet for a Long-Term Contract for the capacity and associated energy of Statoil North America, Inc.'s (Statoil) Hywind Maine Project dated January 14, 2013 (Term Sheet) subject to the conditions and clarifications described in this Order.[1]

II. BACKGROUND

A. Ocean Energy Act

During its 2010 session, the Maine Legislature enacted An Act To Implement the Recommendations of the Governor's Ocean Energy Task Force (Ocean Energy Act). P.L. 2009, ch. 615. Section A-6 of the Ocean Energy Act directed the Maine Public Utilities Commission (Commission), in accordance with Title 35-A, section 3210-C of the Maine Revised Statutes, to conduct a competitive solicitation for proposals for long-term contracts to supply installed capacity and associated renewable energy and renewable energy credits (RECs) from one or more deep-water offshore wind energy pilot projects or tidal energy demonstration projects.

For purposes of the competitive solicitation, "deep-water offshore wind energy pilot project" means a wind energy development, as defined by Title 35-A, section 3451, subsection 11, that is connected to the electrical transmission system located in the State and employs one or more floating wind energy turbines in the Gulf of Maine at a location 300 feet or greater in depth and no less than 10 nautical miles from any land area of the State other than coastal wetlands, as defined by Title 38, section 480B, subsection 2, or an uninhabited island. "Tidal energy demonstration project" has the same meaning as in Title 38, section 636A, subsection 1, paragraph A. Specifically, a "tidal energy demonstration project" means a hydropower project that uses tidal action as a source of electrical power that has a total installed generating capacity of 5 megawatts or less and is proposed for the primary purpose of testing tidal energy generation technology, which may include a mooring or anchoring system and

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[1] Commissioner Vannoy dissents in this decision.

transmission line, and collecting and assessing information on the environmental and other effects of the technology.

As specified in the Ocean Energy Act, the Commission may authorize one or more long-term contracts for an aggregate total of no more than 30 megawatts of installed capacity and associated renewable energy and RECs from deep-water offshore wind energy pilot projects or tidal energy demonstration projects as long as no more than 5 megawatts of the total is supplied by tidal energy demonstration projects.

As required by the Ocean Energy Act, the Commission initiated a competitive solicitation by issuing a Request for Proposals for Long-Term Contracts for Deep-Water Offshore Wind Energy Pilot Projects and Tidal Energy Demonstration Projects (RFP) on September 1, 2010. Responses to the RFP were received on May 2, 2011, including a proposal from Statoil for the Hywind Maine Project. Commission Staff performed an initial review of all proposals received, prioritized proposals and conducted in-depth discussions with several bidders. Projects were evaluated based on cost considerations, overall project viability, including financial, environmental and other site approvals, construction schedule, operational characteristics and the following evaluation criteria as required in the Ocean Energy Act.

Specifically, the Ocean Energy Act states that the Commission may direct one or more transmission and distribution (T&D) utilities, as appropriate, to enter into a long-term contract pursuant to the RFP only if it determines that the bidder:

A. Proposes sale of renewable energy produced by a deep-water offshore wind energy pilot project or a tidal energy demonstration project as defined in this RFP;

B. Has the technical and financial capacity to develop, construct, operate and, to the extent consistent with applicable federal law, decommission and remove the project in the manner provided by Title 38, section 480HH, subsection 3, paragraph G;

C. Has quantified the tangible economic benefits of the project to the State, including those regarding goods and services to be purchased and use of local suppliers, contractors and other professionals, during the proposed term of the contract;

D. Has experience relevant to tidal power or the offshore wind energy industry, as applicable, including, in the case of a deep-water offshore wind energy pilot project proposal, experience relevant to the construction and operation of floating wind turbines, and has the potential to construct a deep-water offshore wind energy project 100 megawatts or greater in capacity in the future to provide electric consumers in Maine with project-generated power at reduced rates;

E. Has demonstrated a commitment to invest in manufacturing facilities in Maine that are related to deep-water offshore wind energy or tidal energy, as applicable, including, but not limited to, component, turbine, blade, foundation or maintenance facilities; and

F. Has taken advantage of all federal support for the project, including subsidies, tax incentives and grants, and incorporated those resources into its bid price.

As required by the Ocean Energy Act, long-term contracts authorized pursuant to the RFP may not, in the aggregate, result in increased electric rates for any customer class that is greater than the amount of the assessment charged under Title 35-A, section 10110, subsection 4 at the time that the contract is entered. That assessment is currently $1.45 per MWh.[2]

As required by the Ocean Energy Act, the Commission consulted with the University of Maine, Department of Industrial Cooperation, Office of Research and Economic Development (University) and the Department of Economic and Community Development (DECD) in developing the RFP and evaluating proposals submitted.

After reviewing all of the RFP responses, the Commission Staff identified a subset of bidders with the strongest proposals from a technical and financial standpoint and began negotiations with these bidders, including Ocean Renewable Power Corp. (ORPC) and Statoil. On March 28, 2012, the Commission approved a Term Sheet with Ocean Renewable Power Corp. (ORPC) containing the essential terms of a long-term power purchase agreement for a 5 MW hydrokinetic facility to be constructed in tidal waters off the coast of the towns of Perry, Eastport and Lubec. *Order Approving Term Sheet,* Docket No. 2010-235 (April 27, 2012). On December 21, 2012, the Commission approved the Agreement Related to Capacity Resource between Bangor Hydro Electric Company and ORPC Maine, LLC (Agreement) and directed Bangor Hydro Electric Company (BHE) to enter into the Agreement and to allocate a pro-rata share of the costs of the contract to Maine Public Service (MPS). *Order Approving Contract,* Docket No. 2010-235 (December 21, 2012).

B. Project Proposal

The Statoil Hywind Maine Project (Project) is a 12 MW deep-water floating offshore wind facility to be constructed in the Gulf of Maine at a location 300 feet or

[2] The Commission has previously concluded that the Legislature intended that customers that take service at transmission and sub-transmission voltage would not have a rate impact resulting from any ocean energy long-term contracts. *Order on Rate Impact Limitation Provision,* No. 2010-235 (Sept. 28, 2010). Accordingly, the costs of the contract will be allocated to customers taking service at the distribution level.

greater in depth and no less than 10 nautical miles from any land area of the State of Maine. The transmission interconnection to Maine is presently contemplated to occur in the Boothbay region. The Project is expected to begin commercial operation sometime in 2016.

Statoil's Hywind Project identifies the following objectives:

1. Demonstrate scalability of costs, building credibility in the market for the commercialization of floating wind parks;

2. Utilize the Hywind demonstration experience to demonstrate a more cost efficient design;

3. Reduce the technical, time and cost risks associated with a large park development;

4. Build a domestic industry and strengthen the ability of the U.S. and Maine supply chains to deliver according to industry expectations;

5. Generate public acceptance of offshore wind turbines;

6. Prove environmental feasibility for a large scale deployment; and

7. Test and prove the interface and controls in a wind farm configuration of Statoil's' ocean turbine angle-of-attack control system which compensates for both wind speed and sea state by controlling each turbine's continuous adjustment to the wind conditions and stability of the floating platform.

C. Initial Term Sheet

Following several months of negotiations between Statoil and the Commission Staff, on August 15, 2012, Statoil proposed a Term Sheet containing the essential terms of a Long-Term Contract for energy and capacity from the Project (Long-Term Contract) for Commission consideration (Initial Term Sheet). The Initial Term Sheet included two different pricing options, one with a starting contract price of $290/MWh with a fixed annual escalator of 1% and a yearly adjustment for the annual rate of change in the aggregate retail sales of distribution voltage customers of Central Maine Power Company (CMP), BHE and MPS (Rate of Change), and a second pricing option with a starting contract price of $320/MWh, no fixed escalator, and a yearly Rate of Change adjustment. The term of the contract was for 20 years, and the amount of energy to be purchased at the contract pricing was capped at 41 GWh/year. CMP, BHE, MPS (collectively referred to as Utilities), the University, DECD, and the Office of the Public Advocate (OPA) were given the opportunity to comment on the Term Sheet. All but the DECD provided comments by September 5, 2012. Statoil provided a letter in support of its proposal as well as responsive comments on the Utilities', University's, and OPA's comments. The Commission Staff solicited comment from the general public

regarding the Initial Term Sheet. The Commission received 46 comments from individuals, businesses and business associations and 14 comments from non-profits, academic institutions, governmental entities and elected officials. The large majority of the comments that were filed voiced support for the Project and the proposed Term Sheet.

On October 4, 2012, the Commission deliberated Statoil's Initial Term Sheet and tabled its deliberation of the matter pending further discussions between Commission Staff and Statoil to address the comments that the Commissioners made at deliberations. The concerns raised by the Commissioners included the viability of the Hywind technology to achieve the long-term cost reduction curve purported by Statoil, the cost of the contract relative to the expected benefits, and the lack of a commitment by Statoil to share any benefits of a future larger park with Maine ratepayers.

III. PROPOSED REVISED TERM SHEET

On January 14, 2013, Statoil proposed a Revised Term Sheet for a Long-Term Contract for the Project that lowered the energy price from that contained in the Initial Term Sheet and included language indicating a commitment to using Maine contractors and suppliers in a future Northeast offshore wind park. (See Revised Term Sheet attached hereto as Attachment 1).

The Revised Term Sheet provides for a contract term of twenty (20) years beginning on the Commercial Operations Date (COD)[3] and contains an initial price of $270/MWh for energy provided during the first year of the contract. No Payments under the Long Term Contract would occur until the COD is achieved by Statoil. For each subsequent Contract Year over the contract term, the contract energy price escalates at 1.0% per year plus the yearly growth in the aggregate retail sales to distribution voltage customers. The quantity of energy to be purchased under the Long-Term Contract is subject to an annual cap of 41 GWh. To the extent the actual energy produced by the Project is less than the annual energy cap, the difference between the cap and the quantity produced may be carried forward and sold as part of the Long-Term Contract, in addition to the annual energy cap, for up to three successive Contract Years.

As provided in the Revised Term Sheet, the capacity component of the proposed Long-Term Contract is a pass-through transaction whereby Statoil would receive a price for any capacity it provides based on the prevailing market value for such capacity. Statoil must use commercially reasonable efforts to qualify the capacity of the facility in the ISO-NE market.

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[3] The COD is not set, but by statute, must occur within five years of the date of execution of the contract, unless the Commission and Statoil mutually agree to a longer period.

The Revised Term Sheet states that Statoil will use commercially reasonably efforts to pursue and acquire state, federal, non-profit organization, for-profit organization, and other grant and subsidy opportunities applicable to the Project. The Project will retain any and all funds stemming from the Department of Energy (DOE) Funding Opportunity Announcement Number DE-FOA-0000410. The acquisition or failure to acquire these particular DOE funds will not change the Contract Price. The Revised Term Sheet provides that any additional grants that Statoil acquires will be applied toward reducing the costs of the Long-Term Contract to ratepayers, unless Statoil proposes, and the Commission agrees to, an increase in the Project scope. This provision, however, is subject to an exception for changes to the Investment Tax Credit (ITC) program. In the event the current federal ITC is materially adversely modified or otherwise unavailable with respect to the Project, Statoil is entitled to retain any additional grant proceeds to the extent necessary to offset the loss of the economic benefits to Statoil associated with the ITC.

The Revised Term Sheet also includes numerous non-pricing terms intended to ensure that economic benefits expected to accrue to the State as a result of the Project will be realized. These terms include a commitment by Statoil to use commercially reasonable efforts to expend at least 40% of the capital investments and 40% of the operating expenditures for the Project in Maine and to establish and maintain the Operations Center for the Project in Maine. The Revised Term Sheet commits Statoil to continue to engage at least 20-25 local consultants through the development period of the Project, including using commercially reasonable efforts to allocate front end engineering and design studies to Maine-based companies. The terms also commit Statoil to employ at least 150 persons in Maine, directly or indirectly through its suppliers, during the peak construction period of the Project. The Revised Term Sheet also commits Statoil to an extended supplier development process as described in the Term Sheet, to a research and development Collaboration Program with the University of Maine, and to use good faith, diligent efforts to award contracts in a future larger Northeast park representing not less than the lessor of 10% of capital expenditures or $100 million to qualified Maine-based contractors. In the event that Statoil fails to deliver on these economic commitments, the Revised Term Sheet provides for financial payments not to exceed 7% of total revenue from the Project in any given year. The Revised Term Sheet also contains a provision permitting the Commission to terminate the Contract prior to the commencement of construction if the Commission determines that Statoil is not likely to achieve a significant portion of the economic benefits associated with capital expenditures, employment, local content, supplier development and research and development collaboration.

The Commission solicited comment on the Revised Term Sheet and received comments from the Utilities, the OPA, the Governor's Energy Office, the Industrial Energy Consumers Group (IECG), nine comments from public or former public officials, and over 50 comments from organizations, businesses and individuals. The large majority of the comments filed by the general public expressed support for the Project and the proposed Revised Term Sheet. The Utilities, the Governor's Energy

Office and the IECG expressed substantial concerns primarily related to the increase in electricity rates that would result from the Statoil long-term contract.

IV. DISCUSSION

A. Statutory Criteria

We assess the proposed terms of a long-term contract as outlined in the Revised Term Sheet in accordance with the requirements of the Ocean Energy Act and as informed by the Final Report of the Ocean Energy Task Force.[4] In enacting the legislation, the Legislature recognized the potential public benefits that could accrue to the State by providing economic incentives to encourage the development of offshore wind, tidal and wave power energy resources. The Ocean Energy Act envisions these projects as technology demonstration projects that would: (i) provide direct economic benefits of research, testing, and development occurring in Maine; (ii) lay a foundation for Maine to be global leader in offshore wind and tidal technology development; and (iii) develop Maine's own indigenous natural resources. The economic incentives inherent in a long-term power purchase agreement are intended by the Ocean Energy Act to support the development of a limited number of technology demonstration projects by providing for above-market prices to be paid for electricity produced by such projects. The Ocean Energy Act limits the impact on ratepayers by limiting the overall impact on rates.

1. Supplier Requirements

As noted above, pursuant to the Ocean Energy Act and as provided in the Commission's RFP, the Commission may order a long-term contract only if it determines that the potential supplier satisfies several specified criteria. Each of these statutory criteria is analyzed below:

a. Supplier proposes sale of renewable energy produced by a deep-water offshore wind energy pilot project or a tidal energy demonstration project as defined in this RFP.

We find that the Project proposed is a deep-water offshore wind energy pilot project. Consistent with the statutory definition, Statoil's 12 MW deep-water wind farm will be constructed in the Gulf of Maine at a location 300 feet or greater in depth and no less than 10 nautical miles from any land area of the State of Maine. In October 2011, Statoil submitted a request for a commercial wind lease on the outer continental shelf (OCS) offshore Maine to the Bureau of Ocean Energy Management (BOEM) identifying the proposed location of the Project as a 22.2 square mile area located 12 nautical miles from the coast and 18 nautical miles from Boothbay Harbor. A map of the

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[4] Maine Ocean Energy Task Force, 2009. *Final Report of the Ocean Energy Task Force to Governor John E. Baldacci.* Available online at: http://www.maine.gov/spo/specialprojects/OETF/

area proposed by Statoil can be found at: http://www.boem.gov/Renewable-Energy-Program/State-Activities/Maine.aspx .[5] We also find that it is a pilot project as it is employing a novel spar buoy design and has the potential to be the first floating offshore wind farm in the United States.

b. Supplier has the technical and financial capacity to develop, construct, operate and, to the extent consistent with applicable federal law, decommission and remove the project in the manner provided by Title 38, section 480HH, subsection 3, paragraph G.

We find that Statoil has the technical and financial capacity to develop, construct, operate, and decommission and remove the Project. Statoil North America, Inc. (Statoil) is a wholly owned subsidiary of Statoil ASA and Statoil's proposal indicates that the full weight of Statoil ASA's knowledge and financial resources will be applied to Statoil's development, construction and operation of the Project.

Statoil's proposal indicates that Statoil is among the most technically capable companies in the world with respect to off-shore wind development. In 2009, Statoil ASA deployed the world's first full-scale, floating wind turbine off the coast of Norway and that turbine continues to operate today. Additionally, Statoil ASA committed to develop the 315 MW Sheringham Shoal (fixed-bottom) offshore wind farm in the UK and is one of four partners developing the Dogger Bank farm in the UK. We find this qualified experience and these activities, combined with Statoil ASA's financial resources described below, demonstrate that Statoil has the technical capability to develop, construct, and operate the Project.

We also find that Statoil, as a wholly owned subsidiary of Statoil ASA, has the financial capacity to develop, construct, and operate the Project. Statoil ASA is an international energy company, headquartered in Norway and majority owned by the Norwegian Government, with 20,000 employees and operations in 34 countries. Statoil ASA's current market capitalization exceeds $85 billion. Statoil ASA is rated Aa2 by Moody's and AA- by Standard & Poor's.

Although the Revised Term Sheet does not address decommissioning and removal of the Project, any commercial lease authorized by BOEM must contain provisions for decommissioning and site clearance procedures and requires the applicant to demonstrate the financial ability or post a surety bond to meet the estimated decommissioning costs. The final long-term contract, which must be approved by the Commission, will also include decommissioning and site clearance requirements. We find that the evidence in the record, combined with Statoil ASA's experience in the

[5] On December 19, 2012, BOEM issued a Notice of Determination of No Competitive Interest (DNCI) for Proposed Commercial Wind Lease Offshore Maine. BOEM will now proceed with the noncompetitive lease issuance process outlined at 30 CFR 585.231.

offshore oil and gas industry and its significant financial resources, establish that Statoil has the technical and financial capability to decommission and remove the project and will be required to do so by BOEM.

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c. Supplier has quantified the tangible economic benefits of the project to the State, including those regarding goods and services to be purchased and use of local suppliers, contractors and other professionals, during the proposed term of the contract.

As outlined in Statoil's comments filed on August 15, 2012, Statoil provided two separate analyses of the potential economic benefits to Maine, one produced by Dr. Charles Colgan of the University of Southern Maine using a set of econometric models of the Maine economy developed by Regional Economic Models Inc. (REMI) of Amherst, Massachusetts and maintained by the University of Southern Maine's Center for Business and Economic Research, and the other produced by the National Renewable Energy Laboratory (NREL) using a version of their Jobs and Economic Development Impact (JEDI) model.

Using the REMI model, Dr. Colgan estimates that the Project would result in $17.4 million in earnings and $23.1 million in economic output during the five-year construction phase and $1.8 million per year in earnings and $2 million per year in economic output during the subsequent 20-year operating phase. Dr. Colgan estimates that during the construction phase, the Project will create up to 292 jobs in Maine, 233 of which would be direct jobs, with another 59 induced jobs. During the operation phase, the Project is anticipated to create 30 new jobs annually in Maine, comprising 20 direct jobs and 10 indirect jobs. These estimates incorporate the assumption that the expenditures made by Statoil in Maine reach but do not exceed the level committed to by Statoil in the Revised Term Sheet of 40% of the capital investments and 40% of the operating expenditures. A higher level of spending by Statoil for the Project in Maine would generate higher economic benefits. Statoil's May 2nd proposal included an analysis by Dr. Colgan that assumed Project spending in Maine of 57% of capital expenditures. Based on this higher level of capital spending, Dr. Colgan estimated the Project would create up to 345 jobs during the construction phase.

The NREL JEDI model results, while confidential and preliminary due to the ongoing development of the JEDI model for offshore wind, affirm or exceed these quantified economic benefits. Statoil has also committed in the term sheet to partner with the University of Maine to use the Advanced Structures and Composite Center's (AEWC) capabilities in materials development and testing. Specifically, Statoil states that it has developed a technology development program with the University that began in June 2012 and will continue for the next five years with a quantified and specific amount of support. Statoil states that the University will have ten personnel involved in the collaboration including senior level researchers, technicians, and graduate students as well as five undergraduate students. Statoil has also committed to establish a mid-coast Maine facility for operations and maintenance with a Maine-based full-time

operations staff. The operations center will have facilities for offices, storage and workshops and function as the main operational base for the project.

Finally, under the Revised Term Sheet, Statoil has committed to use good faith, diligent efforts to award contracts to qualified Maine-based contractors and suppliers representing at least $100 million or 10% of capital expenditures (whichever is smaller) in a future Northeast Hywind park. This is a further quantification of economic benefits to Maine flowing from a future Statoil investment that is not reflected in the REMI or JEDI economic models.

Accordingly, we conclude that Statoil has quantified the tangible economic benefits of the Project to the State.

d. Supplier has experience relevant to tidal power or the offshore wind energy industry, as applicable, including, in the case of a deep-water offshore wind energy pilot project proposal, experience relevant to the construction and operation of floating wind turbines, and has the potential to construct a deep-water offshore wind energy project 100 megawatts or greater in capacity in the future to provide electric consumers in Maine with project-generated power at reduced rates.

We find that Statoil has the experience relevant to floating wind turbines to construct and operate the Project. Statoil ASA has more than 40 years of experience in offshore oil and gas and has developed extensive resources, engineering and purchasing competence, and a wide range of specialized technical disciplines. Statoil ASA resources, experience, and expertise from the offshore oil and gas industry are transferable to the development of the offshore wind sector. Additionally, as stated above, Statoil ASA is a global leader in the deep-water offshore wind industry, having been the first entity to deploy a full-scale floating offshore wind turbine in 2009. We also find that Statoil has the potential through economies of scale to construct a larger offshore wind project of greater than 100 MW at significantly lower cost per megawatt-hour relative to the pilot project that may provide consumers in Maine with project-generated power at reduced rates.

e. Supplier has demonstrated a commitment to invest in manufacturing facilities in Maine that are related to deep-water offshore wind energy or tidal energy, as applicable, including, but not limited to, component, turbine, blade, foundation or maintenance facilities.

We find that Statoil has demonstrated a commitment to invest in manufacturing and other facilities in the State of Maine. Statoil, unlike ORPC, which is further along in project development, has not yet invested in manufacturing or other facilities in Maine. However, we find that Statoil's numerous commitments outlined in

the non-pricing terms of the Revised Term Sheet demonstrate Statoil is committed to invest in the State of Maine on a going-forward basis. Under the terms of the Revised Term Sheet, Statoil has committed to locating the operations center for the Project in Maine, to implementing an extended supplier development process with the goal of maximizing the use of Maine-based suppliers and contractors on the Project, and to using good faith, diligent efforts to award contracts representing at least 10% of capital expenditures in a future Northeast park or $100 million (whichever is less) to qualified Maine-based suppliers and contractors.

Statoil's proposed term sheet contains an extended supplier development process which is designed to facilitate local suppliers and contractors providing goods and services during the construction and operation of the Project and which is designed and likely to result in investment in manufacturing facilities in Maine. One Statoil commitment is to prequalify and nominate Maine suppliers to allow them to bid to provide goods and services for the Project for all components in which local capabilities exist. A second Statoil commitment is to award contracts to Maine based contractors and suppliers who have provided a bid whenever a technically acceptable bid is present on commercially reasonable terms and at a cost that is not materially in excess of alternative goods or services. This commitment provides Maine suppliers with a modest advantage in winning subcontracts including for manufacturing facility work.

Statoil performed two construction studies in 2010 and three assembly studies in 2011 with potential Maine suppliers and an "Extended Supplier Development Program for Hywind Maine" is underway with Maine companies to assess Maine companies' abilities to undertake foundation and assembly, marine operations, metal fabrication and other contractor work on the project. Statoil has preliminarily concluded that Maine companies can construct the floating substructures, although specific suppliers must go through Statoil's prequalification, nomination and selection process before they can be considered to participate in the construction of the Hywind project.

In addition, the Revised Term Sheet includes a provision whereby Statoil is required to file with the Commission, prior to commencement of construction, a Pre-Construction Report documenting Statoil's performance in achieving the local economic benefits. If, in evaluating this report, the Commission determines that Statoil is not likely to achieve a significant portion of the economic benefits associated with capital expenditures, employment, local content, supplier development and research and development collaboration, the Commission may terminate the contract.

f. Supplier has taken advantage of all federal support for the project, including subsidies, tax incentives and grants, and incorporated those resources into its bid price.

Statoil has taken advantage of, and has committed in the Revised Term Sheet to continue to pursue, federal support for the Project. Statoil has been awarded a $4 million Department of Energy (DOE) grant to commercialize the Hywind technology

and intends to pursue further funding available through the Department of Energy Funding Opportunity Announcement Number DE-FOA-0000410. Statoil has assumed that it will receive a significant amount of DOE funding and has reflected this assumption in their projected contract revenues and the proposed Contract Price. The Revised Term Sheet provides that the Contract Price for Energy will be reduced to reflect a credit for any net grant proceeds acquired, beyond the DOE funding described above, unless: (i) Statoil proposes, and the Commission agrees to, an increase in the Project scope, or (ii) the current federal Income Tax Credit (ITC), which is assumed as part of the Project revenues, is materially adversely modified or otherwise unavailable with respect to the Project. In the event that the ITC is not extended or is materially changed, Statoil is entitled to retain any additional grant proceeds to the extent necessary to offset the loss of the economic benefits to Statoil associated with the ITC.

Accordingly, Statoil has sufficiently demonstrated that it has taken advantage of, and will continue to take advantage of, all available federal support for the Project, and has incorporated reasonably expected federal funding into its bid price.

2. Rate Impact Limitation

To explicitly limit the rate impact of the economic incentives provided for ocean energy demonstration projects, the Ocean Energy Act contains a rate impact limitation provision that requires that the Commission may not approve long-term contracts pursuant to the Act that would result in an increase in electric rates in any customer class that is greater than the amount of the assessment charged under Title 35-A, section 10110, subsection 4 at the time that the contracts are entered. The current assessment is $1.45 per MWh, which is assessed to customers taking service at distribution voltage and not to large industrial customers taking service at sub-transmission and transmission voltages

The Commission has analyzed the aggregate above-market costs of the ORPC and Statoil contracts by comparing the contract costs to the expected value of the energy they will provide under a range of potential future scenarios. Based on this analysis, we conclude that the Statoil contract, together with the previously authorized ORPC contract, are within the rate impact cap set forth in the Ocean Energy Act.

B. Economic Analysis

In approving of the Term Sheet, we also consider the likely benefits of the Project. The statute does not require that the economic benefits to Maine must equal or exceed the ratepayer costs, but the Ocean Energy Act gives the Commission discretion, to be exercised consistent with the articulated Legislative intent, to determine whether to direct the Utilities to enter into a long-term contract once all statutory criteria are satisfied, and we consider the relationship of the net benefits of the contract to the costs as an important factor in making that decision.

Based on the analysis described above, we estimate the present value (NPV) of the above-market costs of the Statoil long-term contract to range from $52 million to $76 million[6] or $190 million nominally. The Project will involve investment of just over $120 million initially in 2013-2016 to build the Project and then just over $4 million annually in operations and maintenance expenses for 20 years. The quantified economic benefits to Maine for the Project are estimated by Dr. Colgan to be $33 million (NPV) and $63 million (nominal) assuming that the expenditures made by Statoil in Maine reach but do not exceed the level committed to by Statoil of 40% of the capital investments and 40% of the operating expenditures. The quantified economic benefits estimated by Dr. Colgan assuming that Statoil spends 57% of capital expenditures in Maine would be $99 million nominal and $68 million on a present value basis.

The overall Project investment is estimated at $140-150 million dollars on a present value basis.[7] Statoil is financing the initial investment in the Project from its own funds and other sources including U.S. DOE grants. Measured on a present value basis, therefore, the above market costs to be paid by Maine ratepayers of $52-76 million will leverage as much as twice that amount in additional investment in the Maine Project. Payments under the Statoil contract would not begin until the Project is operational and would be made only when the Project is generating electricity. Thus, all of the permitting, development, construction and operational risk is borne by Statoil.

There are also intangible and un-quantified benefits that may occur in relation to the Project. First, Statoil's good faith commitment to utilize Maine suppliers in a future larger Northeast Wind Farm has the potential to bring economic benefits to the Maine economy beyond the scope of this pilot Project. While these benefits are not certain because Statoil may not develop a future park and not all Maine-based suppliers who want to participate in a larger park may be qualified, Statoil's commitment does represent a potentially significant additional benefit to the State.

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[6] The present value of the cost to Maine ratepayers of the above market subsidy ranges from $52 million to $76 million in 2012 dollars. Commission Staff calculated a range of present values based on four different scenarios of future energy prices using discount rates of 10% and 7%; $52 to $76 million represented the range across the future scenarios and discount rates. While the Commission has traditionally used a 10% discount rate to evaluate cash-flows from long-term contracts, we note that the private equity markets would currently demand a rate of return closer to 20% for this level of risk. Given the Commission's history, we use 7% as a lower bound of the midrange and 10 % as an upper bound of the midrange for purposes of consistency.

[7] The overall Project investment includes the present value of Statoil's capital expenditures to construct the Project, the bulk of which occur prior to 2016 exceed $100 million and the present value of funds spent on operations and maintenance over the life of the Project, projected at $40 million to $50 million.

Second, there are intellectual and labor force development benefits that flow from Statoil's construction of the Project in Maine. These benefits include the knowledge generation from technological development, especially the knowledge that may be created through the collaboration between Statoil and the University, the training of an expert workforce associated with the various aspects of off-shore wind park development and its associated technological developments, and the experience gained by Maine-based businesses from their participation in the Project.[8] The experience Maine businesses likely will be useful in other marine or energy projects anywhere in the world but primarily on U.S. East Coast.

Finally, there is an unquantifiable, but nevertheless important, economic value associated with establishing Maine on the forefront of offshore wind development. This Project is the kind of investment contemplated by the Ocean Energy Act as the foundation for building a strong offshore wind industry in Maine. In addition, projects such as this establish Maine as a center for cutting edge development of this emerging technology and may capture the imagination and generate excitement among a new generation of talented professionals attracted to Maine. Retaining this young talent in Maine could only have a positive effect on Maine's demographic and economic future.

We find that there is a reasonable possibility that, with support from the federal programs supporting offshore development or programs in other states supporting such development, Statoil could develop a large park. University of Maine Professor Todd Gabe performed an analysis of the benefits of a 500 MW floating offshore wind farm in the Gulf of Maine. Professor Gabe's analysis indicates that state-wide economic output would increase by $270 - 460 million annually for five years of planning and construction and then by $115-145 million annually during a 20 year operational phase. Professor Gabe estimates the 500 MW project would support 2,200 to 3,200 direct and indirect jobs during construction and 550 to 880 direct and indirect jobs during operations. The Revised Term Sheet allows Maine to recapture some of the benefit from a large park developed anywhere from Maine to Maryland.

In sum, depending on the level of expenditures made in Maine that Statoil is able to achieve, direct quantified economic benefits from the pilot project as estimated by Dr. Colgan would range from $63 million to $99 million nominal and from $33 million to $68 million on a present value basis with 292 construction phase jobs and 30 operational jobs assuming Statoil reaches but does not exceed the 40% commitment level. Investments in Maine's knowledge base, commercial and labor expertise for work on offshore floating platforms and advanced wind and composites technologies may be

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[8] The field of economics has recognized that long-term economic growth depends more upon knowledge creation than it does on labor (e.g. job creation) or capital (e.g. lower electricity costs). The commitments in the term sheet for Statoil to develop Maine-based suppliers and to facilitate a collaborative relationship between Statoil, the University of Maine, and private companies and individuals will result in "knowledge creation benefits" from the development of the Hywind Pilot Project accruing in Maine.

perhaps the most significant economic benefits. Based upon all of these factors, we find that there is tangible economic benefit from the Project and additional potentially significant intangible economic benefit that weighs in favor of approving the proposed Revised Term Sheet. Although we recognize that there is an inherent risk in approving the proposal in that Maine may not see all of the economic benefit that is promised, that is a risk that the Legislature was aware of when it passed the Ocean Energy Act and approved the use of ratepayer money for the purpose of facilitating the development and operation of offshore wind power and tidal power projects. In light of the Act and the proposal before us, it is a reasonable risk to take to achieve the potential benefits that are the goal of the Act. Accordingly, we approve the proposed Revised Term Sheet subject to the conditions and modifications discussed below.

C. Other Matters and Commenter Issues

Several other issues are raised by the review of the Revised Term Sheet. These are discussed below.

1. Contract Allocation and Rate Impact Limitation

In their comments, BHE and MPS express concern that the Term Sheet calls for the allocation of the Long-Term Contract to all of Maine's Investor Owned Utilities despite the allocation of the ORPC contract entirely to BHE and MPS ratepayers. We agree with BHE and MPS that they should not participate in this Long-Term Contract, and thus find that this Long-Term Contract will be between Statoil and CMP only.

While our analysis indicates that the Statoil contract will not likely violate the statutory rate impact limitation, the contract should include a provision to address this risk. We leave it to the Commission Staff, CMP and Statoil to determine the mechanism, whether it be through the method used in the ORPC long-term contract as a default or through another method if mutually agreed upon.

2. Contract Products and Structure

The current Revised Term Sheet contemplates that capacity will be included in the long-term contract as a pass through, such that any value associated with the capacity from the project will be passed directly to Statoil. CMP expresses a preference that capacity not be included in the contract because it does not provide any value to CMP or its customers but presents a performance risk for CMP. CMP states that it would be more straight forward and administratively easier for capacity to be excluded.

We conclude that there should be a capacity term in the contract, as the Ocean Energy Act allows the Commission to direct utilities to contract for the "installed capacity and *associated* renewable energy and renewable energy credits of deep-water offshore wind energy pilot projects." However, we do not expect CMP to

have any significant role or exposure to risk in matters related to qualifying or bidding the capacity in the ISO-NE market, and direct that the contractual terms regarding capacity ensure that result.

CMP expresses concern that a 3 year period to make up delivery shortfalls is too long. We disagree and find that the 3 year period to make up shortfall deliveries, as outlined in the Term Sheet, is acceptable in this instance.

3. Future Grants

CMP expresses concern that the mechanism of how any future grants will be applied to reducing the costs of the contract is not specified in the Term Sheet. This matter will be addressed during the development of the Long-Term Contract.

4. Enforcement Responsibility

CMP prefers that the non-pricing terms not be included in the contract, because it should not be its responsibility to monitor and enforce the non-pricing term provisions.

We understand CMP's concern in this regard. We do not expect CMP to have significant responsibilities regarding the enforcement of the non-pricing terms. However, we conclude that the non-pricing terms should be included in the contract as there is a provision allowing the Commission to terminate the contract in the event that Statoil is not likely to achieve a significant portion of the economic benefits set forth in the Revised Term Sheet. The specific details of the enforcement responsibilities of the parties and the Commission will be a subject during contract negotiations.

5. Obligation to Perform and Performance Assurance

CMP points out that the Term Sheet is silent on Statoil's obligation to perform, as well as the level and need for financial assurance. Statoil's obligation to perform will be specified in the contract. The Long-Term Contract shall include adequate financial assurance consistent with the requirements of the RFP to secure that obligation. Because the pricing in the contract is above-market, performance assurance would primarily be to secure Statoil's non-pricing obligations.

6. Termination Rights

Under the terms of the Revised Term Sheet, Statoil has the right to terminate the long-term contract if, prior to January 1, 2015: (a) Statoil is unable to obtain all necessary State and Federal permits; (b) the investment tax credit or any DOE support which may have been awarded to Statoil to develop the Project is adversely modified; or (c) the Project fails to obtain the necessary internal Statoil

approvals. While we do not alter this termination provision, our approval is conditioned upon a provision in the contract that requires Statoil to elect or waive its termination right within 90 calendar days of being notified of an adverse DOE funding decision with respect to the Project. To the extent that there are multiple funding decisions, Statoil shall give an indication of intent to terminate or waive the termination right as to that event. We leave it to the Commission Staff to determine the best structure to implement this requirement.

7. Reporting Requirements

In addition to the reporting requirements in the Term Sheet, we add a requirement that six months after contract execution and every six months thereafter until commencement of construction, Statoil North America and its parent Statoil ASA indicate to the Commission in writing, their intent to move forward with the Project and provide updates on planning, engineering, and pre-construction activities.

8. Commercial Operations Deadline

Pursuant to the Ocean Energy Act, we require that the Project be constructed and operating within five (5) years of the date the contract is finalized, unless the Commission and Statoil agree to a longer period..

9. Maintenance of Status During Operation

In its comments, the IECG claims that the Revised Term Sheet violates federal law because it attempts to regulate the price for wholesale purchases of energy and is therefore preempted by FERC's jurisdiction under the Public Utilities Regulatory Policies Act (PURPA) or the Federal Power Act (FPA). While we do not believe that IECG's claim is ripe for determination, we do not view our actions as usurping any applicable FERC jurisdiction. To that end, to the extent necessary, we require that Statoil maintain the Facility's status as an exempt wholesale generator at all times after the Commercial Operations Date and shall obtain and maintain, as necessary, any requisite authority to sell the output, including capacity, of the Facility at market-based rates or an exemption from the requirement that it have such authority.

10. Decommissioning

We require the Long-Term Contract to include a provision that indicates that Statoil will comply with directives from any applicable State or Federal agency to decommission the Project consistent with the Ocean Energy Act. In the unlikely event the neither State nor Federal agencies specify decommissioning requirements, the Contract will contain a backup decommissioning requirement.

11. Educational Training

We require Statoil to use commercially reasonable efforts to develop and implement a training program or other training opportunities to benefit the students of Maine academic or technical institutions, colleges, and universities.

12. Future Offshore Wind Development

Statoil proposes to inform the Commission of key aspects of a business case for a large, commercial park in the Gulf of Maine based on floating technology. This information would be useful and we, therefore, condition our approval of the Revised Term Sheet on Statoil's agreement to develop and submit, prior to December 1, 2015, a business case for the development and construction of an offshore wind farm no less than 100 MW in the Gulf of Maine and using Maine qualified suppliers and to provide updates of the business case or plan every two years until the Contract terminates.

In addition, we require that the economic benefit language in the Long-Term Contract contain a modification that would eliminate the ability of local content requirements in another jurisdiction to obviate the good faith requirement to award contracts representing 10% of future park capital expenditures (or $100 million) to Maine-based contractors and suppliers. Maine companies and research institutions will play a significant role in Statoil establishing its renewable energy pilot project in the United States and Maine ratepayers will make a significant commitment to support the Project. While this 10% or $100 million commitment to pursue Maine content on another U.S. East Coast ocean wind project is a good faith requirement only, we expect that Statoil will use good faith efforts to involve qualified Maine companies and research institutions in other ocean energy projects whether in the Gulf of Maine or elsewhere. We direct that any additional language that would provide a further obstacle to Maine receiving this additional benefit be excluded from the Contract. In connection with any future offshore wind development undertaken by Statoil, regardless of the location of the development, we require Statoil to invite any as yet unqualified Maine suppliers to pre-qualify and to nominate Maine based suppliers and contractors that were previously pre-qualified as part of the pilot Project in the contractor and sub-contractor selection processes for the future park.

13. Technology

To afford Statoil flexibility in developing its Project and to allow for changes or development in technology that may occur after the issuance of this Order, we direct Staff and Statoil to include in the long-term contract a clarification that the commitments and obligations under the long-term contract with respect to both the Project itself and to the future, large park commitment, apply to the Hywind technology, as well as to and any other similar or derivative technology should Statoil elect to utilize other similar or derivative technology in this Project which election will be solely within Statoil's discretion under the Contact.

Accordingly, we

ORDER

1. That the initial contract provisions contained in the Revised Term Sheet, as amended in this Order, are approved, for negotiation of the final Long-Term Contract with Statoil;

2. Delegate negotiation of the Long-Term Contract to Staff consistent with this Order; and,

3. That Central Maine Power Co. actively participate in good faith in the Long-Term Contract negotiations between Staff and Statoil.

Dated at Hallowell, Maine, this 26th day of February, 2013.

BY ORDER OF THE COMMISSION

/s/ Nancy Goodwin
Nancy Goodwin
Acting Administrative Director

COMMISSIONERS VOTING FOR: Welch
Littell

COMMISSIONERS VOTING AGAINST: Vannoy

Dissent of Commissioner Vannoy

I respectfully dissent from the majority decision approving the Statoil N.A. Hywind Maine term sheet. The authorizing statute, the Ocean Energy Act,[1] is an economic development statute that seeks to subsidize the development of ocean energy electricity generation technologies. The goal of the Act is to spur research and development that is complimentary with Maine's marine resources and that could lead, ultimately, to the development of a large-scale project that can "provide electric consumers in the State with project-generated power at reduced rates."[2]

There are significant sources of potential energy in the world's ocean, including tidal and wind energy resources. The ocean engineering community has worked for many years on a variety of ocean energy conversion technologies. The commercial development of these ocean energy conversion technologies is not a question of whether or not they are technically feasible, but rather, whether or not they are financially viable. This is a key question that a pilot project should seek to answer.

The Ocean Energy Act clearly allows for a subsidy, but at the same time it leaves to the Commission the responsibility of negotiating a prudent contract that meets the statutory terms, achieves the economic development goals, and advances the potential of a large offshore wind farm. A good contract assigns risk and compensates parties for the risk they assume. The issue before the Commission with respect to the term sheet can be reduced to answering the question as to whether the risk undertaken by Statoil N.A. is commensurate with the above-market subsidy it will receive under the term sheet. Statoil N.A. is the entity that should assume the risk inherent in demonstrating that the proposed pilot farm will advance the technology of the proven Hywind concept to a point where it is economically viable at a large scale. However, rather than encouraging Statoil N.A. to take on this risk to advance to an economically viable commercial technology, the term sheet compensates Statoil, at roughly seven times the current wholesale market rate, for what amounts to merely a conservative reproduction of the Hywind concept.

Statoil N.A. Development Risk

I will briefly outline the risk to Statoil N.A. in the development of this project. The primary risk to Statoil N.A. in the structure of the term sheet is that of the upfront capital to build the project. The primary area of risk in getting the project built, which is outside of Statoil N.A.'s control, is that of permitting. The term sheet mitigates this risk by allowing Statoil N.A. to opt out of the project at any stage prior to December 31, 2015. This allows Statoil N.A. to limit its capital expenditures until all of the external risks are resolved. With those external risks resolved the company can go to

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[1] An Act to Implement the Recommendations of the Governor's Ocean Energy Task Force, P.L. 2009, Ch. 615 (L.D. 1810).

[2] Ocean Energy Act, P.L. 2009, Ch. 615, § A-6.1.D

construction and, with sound project management, can quickly construct the project and move to commercial operation of the pilot project. Upon reaching the commercial operation milestone, Maine ratepayer costs will begin to accrue.

Statoil N.A. argues that there is substantial risk in developing a new supply chain in Maine. The term sheet mitigates this risk by capping Statoil N.A.'s capital expenditure and operations and maintenance expenditure commitments to 40% Maine content and further limiting those commitments by requiring that Statoil N.A. use "commercially reasonable efforts" to satisfy its commitment. The "commercially reasonable efforts" clause will make it very difficult for the Commission to enforce Maine content requirements. Regardless, well respected Maine marine contractors and experienced terrestrial wind contractors will ensure that Statoil N.A. has very little difficulty in developing a new supply chain in Maine.

Maine Ratepayer Risk

There are no real risks to ratepayers in the project development phase of the project. The ratepayer costs do not flow until the project reaches the commercial operation phase and Statoil N.A. starts receiving payment for the electricity that the pilot project produces. At that point, based on the amount of power produced, the above-market payments begin to flow at roughly $9.5 Million a year for twenty years.

Maine Benefits

In its non-pricing terms, Statoil N.A. outlines "Statoil Ambitions" and several tangible economic benefits. These benefits include: significant construction jobs (150 direct jobs) during the peak construction period of the project; 20-25 consultant and attorney jobs during the pre-Financial Investment Decision phase of the Project, siting and staffing a full time operations center in Maine; developing a research and development collaboration with the University of Maine; and, if a large farm is built before 2025 on the Northeast coast utilizing the Hywind technology, a commitment to undertake "good faith, diligent efforts" to include Maine content of 10% of capital expenditures or $100 million (whichever is less) in the large farm construction. None of these tangible benefits are secure. Instead, the enforceability of these commitments is eroded by the definition and process associated with the term "commercially reasonable efforts."

In its majority decision, the Commission agrees with Statoil N.A., and most commenters filing in support of the project, that the real benefit to the State of Maine lies in the potential of a future large scale offshore wind farm somewhere on the East coast. In Statoil N.A.'s filings they point to the goals of the Ocean Energy Act, that by 2020 Maine will realize 300 MW of build-out of generation located in coastal waters, and by 2030, 5000 MW of build-out. Statoil N.A. couples these goals with the Maine Offshore

Wind Report which Statoil characterizes as indicating that such a build-out will attract $20 billion in private investment.[1]

Large Scale Park Economic Viability

For an industry to be sustainable it will have to produce a product at grid parity. Private capital is risk averse and is not interested in reasonable financing rates for projects that depend on government support that may or may not be available or sustainable. If the cost-curve of this technology is not brought down to grid parity by 2020 any difference (above-market prices) is multiplied by significantly higher production capacities making the project untenable. To illustrate this, if one assumes a 500 MW wind farm in 2020, for every penny above market rates, the wind farm will cost Maine ratepayers $17.1 million annually (assuming a 39% capacity factor).

The pilot project term sheet has a starting price of $270/MWh ($0.27/kWh). Under the term sheet, the power produced by the project is sold into the ISO-NE wholesale electricity market. The difference between wholesale market prices for the power produced, at the time of production, and the term sheet price constitutes the above-market subsidy. The average wholesale price in the ISO-NE Market for 2012 was $36.09/MWh ($0.036/KWh), 7.5 times less than the starting contract price for energy contained in the term sheet. While it is true that the average wholesale price in the ISO-NE market is currently extremely low and is likely to rise, the disparity between the price for electricity in the term sheet and the current wholesale market price is significant. Indeed, the difference between Statoil's unsubstantiated goal of achieving a price point of between $0.10-0.15/kWh is a multiple of 3-4 times the current wholesale market rates. Quite simply, if Statoil N.A.'s technology does not break the cost-curve,[2] the future investment upon which the majority in part bases its decision simply will not materialize. Moreover, it will be Maine ratepayers, and not private investors, who will bear the burden in the event that the cost-curve is not broken and a large offshore wind farm is nevertheless constructed.[3]

The United Kingdom has developed significant offshore wind farms and is on the way to developing what might be called a mature industry. The Crown Estates issued its Offshore Wind Cost Reduction Pathways Study because, despite the billions of dollars being spent, they were actually seeing cost escalations rather than seeing

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[1] Statoil Comments on Term Sheet, August 15, 2012, Docket No. 2012-235, page 1.

[2] Technology that breaks the cost curve is referred to as "destructive technology."

[3] These numbers grow much larger at the 2030 goal of 5000 MW, for every penny above market this would be $170.8 Million at a 39% capacity factor.

cost reductions.[1] The study highlights the United Kingdom's goal of £100/MWh by 2020, which is roughly $0.16/kWh. This report demonstrates how difficult it will be to realize Statoil's goal of a price point of $0.10/kWh by 2020. The study also identifies a number of pathways to drive down price. Among these pathways two key concepts are discussed: building at scale, and market maturation. Statoil N.A.'s price point goal of $0.10/kWh is predicated on both building at scale and a mature market. It is important to understand that these concepts are distinct. The development of a mature market will take numerous large scale farms developed over several decades to ensure the volume of throughput necessary to develop competitive manufacturing facilities. It is through these competitive manufacturers that a "mature market" begins to yield the price efficiencies that Statoil N.A. is relying on to meet a $0.10/kWh price point by 2020. If the United Kingdom has not achieved a mature market despite billions in public investment, how difficult will it be to achieve a "mature market" in New England?

The purpose of a pilot project is to demonstrate a technology at a small scale and test out advances that will make it practical for a larger scale. Statoil N.A. developed and tested the Hywind concept as a single turbine off the coast of Norway. This Hywind concept from a technical standpoint proved very effective. Statoil N.A. states that "The Hywind concept is based upon recognized work methods and equipment from both the marine and oil and gas industries."[2] There is merit in this as the oil and gas industry has a wealth of experience in working in the offshore marine environment. But this leads to a significant question for the industry, based on the more extensive data in the United Kingdom, where the current cost-curve for offshore wind is escalating. What type of destructive technology is necessary to break the cost-curve and, to the point here, is the Statoil Hywind approach a destructive technology? The projects in the United Kingdom to date have been in shallow water using traditional template platforms and jack-up barges. Some would argue that a floating structure is a destructive technology. To a certain degree this is true, it does eliminate the need for jack-up barges, but it does not go far enough. The offshore wind industry and in particular Statoil N.A.'s current proposal, which utilizes a deep draft spar buoy, continues to rely on expensive oil and gas industry equipment for installations. The pilot project before us does not propose any significant changes in construction methodologies that would eliminate deep water assembly and in turn bring the cost-curve down.

This is where the question of Statoil N.A.'s risk enters back into the discussion. Statoil N.A. is suggesting only a conservative increase of its Hywind technology, from the 2.3 MW unit that has already been installed in Norway to the 3 MW

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[1] The Crown Estate "Offshore Wind Cost Reduction Pathways Study," May 2012, page 1 (located at the following link: http://www.thecrownestate.co.uk/media/305094/Offshore%20wind%20cost%20reduction%20pathways%20study.pdf).

[2] Statoil Comments on Term Sheet, August 15, 2012, Docket 2010-235, Attachment 3, Section 3.

units in Maine. In addition, the Company has proposed modifications to the spar buoy structure allowing for some ballasting and de-ballasting due to the relatively shallow depths of Penobscot Bay (in comparison to Norwegian fjords). However, this minimal, and marginal, improvement will not fundamentally change the cost-curve.

There are a number of things that Statoil N.A. could have proposed that would have brought its risk into a more commensurate relationship with its compensation, thereby appreciably impacting the cost-curve. For instance, Statoil N.A. might have maximized generator size per floating structure. Of the recent seven Department of Energy grant winners for offshore wind projects, five have proposed turbines in the 5-6 MW range. In addition, Statoil N.A. might have proposed modifications to the Hywind design that would allow for cost savings in construction methods (for example, a land based assembly process), thereby avoiding the more costly equipment and rates associated with marine work. Further, although the minor modifications to the spar buoy design allows for some ballasting and de-ballasting and thus adds a degree of flexibility to the spar buoy design, it does not truly remedy the issue regarding flexibility and draft. The spar buoy is approximately 100 meters (328 ft.) in length, requiring a draft for erection of the tower and turbine on the order of 300 ft. Clearly this cannot be achieved pier-side in Maine (in contrast to the deep fjords of Norway) and will therefore require costly special equipment and processes.[1]

The Statoil N.A. term sheet falls short in the area of significant advancement beyond the Hywind prototype that demonstrates that the Hywind approach holds the promise of commercial viability through future expansion from a pilot to a full scale farm. Again the ocean engineering world has been working on various ocean energy transformation technologies for many years and has proven that the technologies are not limited by their technical feasibility, but rather by their economic viability.

Another gauge of this project is to consider the “all-in” levelized cost of electricity. This analytical approach calls for consideration of the total lifetime costs of the technology. In this case this would include, the power purchase agreement, the sale of renewable energy credits, the sale of capacity, federal grants, the Investment Tax Credit, and the application of a discount rate to establish a present value. The result is a levelized cost of electricity which can be used to compare different technologies that may receive different levels of state and federal support. This approach does have some limitations because it does not account for the technologies production ramp up rates, or intermittency which might have a significant effect on a developer’s view of financial viability. But, for comparison’s sake, Statoil N.A.’s Hywind

[1] The offshore oil industry has relied on three different floating structures which include the spar buoy, the tension leg platform (TLP), and the semisubmersible platform. The offshore wind industry has adopted these proven platform designs. While Statoil N.A.’s proposal is a spar buoy platform, the University of Maine, funded by the DOE is pursuing a semi-submersible platform, and Glosten Associates, also funded by the DOE, is pursuing a TLP.

project's levelized cost of electricity is in the range of 4-6 times that of a combined cycle gas turbine.[1]

In interpreting the Statute and its goals, which are primarily geared towards economic development, a balance must be sought between cost, the assignment of risk, and tangible economic benefits. Simply put, the economic development prospects of this term sheet depend on the future economic viability of a large scale park. Statoil N.A. does not undertake the development risks necessary to achieve a future large park that is economically viable. Nor does it ensure that the potential economic benefits of the pilot project are concrete, enforceable, or commensurate with a levelized cost of electricity that is 4-6 times the market rate. For these reasons, I would reject the term sheet.

[1] Unfortunately in this case, Statoil N.A. considers the levelized cost figures to be confidential. In my view, it would be valuable for all policy-makers to understand the total costs of this project, and I therefore encourage Statoil N.A. to be transparent in this regard. As an example, while Statoil N.A. has released its estimate of Capital Expenditure for the pilot project ($120 million). This figure, which is but a small portion of the total cost of the project, does not begin to approach the sum of the various revenue streams and tax incentives.

NOTICE OF RIGHTS TO REVIEW OR APPEAL

5 M.R.S.A. § 9061 requires the Public Utilities Commission to give each party to an adjudicatory proceeding written notice of the party's rights to review or appeal of its decision made at the conclusion of the adjudicatory proceeding. The methods of review or appeal of PUC decisions at the conclusion of an adjudicatory proceeding are as follows:

1. Reconsideration of the Commission's Order may be requested under Section 1004 of the Commission's Rules of Practice and Procedure (65-407 C.M.R.110) within 20 days of the date of the Order by filing a petition with the Commission stating the grounds upon which reconsideration is sought.

2. Appeal of a final decision of the Commission may be taken to the Law Court by filing, within 21 days of the date of the Order, a Notice of Appeal with the Administrative Director of the Commission, pursuant to 35-A M.R.S.A. § 1320(1)-(4) and the Maine Rules of Appellate Procedure.

3. Additional court review of constitutional issues or issues involving the justness or reasonableness of rates may be had by the filing of an appeal with the Law Court, pursuant to 35-A M.R.S.A. § 1320(5).

Note: The attachment of this Notice to a document does not indicate the Commission's view that the particular document may be subject to review or appeal. Similarly, the failure of the Commission to attach a copy of this Notice to a document does not indicate the Commission's view that the document is not subject to review or appeal.