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Mr. Harry Lanphear
Administrative Director
Maine Public Utilities Commission
State House Station 18
Augusta, Maine 04333-018

Re: Maine Aqua Ventus I GP LLC Bid Proposal in response to Supplemental Request for Proposals for Long-term Contracts for Deep-Water Offshore Wind Energy Pilot Projects
MPUC Docket No. 2010-235

Dear Harry:

Maine Aqua Ventus I GP LLC (MAV), a collaboration of several entities with deep roots in Maine, is pleased to file a proposed Term Sheet for MAV's Pilot 12 MW Deepwater Offshore Wind Project to be located in the Gulf of Maine. We have also attached supporting materials, including a study by Dr. Todd Gabe of the economic impact of the MAV Pilot Project, as well as his analysis of the potential economic impact of a larger commercial scale project in the Gulf of Maine, should the Pilot Project prove successful.

The Pilot Project and the Proposed Power Purchase Agreement

In its August 30, 2013 Bid Proposal, MAV proposed to construct a 12 MW Pilot Project south of Monhegan Island and to execute a long-term contract for the purchase of power from the Project, as provided by Maine's Ocean Energy Act. The Project is also a finalist for $46.6 MM in additional federal funding from the U.S. Department of Energy ("DOE") that will be awarded by mid-2014. Together, the long-term contract and the DOE funding will assist the Project in securing financing for its capital expenditure which is estimated between $120-$166.7 MM. The $166.7 MM capital expenditure estimate is based on the Project's 30% design milestone. Further engineering and design are continuing, as the DOE requires a 50% design milestone by the time of final project submission on February 15, 2014. In addition to the two 6 MW floating turbines, key project elements include necessary assembly and electrical transmission facilities.

Perhaps more significantly, if this small Pilot Project proves successful, MAV is committed to pursue the development of an offshore wind industry in Maine. The

foundation of the Project is the patent-pending VolturnUS floating turbine technology. The University of Maine has already demonstrated the viability of this technology at the 1:50 scale in a wave basin, and at the 1:8 scale off Castine, Maine. The Project will now demonstrate the VoltunUS technology at full-scale using 6 MW turbines, as a necessary precursor to commercial production and building an industry in Maine. The VolturnUS provides a paradigm-shift in offshore wind construction through the use of advanced concrete and composite materials, which are designed to reduce cost, allow local production, and extend hull and tower life to significantly beyond today's typical offshore wind project life of 20 years. The new technology has been designed to allow dock-side fabrication and assembly of the hull, tower and turbine, so that the entire assembled VolturnUS unit can be towed out to sea and moored offshore. This eliminates the need for the more expensive heavy offshore construction and assembly vessels used in other offshore wind proposals.

The attached draft Term Sheet, the result of discussions between MAV and Commission Staff, provides the proposed terms of the power purchase agreement, as well as significant local benefit obligations to be provided by MAV to the State of Maine. The Project will provide its electrical generation, an expected 43,099 MWh annually, at a price of $230/MWh, for 20 years. This price shall escalate 2.25% annually.

Local Benefit Commitments

In exchange for the long-term contract, MAV has made significant commitments to Maine that are contained within the proposed Term Sheet. These commitments include:

- A minimum of $120 million of investment in this project that may rise to as much as $166.7 million depending on the project's further engineering and design.

- At least 50% of this investment will be paid to Maine-based entities. Without considering the cost of the 6 MW turbines (which are not manufactured in Maine, or anywhere else in the United States), this represents 70% of the non-turbine capital expenditures being paid to Maine-based entities.

- A project-wide preference for hiring Maine-based entities, consistent with state and federal law, with the goal of maximizing local suppliers and contractors providing goods and services during construction and operation of the Project.

- The development of a unique science, mathematics and technology curriculum connected to the MAV project to be provided to Maine public high schools, as well as collaborating with Maine's public higher education institutions to develop programs to educate and train undergraduate and graduate degree students in related science, engineering, and business fields.

- The connection of Monhegan Island to the electric grid for the first time. The provision of electric energy to the Monhegan Island Plantation Power District for

the entire duration of the Contract Term without charge, in an annual amount not to exceed 340 megawatt hours, escalating at one percent per year. MAV will pay the commercially reasonable costs and installation of all interconnection to fulfill this commitment. It will also connect the island to the mainland by fiber optic cable allowing increased internet access speed on the island.

- A commitment to spend at least $7 million on R&D, design engineering, and environmental monitoring provided by the University of Maine, its faculty and its students.

- If the Project is successful, and if a commercial-scale phase is proposed by MAV or its successor, MAV has committed to build such a commercial scale wind park in the Gulf of Maine and to contract for at least 50% of the capital expenditures of the commercial scale park with Maine-based entities. In addition, if the commercial scale park is undertaken, MAV has committed to work with the State of Maine and other Maine-based entities to attract a wind turbine manufacturer to Maine.

According to the Economic Impact Report, prepared by Dr. Todd Gabe and attached here for public review, the Pilot Project is expected to provide substantial economic benefit through employment and spending during the pre-construction, construction and operations phases of the project. Dr. Gabe's analysis is based on a well-regarded IMPLAN econometric model and his extensive experience measuring the economic impact of projects in Maine. The Economic Impact Report concludes that including multiplier effects, the planning and construction of the 12 MW MAV Pilot Project would have an annual economic impact, for the three years of the construction period, of an estimated $37.4 million to $51.9 million in output, 341 to 475 full- and part-time jobs, and $13.6 million to $18.9 million in labor income. The Report further concludes that ongoing operations and maintenance of the 12 MW MAV Pilot Project would have an annual economic impact, including multiplier effects, of an estimated $1.9 million in output, 14 full- and part-time jobs, and $625,741 in labor income.

The Economic Impact Report also assessed the potential economic benefit of a commercial scale wind farm in the Gulf of Maine, assuming the Pilot Project is successful. The Report found that the planning and construction of a potential 500 MW project using the VolturnUS technology would have an annual economic impact, for the five years of the construction period, of an estimated $338.0 million in output, 3,077 full- and part-time jobs, and $123.1 million in labor income. If the turbines used in the 500 MW offshore wind power installation were assembled in Maine, the annual statewide economic impact would increase to an estimated $791.1 million in output, 4,663 full- and part-time jobs, and $229.6 million in labor income. The ongoing operations of such a commercial scale project, assuming the production of about 17 VolturnUS platforms & towers per year, would have an annual statewide economic impact, including multiplier effects, of an estimated $240.4 million in output, 1,602 full- and part-time jobs, and $72.6 million in labor income

Compliance with the Ocean Energy Act Requirements

The Ocean Energy Act, P.L. 2010 Chapter 615, requires that the Commission find that any supplier proposing a long-term contract under the Act[1]:

A. Proposes sale of renewable energy produced by a deep-water offshore wind energy pilot project or a tidal energy demonstration project, referred to in this section as "the project;"

MAV has proposed the sale of electricity generated from the Project, which has been legislatively determined to be a deep-water offshore wind energy project.

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;

MAV's partners include two world-class businesses—Cianbro and Emera—with extensive experience in project development, engineering, design and operation for projects related to renewable energy and ocean settings. Based on extended discussions with numerous renewable energy investment advisers around the world, MAV believes that the Project will be project-financed, as are most other renewable energy projects. The strong balance sheets of the MAV private partners will be an advantage in structuring and securing final project financing. The University of Maine, through its spin-off, Maine Prime Technologies LLC, offers grant application and administration experience, as well as design, research, development, testing and environmental monitoring expertise for deep-water offshore wind. The University and its two partners, along with over twenty-five partnering organizations in its DeepCwind Consortium, has successfully designed, constructed, deployed and operated the first grid-connected offshore wind turbine in the country off Castine, Maine. So far, this 1:8 scale prototype has performed extremely well. Even when faced with 100-year return period events, the prototype's perofrmance is in line with modeling predictions. The proposed Term Sheet provides that MAV shall ensure decommissioning in accordance with the statute.

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;

MAV's Bid Proposal, proposed Term Sheet, Economic Impact Report and other submissions together provide extensive quantification of the

[1] P.L. 2010 Chapter 615 Section A-6, Paragraph 1.A-F.

economic benefits of the Project, which are summarized in the previous "Local Benefits Section".

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 the State with project-generated power at reduced rates;

MAV, through its partners, especially its research leader, the University of Maine, has demonstrated unique expertise regarding the design, manufacture, and deployment of the VolturnUS project, a 1/8th scale demonstration project of the technology to be used for the Project. MAV's other partners have substantial large-scale development and construction experience, both in renewable energy as well as maritime projects that are described in the Bid Proposal. MAV's proposed technology has significant potential for cost reduction at commercial scale.

E. Has demonstrated a commitment to invest in manufacturing facilities in the State 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

MAV has demonstrated its commitment to the State of Maine through its comprehensive local benefit commitments discussed above; including spending greater than 50% of all capital expenditures with Maine-based entities. In addition, if the commercial scale project is pursued by MAV or its successors, MAV has committed to (1) locate it in the Gulf of Maine, (2) locate hull and tower manufacturing and assembly facilities in Maine, (3) spend more than 50% of the capital expenditures for the commercial scale project on Maine-based entities and (4) work with the State of Maine to attract a turbine manufacturer to the state.

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.

MAV has utilized prior federal grants to support the design, engineering, and permitting phase of the Project. In addition, MAV has committed to, if successful, use the proceeds of the next phase of DOE financial support for the project, as well as existing federal tax incentives and to seek other federal financial support for the Project.

In addition, the Ocean Energy Act, as amended, requires the following:

The commission may not approve any long-term contract under this section that would result in an increase in electric rates in any customer class that is greater than $1.45 per megawatt hour[2].

The proposed Term Sheet provides a mechanism for ensuring compliance with this requirement, with a true-up at the end of the contract term.

Any contract entered into pursuant to this section must require that the deep-water offshore wind energy pilot project or tidal energy demonstration project, as appropriate, be constructed and operating within 5 years of the date the contract is finalized, unless the commission and project developer mutually agree to a longer time period[3].

The proposed Term Sheet requires operation within 5 years and provides for contract termination in the event that the deadline is not met.

The Promise and Potential of Maine Aqua Ventus I

Maine Aqua Ventus I is proceeding well through design engineering and is receiving significant national recognition. The currently-deployed 1/8th scale VolturnUS floating windpower project off of Castine has been grid connected and successfully operating since early June 2013. Particularly, the month of November has seen a storm equivalent to 100-year return period event relative to the 1:8 scale. Through over sixty sensors reporting on operational performance, the scale VolturnUS has proven the accuracy of the modeling, design and construction techniques that are at the heart of the larger scale Maine Aqua Ventus I Pilot Project.

Maine Aqua Ventus I is poised to make Maine the home of floating offshore wind technology and manufacturing that is critical to our nation's energy future. Maine Aqua Ventus I GP LLC, has three general partners with deep Maine roots, including two world-class businesses—Cianbro and Emera—and Maine Prime Technologies, LLC, a company wholly owned by the University of Maine. The patent-pending VolturnUS floating platform technology proposed for the Project was invented at the University of Maine, is being built by Maine institutions in Maine, and it is specifically designed and optimized to operate in the Gulf of Maine

Maine Aqua Ventus I features game-changing technological advances that promise significant cost-reduction potential at commercial scale, including:

- **Floating platforms instead of bottom-mounted structures** that are fixed to the seabed, like those used in European offshore wind commercial farms since 1991. Floating platform technology greatly simplifies construction and maintenance by eliminating expensive offshore construction, as the platforms will be built dockside and towed to sea when complete.

[2] P.L. 2013 Chapter 369, Part H.
[3] P.L. 2010 Chapter 615 Section A-6.

- **Concrete hulls instead of steel structures**. Corrosion-resistant concrete hulls utilize indigenous Maine cement that can be built cost effectively in Maine than foreign-sourced steel and have far longer life spans than steel.
- **Composite towers** that significantly reduce topside weight, thereby reducing platform size and associated cost, and reduces corrosion relative to steel structures.

This project presents a tremendous opportunity for all of Maine, but especially for young Mainers who will have the opportunity for education and employment in all aspects of this important new industry.

Maine Aqua Ventus I will be a significant step in protecting our climate by helping to displace some of the dominance of fossil fuels in Maine and New England. With increasing demand for renewable power, offshore wind presents the clearest path to significant new grid-scale renewable energy production in Maine and along the entire eastern seaboard, where other types of renewable energy sources close to population centers are scarce. *Maine Aqua Ventus I* and its technology offer Maine a significant response to the challenges that climate change presents Maine's environment and economy with effects such as ocean acidification, ocean warming, sea level rise and forest habitat degradation. The demonstration project will avoid emission of over 17,600 tons of carbon dioxide equivalent per year, as well as emission of over 5,440 pounds of NO_x and 1,940 pounds of SO_2 per year. These benefits will increase geometrically if this pilot project leads to a far larger wind farm in the Gulf of Maine.

Should you have any questions, please do not hesitate to contact us.

Very truly yours,

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Enclosure