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SIEMENS

Massachusetts Clean Energy Center
55 Summer Street, 9th Floor
Boston, Massachusetts 02110
Attn: Mr. James Bowen

Name	Casper Kvitzau
Department	E W AM OF PM
Telephone	+1 857 210 6927
Fax	
Mobile	
E-mail	casper.kvitzau@siemens.com
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Pre-construction staging area for Offshore Wind Turbines
Review of Revised Layout for the New Bedford Marine Commerce Park (NBMCT), New Bedford, Massachusetts

Dear Sirs,

Thank you for your recent communication concerning the South Terminal project. We are very pleased to hear that the Terminal development is progressing forward on schedule. As you know, the Terminal is a key component in facilitating the development of offshore wind energy in the United States. As one of the largest wind energy component suppliers in the world, Siemens has unique experience in offshore wind development, and has over the past several years routinely identified, managed and utilized staging facilities for offshore wind projects. We are quite pleased that we have been able to work with your agency and the City of New Bedford to assist in developing the specifications for a Port facility that can service the new offshore wind industry in the United States for years to come, and we are very pleased to provide this letter of support for your important project.

On August 24, 2010 Siemens wrote a letter detailing the requirements for an offshore wind turbine staging facility, and assessing the appropriateness of the proposed "South Terminal" (aka – New Bedford Marine Commerce Terminal or NBMCT) Port Facility preliminary project design. Since our submission of that letter, the scope and timeline of Cape Wind project has been further refined, and the schedule for required completion has changed. Additionally, it is Siemens' understanding that during the design process and negotiations with the parcel owners, some changes to the facility plans have occurred. We are in receipt of the Revised Facility Layout Plans, which you forwarded to us, and have reviewed the revised Site Configurations (A & B) to assess their feasibility for offshore wind turbine staging and their utility to support multi-installation offshore wind development projects. This letter reiterates some of the key specifications from the August letter, which are necessary for a staging area to be adequate and practicable, and comments on whether the proposed South Terminal meets these specifications.

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The following activities summarize the anticipated operations on the site:

- Delivery of wind turbine parts and material by international cargo vessel. This comprises tower sections, electronics components, nacelles, hubs and blades. These items will be off loaded to the quayside, for movement to their designated storage locations.
- Storage onsite of sufficient number of turbine and tower components to facilitate efficient assembly and transfer to the development site.
- Assembly of nacelle components, including attachment of the hub and installation of aviation lighting etc.
- Assembly of all components in complete sets for loading onto the assembly vessel.
- Loading assembled components onto the installation vessel, using both on-shore and vessel-mounted cranes as appropriate.

The following points summarize the requirements of a Port facility from the Siemens operational perspective keeping in mind that the requirements are also in general heavily dependent on the allowable timeframe given by our clients and the installation equipment (vessels etc.) in use:

- It is critically important that the staging area be dedicated to the wind farm activities with unrestricted access on a 24-hour per day basis during pre-assembly and installation operations. Locations that would require Siemens to share space with other unrelated ongoing uses would not be feasible or practicable. The South Terminal meets these criteria, because it can be made available for wind farm use on a 24 hour exclusive basis, including access between the areas.

- A minimum of 1,200 linear feet of quayside be dedicated to the wind farm activities. Efficient operation requires the continuous access to up to three vessels. This is because, among other reasons, due to weather and other variables, arrivals and departures cannot be scheduled with precision, and we need to have enough space so that up to three vessels can operate on the site simultaneously, so that they are not turned away when they arrive. This will likely be one international cargo vessel and two installation vessels. It is not possible to use fewer vessels and install a large multi-turbine project in the time-frame required for Cape Wind and generally for these types of projects in the Northeastern US coastal setting due to the seasonality of the work. Siemens has reviewed the planned NBMCT facilities and finds that the proposed South Terminal facility could meet these criteria.

- Available land at and proximal to the quayside is a third important asset of an efficient staging area. For economic operations, to construct a large multi-turbine project will require a minimum area of 25 to 30 preferably contiguous acres adjoined with the quayside. Our previous letter stated "The exact size depends on many variables, but as an example, Siemens has carefully considered the proposed build out of the South Terminal at New Bedford and determined that approximately 28 acres is a minimum requirement for efficient operation at that location." Having land area of approximately 28 acres in the Port area within easily accessible distance of the quayside and proximal to improved roadways for accessibility for site logistics, such as trucks carrying crane parts and tools, as well as site personnel, are important requirements of the site to ensure efficient operations for offshore wind development. In order to perform the operations listed above, Siemens needs storage space for ~40 complete sets of turbine components (consisting of 3 tower sections, 1 nacelle, 1 hub, 3 blades and 2 electrical components per turbine). This is because we need to have a certain backlog of complete sets to ensure that when the installation vessels are present, there are complete sets to load on to them. Again, due to weather variables that are particularly problematic during the winter, we need to ensure that these installation vessels are not delayed for use in the intended purpose whenever they arrive. Siemens has reviewed the proposed revised NBMCT facility layout plans, which you forwarded to Siemens this week, and finds that the size (approximately 28-acres) and both proposed configurations of the facility could satisfy Siemens needs.

- Equally important as the amount of available land is the type of land available for the project. In order to efficiently unload wind energy components from cargo vessels, stage components for assembly, assemble components, and transfer those components to installation vessels, a large "heavy lift"

staging and assembly area is required adjacent to approximately 1,000 feet of the quayside bulkhead. This "heavy lift" area must have bearing capacity sufficient to accommodate the load characteristics of the types of land-side cranes anticipated while lifting the loads associated with the types of wind components expected for the project. The quayside transfer and assembly area should have sufficient acreage to allow for the efficient loading of multiple turbines.

- In addition to the high-load-bearing-capacity area for shipment and assembly of components, "lay-down" areas for storage of wind energy components is required. The lay-down areas do not require the same load-bearing characteristics as the main shipping, transfer, and assembly area. The lay-down area will be utilized for the storage of the lighter components such as the blades, electrical components, and staging equipment, and as such need only sufficient load bearing capacity for those lighter components. Siemens has reviewed the proposed size of the "lay-down" areas proposed for the NBMCT facility (from your revised facility layout), and finds that the characteristics of the proposed "lay-down" areas satisfy Siemens needs for component storage for a typical offshore project.

- Vertical clearance is also an issue in the long run. As the offshore industry matures in the US, for Siemens to operate efficiently and competitively, we must begin to fully assemble the towers on shore. This would require 250 feet or more of vertical clearance both on a portion of the pre-assembly area and the full transit route to the wind farm site. If the South Terminal is built out as proposed, it could be a suitable staging port for multiple projects along the East coast because there are no vertical restrictions within the pre-assembly area and the full transit route to the wind farm site. In the coming years, larger turbines, 6MW or greater, will become available and the South Terminal could be suitable for their pre-assembly. Limited vertical access either at the pre-assembly area or the route to the installation site would cause an unacceptable impediment to future installations.

Keeping in mind that the requirements to Port facilities in general are dependent on the timeframe given by our clients and the installation equipment intended for use, Siemens has reviewed the proposed NBMCT facilities and finds that the characteristics are suitable to support the offshore wind industry in the United States.

Sincerely yours,

06/18/12

Casper Kvitzau
Siemens Energy
Offshore Wind Americas