July 30, 2009

Lindsey J. Logan New Jersey Department of Environmental Protection Division of Land Use Regulation P.O. Box 439 Trenton, NJ 08625-0439

Re: Delsea Energy LLC Waterfront Development Application for a Meteorological Tower in Delaware Bay (N.J File 0600-09-0001.1WFC090001)

Dear Ms. Logan:

Thank you for the opportunity to review Delsea Energy, LLC's waterfront development permit to construct and operate a meteorological tower and test platforms in the Delaware Bay in the region between Cohansey Point and Egg Island. We have several concerns regarding the installation and operation of the meteorological tower and test platforms, but are also extremely concerned about the resource impacts that could result from the eventual development of a utility-scale wind park in this location.

The State of Delaware is generally supportive of wind power development and is keenly interested in increasing renewable power sources in the region and reducing regional greenhouse gas emissions. However, alternative energy development is not without environmental consequences. In this particular case, wind turbines are proposed for a location within the Delaware Bay that has exceptional value for migratory bird populations and for shellfish. Therefore, this particular proposal may have higher than average potential for significant environmental consequences.

The Delaware Bay is a shared resource; the eventual development of a utility scale wind park within it will have economic, environmental and social impacts for both Delaware and New Jersey. Should this application move forward, the DNREC respectfully requests that Delsea, LLC and the State of New Jersey coordinate closely with Delaware State agencies regarding siting, construction methodology, monitoring and data collection protocols. If the meteorological towers and monitoring platforms are constructed, we also request that monitoring reports and data be shared with us as early as possible so that State staff can assess the potential for resource impacts to the State of Delaware.

Specific concerns and recommendations regarding the meteorological tower and monitoring stations proposal and eventual wind farm development are as follows:

<u>Installation and operation of a meteorological tower and monitoring stations</u>

We understand that the installation of a meteorological tower and monitoring stations are a prerequisite to the development of a proposal for a utility-scale wind park and that the information collected from these stations will provide answers to many of the concerns that we have regarding the wind park. However, construction and operation of these facilities have potential impacts to coastal resources that are not addressed in the application:

<u>Installation of support piles</u>: No information is provided in the application regarding installation methods for the support piles, nor how adverse impacts to marine mammals, sea turtles and fish will be avoided and mitigated during construction. To avoid impacts, the following measures should be incorporated into the construction plan:

- 1. Piles should be driven with a vibratory hammer, rather than a driver;
- 2. Piles should be driven with a "soft start" to allow marine mammals and sea turtles to vacate the area:
- 3. An exclusion zone should be established and monitored for marine mammals and sea turtles. Pile driving operations should cease if a protected marine mammal or sea turtle enters the area;
- 4. Sound pressure levels should be monitored during construction. Levels that exceed 190 dB re: 1μPa can cause injury to fish; if these levels are observed, additional mitigation measures, such as a bubble curtain, should be employed;
- 5. Monitoring reports should be submitted to both the States of New Jersey and Delaware.

Reduction of impacts to birds and bats: This area of the Delaware Bay is of exceptional importance to migratory birds. Close to a million migratory shorebirds stage in the Delaware Bay during their spring migration, and are known to commute across the Bay to forage and roost. The Bay is also a major staging area for eighty percent of the Atlantic flyway population of Snow Geese and its adjacent marshes provide important foraging and nesting habitat for myriad avian species. In order to reduce potential impacts to bird and bat species, the following measures should be taken:

- 1. Anti-perching devices should be employed on each of the structures;
- 2. Guy-wire can cause injuries to birds; all structures should be designed so that use of guy-wires is not required;
- 3. Lighting on the structures should be designed so as to avoid impacts to birds and bats. Lighting should be used only as necessary and in compliance with Federal Aviation Administration regulations. When possible, downshielding should be employed to avoid ambient lighting issues.

<u>Data collection, sharing and coordination:</u> While the meteorological tower and monitoring station will provide essential information for the wind developers, additional geophysical studies and wildlife studies will also need to be conducted. These potential impacts to navigation, benthic habitat and protected species should be included in this application. We are

very interested in ensuring that studies are designed using the best available technology and accepted protocols and that results of studies are shared with Delaware resource managers.

Concerns regarding development of utility-scale wind park

The proposed location for the wind park is in an area of high resource value; we have tremendous concerns about direct and secondary impacts that could result from construction and operation of wind turbines in this area of the Bay. Phase 1 and 2 of the proposed project lie within the most productive oyster beds in the region. Construction of 106 turbines in this area will cause not only direct disruption of benthic habitat, but also may disrupt the flow and settling rate of oyster spat. These impacts, combined with potential exclusion zones, could have an effect on commercial and recreational fishing and will impact the economy and resources of both New Jersey and Delaware.

The proposed location is directly east of the Bombay Hook National Wildlife Refuge, Little Creek Wildlife Area and the Ted Harvey Wildlife Area in Delaware. These areas, and the open Bay between them and the coast of New Jersey, represent habitat of both regional and hemispheric importance for numerous migratory birds and marine animals. Intensive studies on migration, commuting patterns, and seasonality must be conducted to assess the potential impacts to shorebirds, geese, ducks, sea turtles and marine mammals.

There is also concern regarding the proposed wind park's proximity to the main shipping channel. There have been several groundings and steering loss causalities in the Bay and River. Should a tanker lose steerage and make contact with one or more turbines the result could be a sizable oil spill with extensive injury to the region's natural resources. This issue will have to be considered and addressed in any proposal for a full-scale wind park.

Thank you for the opportunity to comment on this application. If you have any questions about the above concerns or want additional information, please contact Susan Love of my staff at (302) 739-9283 or Susan.Love@state.de.us. We look forward to close collaboration with you and Delsea, LLC as this project moves forward.

Sincerely,

Sarah W. Cooksey, Administrator Delaware Coastal Programs

Saul SV. Croksy

SWC/sel

Cc: Delsea Energy LLC
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