

Participating Organizations

Alliance for a Living Ocean
American Littoral Society
Arthur Kill Coalition
Asbury Park Fishing Club
Bayberry Garden Club
Bayshore Regional Watershed Council
Bayshore Saltwater Flyrodders
Belford Seafood Co-op
Belmar Fishing Club
Beneath The Sea
Bergen Save the Watershed Action Network
Berkeley Shores Homeowners Civic Association
Cape May Environmental Commission
Central Jersey Anglers
Citizens Conservation Council of Ocean County
Clean Air Campaign, NY
Coalition Against Toxics
Coalition for Peace & Justice/Unplug Salem
Coast Alliance
Coastal Jersey Parrot Head Club
Communication Workers of America, Local 1034
Concerned Businesses of COA
Concerned Citizens of Bensonhurst
Concerned Citizens of COA
Concerned Citizens of Montauk
Eastern Monmouth Chamber of Commerce
Fisher's Island Conservancy
Fisheries Defense Fund
Fishermen's Dock Cooperative, Pt. Pleasant
Friends of Island Beach State Park
Friends of Liberty State Park, NJ
Friends of the Boardwalk, NY
Garden Club of Englewood
Garden Club of Fair Haven
Garden Club of Long Beach Island
Garden Club of Middletown
Garden Club of Morristown
Garden Club of Navesink
Garden Club of New Jersey
Garden Club of New Vernon
Garden Club of Oceanport
Garden Club of Princeton
Garden Club of Ridgewood
Garden Club of Rumson
Garden Club of Short Hills
Garden Club of Shrewsbury
Garden Club of Spring Lake
Garden Club of Washington Valley
Great Egg Harbor Watershed Association
Highlands Business Partnership
Highlands Chamber of Commerce
Hudson River Fishermen's Association/NJ
Jersey Coast Shark Anglers
Jersey Shore Captains Association
Jersey Shore Running Club
Junior League of Monmouth County
Keyport Environmental Commission
Kiwans Club of Manasquan
Kiwans Club of Shadow Lake Village
Leonardo Parry & Pleasure Boat Association
Leonardo Tax Payers Association
Miami Street Wildwood
Marine Trades Association of NJ
Monmouth Conservation Foundation
Monmouth County Association of Realtors
Monmouth County Audubon Society
Monmouth County Friends of Clearwater
Montauk Fisherman's Emergency Fund
National Coalition for Marine Conservation
Natural Resources Protective Association, NY
NJ Beach Buggy Association
NJ Commercial Fishermen's Association
NJ Environmental Federation
NJ Environmental Lobby
NJ Main Ship Owners Group
NJ Marine Educators Association
NJ PIRG Citizen Lobby
Nottingham Hunting & Fishing Club, NJ
NYC Sea Gypsies
NY Marine Educators Association
NY/NJ Baykeeper
Ocean Wreck Divers, NJ
PaddleOut.org
Piscataway Saltwater Sportsmen Club
Raritan Riverkeeper
Religious On Water
Riverside Drive Association
Rotary Club of Long Branch
Rotary District #7510 - Interact
Saint George's by the River Church, NJ
Saltwater Anglers of Bergen County
Sandy Hook Bay Anglers
Save Barnegat Bay
Save the Bay, NJ
SEAS Monmouth
Seaweeders Garden Club
Shark Research Institute
Shark River Cleanup Coalition
Shark River Surf Anglers
Shore Adventure Club
Shore Surf Club
Sierra Club, Shore Chapter
Soptimist Club of Cape May County
South Jersey Dive Club
South Monmouth Board of Realtors
Staten Island Friends of Clearwater
Staten Island Tuna Club
Strathmere Fishing & Environmental Club
Surfers' Environmental Alliance
Surfider Foundation, Jersey Shore Chapter
TACK LMA
Terra Nova Garden Club
Unitarian Universalist Congregation / Monm. Cnty.
United Boatmen of NY/NJ
United Bowhunters of NJ
Volunteer Friends of Boaters, NJ
WATERSPIRIT
Women's Club of Brick Township
Women's Club of Keyport
Women's Club of Long Branch
Women's Club of Merchantville
Zen Society, NJ

Clean Ocean Action



Ocean Advocacy
Since 1984

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August 17, 2006

VIA WEB AND POST

Department of the Interior
Minerals Management Service
1201 Elmwood Park Blvd., MS 5412
New Orleans, LA 70123

RE: Comments on EIS Scoping for the LIOWP Project

To Whom It May Concern:

Clean Ocean Action is a broad-based coalition of over 180 conservation, environmental, fishing, boating, diving, student, surfing, women's, business, service, and community groups. Our goal is to improve the degraded water quality of the marine waters off the New Jersey/New York coast. It is Clean Ocean Action's (hereinafter "COA") mission to investigate, review, and question proposals that may effect ocean water quality in the NY/NJ Bight.¹ After many decades of abuse at the hands of polluters, these regional waters have successfully been defended to prevent ocean dumping and other adverse water quality impacts. Although COA has not taken an official position for or against offshore wind energy, COA intends to, consistent with the above mission, review any and all such projects for any potential negative impacts to the NY/NJ Bight.

The ocean and coastal waters of New York and New Jersey are an essential and unique resource. They provide recreational opportunities, support a vital commercial fishing industry, are home to a rich wildlife community, and are the foundation of one of the states' largest tourism industries. The NY/NJ Bight is an extremely fragile and vulnerable resource. A legacy of pollution and failure of stewardship for the NY/NJ Bight led to beach closures, massive fish kills, and economic crashes in the late 1980s. In response to these negative impacts, New Jersey strengthened its laws and regulations, and has come to understand that questions about using ocean and coastal resources must be approached very carefully, with full knowledge of the impacts and consequences.

The proposed Long Island Power Authority's (hereinafter "LIPA" or "Applicant") offshore wind power project is comprised of 40 windmills throughout a 5,216-acre offshore site ("Wind Farm"), and is a 3.5 miles from Jones Beach.

¹ Visit <http://www.cleanoceanaction.org> for more information.

The project would be located within New Jersey's "area of concern" for purposes of federal consistency under § 307 of the Coastal Zone Management Act and within land held in public trust under federal jurisdiction. Clean Ocean Action commented on the original Long Island Offshore Wind Park application (Hereinafter "Application") to the US Army Corps of Engineers (hereinafter "US ACOE") submitted on April 26, 2005, but it is not clear if this document is the same as the Proposal. **We therefore, request a copy of the Proposal submitted by LIPA to MMS for the construction and operation of the wind energy facility off Long Island, NY and referenced in the Federal Register Notice² for these Environmental Impact Statement (hereinafter "EIS") scoping comments.**

The physical presence of offshore wind facilities in all phases of the project - construction, operation and decommission - may cause significant effects on the environment. Without more information on the potential effects of the Wind Farm on the organisms within the project area (which include several listed and endangered species), one cannot properly analyze the potential impacts of the project. The Wind Farm constitutes a new industrial use of the NY/NJ Bight region. In fact, offshore wind development is new to the entire United States. Consequently, no regulatory framework exists to govern such an activity.

COA strongly urges Minerals Management Service ((hereinafter "MMS") to postpone the issuance of any permit, grant, lease or easement until **after** the National Academy of Sciences ((hereinafter "NAS") completes the study required by Section 1833 of the Energy Policy Act. Upon completion of the study, MMS should review the conclusions and recommendations of the NAS report, take further public comment, and make any necessary changes to the Section 388 regulations. Following this process is the prudent course of action, particularly since the NAS is to *"recommend statutory and regulatory mechanisms for developing those resources."*³

Within Section 388 of the Energy Policy Act, MMS is allowed to let the LIPA Wind Farm application process to proceed without waiting for adequate regulations or the completion of the Programmatic EIS. Considering the potential implications of significant environmental impacts, **it is critical that every effort be made to assess all possible impacts, as well as alternative approaches, through the preparation of a thorough and complete EIS.**

² Federal Register, Minerals Management Service, Outer Continental Shelf, Headquarters, Long Island Offshore Wind Park Development, Notice of Intent to prepare an EIS invitation for participation by cooperating agencies, and scoping period, Vol. 71, No. 117; pg. 35293.

³ Energy Policy Act, Section 1833, Renewable Energy on Federal Land

(a) National Academy of Sciences Study- Not later than 90 days after the date of enactment of this Act, the Secretary of the Interior shall enter into a contract with the National Academy of Sciences under which the National Academy of Sciences shall--

(1) study the potential of developing wind, solar, and ocean energy resources (including tidal, wave, and thermal energy) on Federal land available for those uses under current law and the outer Continental Shelf;

(2) assess any Federal law (including regulations) relating to the development of those resources that is in existence on the date of enactment of this Act; and

(3) recommend statutory and regulatory mechanisms for developing those resources.

(b) Submission to Congress- Not later than 2 years after the date of enactment of this Act, the Secretary of the Interior shall submit to Congress the results of the study under subsection (a).

The EIS for the proposed LIPA offshore wind power project must address the following issues, each of which has the potential to significantly affect the marine environment:

1. Baseline Information on Organisms and Habitat

- The Applicant must provide information on all of the potentially affected species, including but not limited to federally managed fish species and endangered/threatened species.
 - Additionally, the information currently provided in the Essential Fish Habitat (EFH) section of LIPA’s Application to the US ACOE contains several unsubstantiated assumptions and generalizations about habitat type, fish behaviours and effects of activity, as well as numerous acknowledgments of unknown impacts or lack of information. For example, the Applicant repeatedly admits that the impact of the proposed project upon various species is “*unknown*”, and concedes that further studies are necessary. COA agrees. The Applicant must be required to identify all local organisms and determine their individual level of sensitivity to the project activities, not just provide generic conclusions about impacts to “benthic organisms” or “eggs and larvae.”
 - Furthermore, studies conducted in other countries have concluded that baseline information specific to the actual proposed site of the project is the first step in determining the environmental impacts of the project. The evaluation of effects depends on both on the intensity of the project (scope and scale) and the sensitivity of the local ecosystem and species. The higher the projects intensity and the sensitivity of the site, the higher the likelihood of negative impacts.⁴ Such basic information is necessary for an adequate EIS for the proposed project.
- The EIS must include the mapping of all the specific habitat types present in the project area that may potentially be impacted.
- The Applicant needs to determine the use patterns of each species found in the project area, including migration patterns, time/seasons of residency, life history traits, dependency on the specific habitat type, percentage of critical habitat to be impacted by the project
- Once the baseline information has been collected, the Applicant must provide a detailed analysis of all the project’s potential impacts at the organism, population and community level.
- In addition, baseline information on sediment chemistry and contaminant concentrations in the project area must be collected.

⁴ For instance, a local bird species with a high annual survival rate and a low reproductive output can be expected to have a higher level of sensitivity (and therefore more likely to be negatively impacted by the proposed project) than a local bird species with a high reproductive output and a correspondingly low annual survival rate.

2. Emissions Pollution Offsetting

- LIPA claims that the Wind Farm “*will annually offset significant amounts of air pollutants including an estimated 235,000 tons of CO₂, 489,000 tons of SO₂, and 221,000 of NO₂.*”⁵ However, the Application fails to provide any evidence of how this project will achieve such an offset. In order to accurately assess the impact of this project, the Applicant should be required to present a detailed explanation of how the Wind Farm would offset air pollution.
- Any and all potential sources of pollution emissions from the operation and maintenance of the facility must also be included in the emissions assessment.
 - The intermittent nature of wind turbine power requires that traditional power station capacities be maintained as “reserve power stations”⁶ at a total level of more than 80% of the installed wind energy capacity in order to assure energy supply reliability and security.⁷ Operating traditional power sources in an intermittent or fluctuating fashion generates more carbon per kWh generated than if operating at a constant rate⁸ (re-starting energy facilities requires more fuel resources). **Any assessment of emissions offset must include the identification of the source of reserve power and the expected emissions released during operation of the reserve power.**
 - The Application states that a diesel generator will be used. Pollution emissions from the generator should be thoroughly evaluated.
 - Existing offshore wind turbine facilities have required an extremely high number of maintenance trips, including over 75,000 trips to Horns Rev off the coast of Denmark in just an 18 month period⁹. LIPA has yet to identify the type and size of the boats, or other maintenance system, to be used for maintenance of the proposed facility. The type of engine can vary significantly on the type (air or hazardous) of quantity of the pollutant. Due to the large number of trips per year, the type of engine (two or four stroke) and emissions controls of that engine become an important factor in gauging the effects on the marine environment, as well as the overall emissions saving that will be realized. Therefore, LIPA should incorporate such considerations as type of motor and size of the boat into an EIS and include projected emissions production in the above mentioned emissions analysis.

⁵ <http://www.lipower.org.cei/offshore.community.html>

⁶Wind Power – Wikipedia, p. 13.

⁷Wind Report 2004, e-on, Netz, p. 3.

⁸Id.

⁹ Staff Report, Renewables Technology, *Horns Rev Reveals the Real Hazards of Offshore Wind*, (October 2004).

3. Noise Pollution

- Noise pollution during and after construction could have a significant impact on the marine environment. During construction, underwater noise from construction vessels and drilling or piling equipment may have a negative effect on fish and benthic organisms. The frequency and level of underwater noise would vary depending on the way the Wind Turbines are constructed and the choice of foundation type and material. Because of the varying degree of noise, the degree of impact on marine organisms will also vary. To this point, LIPA admits it does not know the impacts of noise on this community, stating, *“Because the effects of construction noise and vibrations from wind farms on fish are relatively unknown, pre- and post-construction studies and surveys are needed.”*¹⁰ These noise studies should be incorporated as part of the EIS to ensure the reliability of the data being used as well as ensuring the exploration of proper alternatives.
 - Furthermore, LIPA cites data from a Swedish study and the Cape Wind project as support of its contention that the project will not cause any negative effects from noise pollution. However, LIPA fails to address Swedish findings that harbour porpoises were affected by the ramming operations, both in terms of behaviour and abundance, over a range of temporal and spatial scales.¹¹ As mentioned above, reliance on the Cape Wind DEIS is not acceptable. Therefore, an independent study specifically concerning the marine organisms in the project area must be done in order to understand and mitigate any potential impacts.
- Post construction operation and maintenance, as well as decommissioning activities, are also expected to generate noise that could have a significant effect on the marine life around the project. LIPA relies on typical decibel (dB) value levels between 145 to 167 dBs at a distance of approximately 500 meters from Cape Wind. **LIPA candidly admits that it does not know what noise levels will be generated by its Wind Farm.** Rather than relying on analysis of this specific project, LIPA looks to Cape Wind to make conclusions regarding the impacts on NY/NJ waters. Again, reliance on the Cape Wind DEIS is unacceptable. The Application states, *“It is anticipated that noise from construction activities and increased vessel traffic, which would be very similar to that employed for the Cape Wind Project, would produce noise levels similar or below those presented above (145-167 dBs).”*¹² Due to the fact that the actual noise levels, as well as the effects of the noise levels on the marine environment, are unknown, it is important to conduct noise modeling (including

¹⁰ Long Island Offshore Wind Park, Application to the US Army Corps of Engineers NY District, April 26, 2005. Tab 4, 80.

¹¹ Tougaard, J., Carstensen, J., Henriksen, O.D., Teilmann, J. & Hansen, J.R. (2004): Harbour porpoises on Horns Reef - Effects of the Horns Reef Wind Farm. Annual Status Report 2003. Report request. Commissioned by Elsam Engineering A/S. National Environmental Research Institute. 67 pp.

¹² Long Island Offshore Wind Park, Application to the US Army Corps of Engineers NY District, April 26, 2005, Tab 4, 80

individual and cumulative noise) for this specific site and in this specific area in order to properly address potential problems and ensure minimal impact.

4. Sediment Re-suspension

- The installation of the Monopoles and Electrical Substation Platform (ESP) will be done with a pile driver as well as the use of anchors and jack up barges. These activities will cause disturbance of the seafloor by increasing suspended sediments and turbidity. Such a disturbance can cause a wide range of negative impacts such as: bioaccumulation in fish from contaminated suspended sediments, clogging of fish gills, and damage to fish larvae and eggs. Due to the likelihood of impacts resulting from these activities, all impacts and alternatives should be explored to determine the degree of disturbance that will be caused. Only after impacts and alternatives have been adequately analyzed, can an applicant properly minimize and mitigate the impacts of the activity. The impacts of the construction will vary significantly with the duration, number and frequency of barges and anchors being used. The extent of the use of anchor and jack up barges has yet to be determined by LIPA. The Application states, *“It is not known at this time how many anchors would be used on construction vessels during installation activities, and as a result, it is not currently known how much disturbance to seafloor sediments would occur associated with vessel positioning, anchoring, and the anchor line sweep during the installation of the WTGs and substation.”*¹³ This information must be supplied and used to determine the full impact of the proposed project on the public health and the environment.
- The installation of 40 Monopoles will disturb and destroy approximately eight (8) acres of benthic habitat. The installation of transmission cables will negatively impact another 375,000 to 675,000 square feet (8.6 to 15.5 acres) of benthic habitat. Presumably to minimize the significance of these losses, LIPA repeatedly states that offshore benthic communities are homogenous.¹⁴ However, this statement is incorrect. Contrary to LIPA’s claims, most research conducted in nearshore marine environments (including Long Island Sound)¹⁵ has found that benthic habitats are complex and heterogeneous environments.
 - We further note that the jet plow technique used to bury the lines will further impact marine organisms that survive the destruction of their benthic habitat. Sediment suspended by the plowing will cause impacts on marine organisms through the bioaccumulation of pollutants contained in those sediments, clog fish gills, and cause negative impacts on benthic invertebrates, fish larvae, and eggs.

¹³ Long Island Offshore Wind Park, Application to the US Army Corps of Engineers NY District, April 26, 2005. 69.

¹⁴ Long Island Offshore Wind Park, Application to the US Army Corps of Engineers NY District, April 26, 2005, Tab 4

¹⁵ Zajac, R. N. et al. Response of infaunal populations to benthoscape structure and the potential importance of transition zones. 2003. *Limnology and Oceanography* 48 (2): 829-842.

- Anchor placement is admitted to cause long-term destruction of benthic habitat, yet LIPA does not provide the number of anchors to be utilized or the extent of habitat to be impacted. In the permit application, LIPA states that, “[i]t is not known at this time how many anchors would be used on construction vessels during installation activities, and as a result, it is not currently known how much disturbance to seafloor sediments would occur associated with vessel positioning, anchoring, and the anchor line sweep during the installation of the WTGs and substation.”¹⁶ The development of an Anchor Handling Plan must be a requirement of the EIS, along with an analysis of the impact to benthic organisms.
- LIPA admits that the full range of impacts of sediment and displacement on marine organisms is unknown. Relying on data from Cape Wind, LIPA anticipates that the sedimentation effects will be minimal.¹⁷ Reliance on other project data is not appropriate in this circumstance. The habitat and waters of the two projects are too different to draw any valid correlations. Therefore, an independent study, specifically concerning this marine environment, must be done in order to understand and mitigate any potential impacts.

5. Hydrographic Disturbance

- Local water flow across the bottom will be altered due to the presence of the Monopole tower bases and foundations, resulting in localized sediment scour behind the tower and deposition in front of the tower. These changes in water flow and wave action will likely change sediment dynamics locally and possibly on a larger scale, thus impacting the benthic community that depends on the current hydrographic conditions at the site.¹⁸ The Applicant must identify potential effects of the hydrographic disturbance created by the towers and foundations on the stability of the sediment, its grain size, porosity, organic content, nutrient cycling, oxygen content and redox potential and determine the impacts of these changes on the benthic community.
- The presence of multiple turbines and foundations could potentially affect water flow around and through the development area. In addition, diffraction or interference of wave energy through or around the development area could potentially affect the amount of wave energy impinging on the adjacent coastal habitats, affecting wave action. Wave action is an important factor determining the structure and function of both rocky and sedimentary intertidal communities, as well as influencing coastal

¹⁶ Long Island Offshore Wind Park, Application to the US Army Corps of Engineers NY District, April 26, 2005, Tab 4 68.

¹⁷ Long Island Offshore Wind Park, Application to the US Army Corps of Engineers NY District, April 26, 2005, Tab 4 75-78.

¹⁸ Hiscock, K., Tyler-Walters, H. & Jones, H. High Level Environmental Screening Study for Offshore Wind Farm Developments – Marine Habitats and Species Project. 2002. Report from the Marine Biological Association to The Department of Trade and Industry New & Renewable Energy Programme.

accretion or erosion¹⁹. The Applicant must assess the cumulative impact of the hydrodynamic disruption created by the wind turbine field as a whole.

6. Fuels and Oil Spill

- The Applicant must include potential impacts to Essential Fish Habitat (EFH) of federally managed species from the inadvertent release of drilling fluids during construction of the Horizontal Direct Drilling (HDD), Wind Farm operation, and accidental spills of petroleum lubricants and fuel from offshore construction equipment/vessels during construction of the Wind Farm.²⁰ LIPA proposes that “*a spill prevention and countermeasure plan (SPCC) would be prepared, submitted and implemented in order to avoid and/or minimize the potential for project-related releases or spills of fuels or other discharges.*”²¹ The SPCC must be prepared in conjunction with the EIS so the full range of potential impacts and alternatives can be explored to minimize any possible impact. The SPCC also must include a thorough analysis detailing the areas that would be impacted the most in the event of any spill.
- The potential for corrosion of transmission lines exists. Submarine transmission cables often are filled with oil to insulate the cables and prevent heat loss. Due to the ocean’s highly corrosive environment, the potential for leakage of oil directly into the environment is a serious concern. The Applicant must information as to whether the cable to be used is oil filled or not in order to properly prepare for, and assess the impact of, line corrosion.
- During operation, up to 300 gallons of petroleum-based lubricant would be stored in each windmill and up to 1500 gallons of diesel fuel oil would be stored at the Electrical Substation Platform.²² Thus, a significant amount (total of 12,000 gallons of petroleum based lubricant and 1,500 gallons of diesel) of petroleum products will be stored perilously close to the ocean environment. LIPA needs to detail all possible alternatives and procedures for spill prevention and cleanup. Also, the Applicant has yet to state how much oil and lubricant will likely be consumed and brought out to the Wind Turbine Generators throughout the year. The EIS must include the amount of oil and lubricant and an assessment of the potential impacts of a spill.

7. Electromagnetic and Thermal Effects

¹⁹ Hiscock, K., Tyler-Walters, H. & Jones, H. High Level Environmental Screening Study for Offshore Wind Farm Developments – Marine Habitats and Species Project. 2002. Report from the Marine Biological Association to The Department of Trade and Industry New & Renewable Energy Programme.

²⁰ Long Island Offshore Wind Park, Application to the US Army Corps of Engineers NY District, April 26, 2005, Tab 4 78.

²¹ Long Island Offshore Wind Park, Application to the US Army Corps of Engineers NY District, April 26, 2005, Tab 4 78.

²² Long Island Offshore Wind Park, Application to the US Army Corps of Engineers NY District, April 26, 2005, Tab 3 5.

- Once the transmission lines are installed and operating, the lines will emit electromagnetic and thermal emissions that can disturb and interfere with navigation of fish along migratory pathways, and decrease the ability of predatory fish species that use electrical outputs to detect and capture their prey. Modeling within an EIS is necessary to ensure that the most effective measures have been considered and utilized in order to minimize and eliminate any adverse impacts resulting from such thermal and electromagnetic disturbances.
- The use of an Alternating Current (AC) cable has been proposed for this project. AC current usually emits higher electromagnetic frequencies than Direct Current (DC). Therefore, LIPA must be required to properly block these frequencies to minimize the potential risk to the marine environment. The methods chosen by LIPA should be incorporated into the EIS to ensure that all possible alternatives have been explored and to ensure the best alternative is chosen.

8. Weather Impacts

- The severity of the weather and the depth of water in the project location will put a tremendous burden on the Wind Turbines and the Electrical Substation Platform. To this point, LIPA has not addressed the potential problems involving the severity of weather on the Wind Farm. The location of this Wind Farm is unique due to the depth of water and strength of current along with seasonal storms such as Nor' Easters, Tropical Depressions, and Hurricanes. An EIS must incorporate site-specific information on weather patterns and events that impact the project area, along with evidence that a Monopile Wind Turbine and Electrical substation platform can remain stable and functional in such harsh conditions. The Applicant must explain what measures will be taken to ensure that the Turbines will remain stable throughout their 25-year life span, and what additional measures will be taken to prevent discharge of oil and lubricant from the storage facilities on the Electrical Substation Platform and Wind Turbines and, if applicable, from the transmission lines in the event that such a weather-related catastrophe occurs. These questions must be answered in order to ensure that the impact on the environment is as minimal as possible.

9. Navigation

- The project area will result in the loss of open water (5,216 acres) and increase the density of boat traffic in nearby shipping lanes, thus increasing the chance of collisions and accidents. Such incidents may result in the loss of human life and property, and may also cause the release of toxic pollutants into the ocean environment. Due to the increased likelihood of accidental collisions, a comprehensive analysis of the potential impacts of the increased traffic and how to accommodate such traffic should be included in an EIS.
 - Additionally, the Application suggests that access to the Wind Farm will not be restricted. The EIS must therefore include the procedures for rescue and

recovery, as well as spill cleanup operations, should a collision occur within the Wind Turbine Field.

10. Operations and Maintenance

- Due to the size and complexity of the project, operation and maintenance of the facility is inexorably linked to the potential for significant negative effects. An EIS must address such issues and prevent, or mitigate any foreseeable operational and maintenance problems. It is only through an EIS that that an Operation and Maintenance Manual (OMM) can be properly developed. The OMM should cover both the construction, operation, and decommissioning of the project. The safety concerns of the public and the environment demand that the OMM be detailed and comprehensive enough to cover all reasonably foreseeable events. The EIS should incorporate into the OMM the proper range of alternatives and mitigation measures necessary. Additionally, the OMM should include, at a minimum, cleanup crew response time, clean up procedures for specific types of spills (oil, lubricant, bentonite), comprehensive crew training, first aid response, and a decommissioning plan.

11. Upgrading Grid Infrastructure

- The successful production of offshore wind power requires new and sophisticated high voltage and extra high voltage transmission lines in order to create the transmission capacities required to transport wind generated electricity, some of which must be laid into the seafloor²³. The necessary grid expansion and new wind power construction must take place in parallel. Thus, impacts of grid expansion must be included in the EIS.

12. Decommissioning

- The decommissioning of the Wind Farm is projected for 25 years after the installation of the Wind Farm Turbines, the Electrical Substation Platform and their foundations. Due to the presence of hazardous materials within the turbines (and, possibly, the transmission cables), as well as the disturbance to the ocean floor, a thorough and detailed Decommissioning Plan is necessary to adequately protect the marine environment. The Decommissioning Plan needs to be incorporated into the EIS to ensure that all alternatives are explored and the marine environment can be fully restored. The decommissioning of the Wind Farm will also present a disposal issue concerning the oil filled containers (and, possibly, oil filled cables). The Decommissioning Plan should include decommissioning and disposal of oil filled cables and containers to ensure that no release of toxins into the waters of New York

²³ Wind Report 2004, E-ON Energy, pp.3.

and New Jersey will occur. Current measures are inadequate to address such concerns. The application provided by LIPA states that, “*decommissioning may involve the dismantling of the Wind Turbine Generators, the Electrical Substation Platform and their foundations, and the removal of the associated scour protection devices and the subsequent transportation of these materials to shore for reuse or recycling. When disassembling the Wind Turbine Generators, they would be dismantled in the same manner that they were put together utilizing similar equipment.*” Simply stating that the procedure of decommissioning will be similar to that of the construction is unacceptable. The potential impacts on the environment demands that a comprehensive and detailed decommissioning plan be adopted. A detailed plan needs to explain specifically how the Wind Farm will be dismantled, what equipment will be used, mitigation measures employed in event of an accident, clean up crews, and time taken to dismantle.

- Finally, it is essential that the Applicant make financial arrangements (such as the posting of a bond in an adequate amount) to secure the performance of the Decommissioning Plan. Without such arrangements, if the Wind Farm is subsequently closed or abandoned, there may be insufficient funds to prevent the Wind Farm from leaching oil and diesel fuel as its windmills rust and collapse into the ocean.

13. Cumulative Impacts

- The above referenced impacts, as well as any other potential impacts should be analyzed cumulatively in the EIS. Some potential cumulative effects that must be explored include:
 - Alteration in the benthic communities and consequent indirect effects on fish and their predators,
 - Disturbance of communication and migration routes of marine mammals due to emission of low frequency sound or habitat loss,
 - Effects of on habitat loss or changes in hydrography on fish spawning and nursery areas,
 - Potential effect on electromagnetic fields on fish migration and feeding behavior, especially in sharks and rays.
 - Changes to preferred feeding habitats or migration patterns of seabirds, and
 - Changes in hydrography, water flow and wave energy impinging on the coast.

- The MMS must also consider the cumulative effects of multiple Wind Farms within a region, considering the large number of wind farms currently proposed in the offshore region of the Northeast.

The LIPA Wind Farm is one of two projects that are being allowed to move forward without the completion of the National Academy of Sciences (NAS) or the Programmatic EIS. Therefore, it is imperative that the EIS developed for this project is comprehensive in scope and that all analyses conducted in association with the EIS utilize the precautionary principal.

Thank you for your consideration of the above comments. Should you have any questions, please contact Jennifer Samson at (732) 872-0111.

Sincerely,



Cindy Zipf
Executive Director



Jennifer Samson, Ph.D.
Principal Scientist