



Chris Christie  
Governor

Kim Guadagno  
Lt. Governor

**STATE OF NEW JERSEY**  
**Board of Public Utilities**  
Two Gateway Center  
Newark, NJ 07102  
[www.nj.gov/bpu/](http://www.nj.gov/bpu/)

Kristi Izzo  
Secretary of the Board  
Tel. # (973) 648-3426

## NOTICE<sup>1</sup>

### REQUEST FOR PUBLIC COMMENT

IN THE MATTER OF THE OFFSHORE WIND REBATE PROGRAM FOR THE INSTALLATION OF METEOROLOGICAL TOWERS:

<u>Docket Nos.</u>	<u>Company</u>
EO08121062	Fishermen's Energy of New Jersey, LLC – Request for Project Modification
EO08121064	Garden State Offshore Energy, LLC - Request for Project Modification

The Board is requesting public comment on the request of two applicants to modify the project plans approved for rebate in the Offshore Wind Rebate (OSW) Program for the Installation of Meteorological Towers in the New Jersey Clean Energy Program. By Order dated January 7, 2009 in Docket No. EO07030203, the Board approved funding for meteorological facilities necessary to support the development of offshore wind. This program was developed with the input of public stakeholders and discussed in an Order dated November 26, 2008, in docket number EO08110971. The Order established the criteria and conditions for rebate commitments as well as authorizing staff to develop and issue a rebate application for offshore wind met towers and related equipment.

The program criteria limited rebate commitments to \$4 million per meteorological tower with the developer being responsible for additional costs. Proposed projects were limited to the Department of Interior Minerals Management Service (MMS) New Jersey Interim Policy Lease Area with construction designed to provide data for a proposed OSW wind farm that will be at least 200 MW. Another condition of the OSW rebate commitment requires the rebate applicant to provide access to the meteorological tower to the New Jersey Department of Environmental Protection (DEP) and/or DEP's contractors to collect other data not related to wind resources. The rebate applicants are also required to coordinate with DEP and MMS, which the United States Department of Interior has since renamed the Bureau of Ocean Energy Management (BOEM), concerning wind farm pre-construction ecological/environmental studies to ensure the studies meet the needs of DEP and BOEM and to expedite and standardize the data collection process. Rebates are payable upon completion of a tower with no rebate or fraction of a rebate payable for a project halted prior to completion.

---

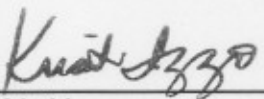
<sup>1</sup> Not a Paid Legal Advertisement

On December 5, 2008, Garden State Offshore Energy (GSOE) submitted a rebate application requesting \$4 million for the development of a meteorological station to be constructed in two phases. The first phase for which the developer sought rebate funding proposed a platform with LIDAR (light detection and ranging wind resource measurement equipment) and other data collection equipment constructed atop a foundation on the seabed subject to the necessary geophysical and geotechnical reviews required by the BOEM. GSOE proposed a second phase contingent upon the adequacy of the LIDAR data that would involve constructing a met mast atop the platform. On December 8, 2008, Fishermen's Energy of New Jersey (FERN) submitted a rebate application requesting \$4 million for a met station employing a monopole foundation with lattice tower to be finalized after the necessary geophysical investigations. The Board approved the rebate applications for FERN and GSOE by Order dated January 8, 2009 in the above captioned dockets. The Board later approved an extension of each developer's rebate commitment for a second one year term in an Order, dated September 16, 2009 in the same dockets.

GSOE and FERN have each requested the Board approve the use of alternative, buoy-based technologies to collect wind data within their Interim Lease area. These alternative approaches do not require the construction of a foundation fixed to seabed as originally stated in the approved applications. Both the original applications and the alternatives require the developer to submit Project Plan to the BOEM to satisfy the conditions of their Interim Lease. Under the terms of the lease, the BOEM has 60 days to review and comment of their project plans before activities can commence. Board Staff has received confirmation that GSOE and FERN have shared their proposed project plan modifications with the DEP and BOEM. Each agency has communicated to the Board their respective expectations regarding future data collection and permitting requirements. Copies of the correspondence from DEP and BOEM to the BPU are attached to this Notice.

Each approach to offshore wind data collection has its advantages and disadvantages. A fixed met station is a more permanent structure with a platform that is proven suitable for mounting of monitoring equipment expected to be necessary for pre-construction permitting of commercial wind farms. On the other hand, while a buoy based system of met data collection may not enable the same opportunities for environmental resource monitoring, it is expected to be less intrusive on the environment compared to a met station structure on a fixed foundation. A buoy-based LIDAR system has also been proposed to offer better wind resource assessment data with near and long term cost advantages compared to the original anemometer based on a fixed foundation. The developers have expressed their ability to employ the buoy-based data collection facilities within the terms of their current rebate commitment in 2010, whereas the developer's believe the opportunity to install a fixed foundation in the ocean has closed for 2010.

The Board seeks public comment on the proposals to collect offshore wind data via buoys as opposed to fixed stations. In order to be considered by the Board in this matter, comments must be submitted by Friday August 13, 2010 at 5:00 pm and submitted via email to [OCE@bpu.state.nj.us](mailto:OCE@bpu.state.nj.us).

  
\_\_\_\_\_  
Kristi Izzo  
Secretary of the Board

Dated: August 6, 2010



## State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF SCIENCE

*P.O. Box 420*

*Trenton, NJ 08625-0420*

CHRIS CHRISTIE  
*Governor*

BOB MARTIN  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

Mr. Michael Winka, Director  
Office of Clean Energy  
N.J. Board of Public Utilities  
44 South Clinton Avenue  
Post Office Box 350  
Trenton, NJ 08625-0350

**Re: Offshore Wind Rebate Program for the Installation of Meteorological Towers and the request by Garden State Offshore Energy for an Eligibility Determination**

Dear Mr. Winka,

The Office of Clean Energy (OCE) has asked that the New Jersey Department of Environmental Protection (DEP) provide a response concerning the equivalency of the proposal submitted by Garden State Offshore Energy (GSOE) for the Meteorological (MET) tower rebate. We understand that GSOE is proposing to site a buoy system rather than a fixed MET tower to collect wind resource and environmental monitoring data.

Several DEP programs met with GSOE on July 20, 2010 to learn more about the proposal. It is our understanding that the following data will be collected in Phase I using this new spar buoy system:

- LIDAR data
- Acoustic monitoring for birds and bats (separate systems)
- Acoustic monitoring for marine mammals (subsurface)
- Current profiler – ADCP instrument
- Water measurements (e.g., temperature, salinity, etc.)

At the meeting, GSOE acknowledged the importance of radar data for birds and indicated they are investigating whether it can be incorporated into the Phase I surveys. If not, it will be designed into the Phase II spar buoy, or a MET tower will be constructed. They also indicated the urgency to start collecting wind resource data and are committed to collecting needed additional radar data in Phase II.

There are two primary relevant stipulations in the BPU MET Tower rebate program that involve DEP. These include:

- DEP and/or DEP's contactors will be provided access to the station to collect data and/or deploy instruments for data collection based on a mutual agreement to be executed by the parties based on good faith negotiations;
- The rebate applicant shall coordinate with DEP and MMS concerning wind farm pre-construction ecological/environmental studies conducted from the meteorological tower to insure the studies meet the needs of DEP and MMS for wind farm permitting/leasing, and to expedite and standardize the data collection process.

Based on further internal discussion, the DEP made the following decisions. At this time, DEP does not plan on needing access to the original MET station or planned buoy for data collection and/or the deployment of instruments. Therefore, this proposal meets the requirement of this stipulation. Concerning the second stipulation, DEP agrees that the Phase I data collection effort generally meets this requirement and can move forward, with one caveat. This latter 'equivalency' is acceptable based on GSOE's planned and appropriate Phase II data being collected to fill in data gaps required by Federal and State agencies (e.g., offshore radar) prior to construction of a renewable energy wind farm.

Please feel free to contact me at 609-984-6070 if you have any questions or need additional information.

Sincerely yours,

Gary A. Buchanan, Ph.D.  
Manager

c: Michele Siekerka, DEP  
Will Waskes, MMS  
Robert Gibbs, PSEG/GSOE



## State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF SCIENCE

*P.O. Box 420*

*Trenton, NJ 08625-0420*

CHRIS CHRISTIE  
*Governor*

BOB MARTIN  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

Mr. Michael Winka, Director  
Office of Clean Energy  
N.J. Board of Public Utilities  
44 South Clinton Avenue  
Post Office Box 350  
Trenton, NJ 08625-0350

**Re: Offshore Wind Rebate Program for the Installation of Meteorological Towers and the request by Fishermen's Energy for an Eligibility Determination**

Dear Mr. Winka,

The Office of Clean Energy (OCE) has asked that the New Jersey Department of Environmental Protection (DEP) provide a response concerning the equivalency of the proposal submitted by Fishermen's Energy for the Meteorological (MET) tower rebate. We understand that Fishermen's Energy is proposing to site a buoy system and other land-based equipment rather than a fixed MET tower to collect wind resource and environmental monitoring data.

Several DEP programs met with Fishermen's Energy on July 20, 2010 to learn more about the proposal. It is our understanding that the following data will be collected using this new buoy system:

- LIDAR data – Land- and buoy-based
- Acoustic monitoring for birds and bats (separate systems)
- Acoustic monitoring for marine mammals (subsurface)
- Current profiler – ADCP instrument
- Vessel surveys for biological resources (e.g., birds, marine mammals & turtles)

One concern expressed by DEP was the lack of radar for bird and bat detections in the lease area. Fishermen's Energy acknowledged they were examining options for collecting additional data including a low voltage radar system and collaboration with other wind developers. They also indicated they would consider collecting radar data at a later point. They indicated that due to scheduling and financial concerns they would need to wait until an MMS lease was issued prior to performing these additional surveys, and did acknowledge the need to resolve any data gaps. They also indicated the need to start collecting wind resource data.

There are two primary relevant stipulations in the BPU MET Tower rebate program that involve DEP. These include:

- DEP and/or DEP's contactors will be provided access to the station to collect data and/or deploy instruments for data collection based on a mutual agreement to be executed by the parties based on good faith negotiations;
- The rebate applicant shall coordinate with DEP and MMS concerning wind farm pre-construction ecological/environmental studies conducted from the meteorological tower to insure the studies meet the needs of DEP and MMS for wind farm permitting/leasing, and to expedite and standardize the data collection process.

Based on further internal discussion, the DEP made the following decisions. At this time, DEP does not plan on needing access to the original MET station or planned buoy for data collection and/or the deployment of instruments. Therefore, this proposal meets the requirement of this stipulation. Concerning the second stipulation, DEP agrees that the initial data collection effort generally meets this requirement and can move forward, with one caveat. Based on discussions with Fishermen's Energy this latter 'equivalency' is acceptable based on the planned and appropriate data being collected later to fill in any data gaps identified and required by Federal and State agencies (e.g., offshore radar) prior to construction of a renewable energy wind farm.

Please feel free to contact me at 609-984-6070 if you have any questions or need additional information.

Sincerely Yours,

Gary A. Buchanan, Ph.D.  
Manager

c: Michele Siekerka, DEP  
Will Waskes, MMS  
Dan Cohen, FE



# United States Department of the Interior

## BUREAU OF OCEAN ENERGY MANAGEMENT, REGULATION, AND ENFORCEMENT

Washington, DC 20240

Mr. B. Scott Hunter  
Renewable Energy Program Administrator  
Office of Clean Energy  
New Jersey Board of Public Utilities  
Two Gateway Center  
Newark, New Jersey 07102

**JUL 23 2010**

Dear Mr. Hunter:

On November 1, 2009, the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEM), formerly known as the Minerals Management Service, issued lease OCS-A-0473 to Fishermen's Energy of New Jersey, LLC under the Bureau's Interim Policy. This lease allows Fisherman's Energy to conduct data collection activities in Official Protraction Diagram Wilmington NJ-1802 Block 6931. At the time that BOEM issued this lease, it was the Bureau's understanding that Fisherman's Energy intended to install a meteorological tower on this site in order to collect wind speed and other data pertinent to the eventual development of commercial operations on this site. However, Fishermen's Energy recently requested that BOEM consider an alternative site assessment program for data collection within this lease block, and concur that the proposed program would still fall within the activities authorized by Fishermen's Energy of New Jersey's Interim Policy lease. Their request is outlined in the enclosed letter.

Specifically, on June 30, 2010, Fishermen's Energy delivered a presentation to BOEM staff that proposed utilizing a buoy system and other land-based equipment rather than installing a fixed meteorological tower on the OCS. This appears to be an innovative approach to gathering offshore wind data. At this time, it would be premature for BOEM to determine that this proposed program would fall within the activities authorized by the developer's Interim Policy lease; Fishermen's Energy of New Jersey has yet to submit a Project Plan to BOEM, as required under Section 8 of their lease, which will serve as the official description of their proposed activities. However, should the forthcoming Project Plan mirror the activities described in the enclosed letter, it appears as though those activities would be authorized by their lease.

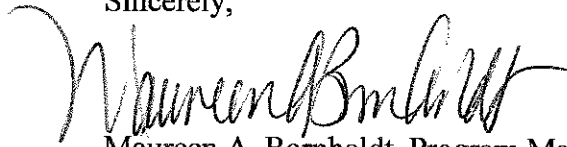
Also at this meeting, BOEM staff noted that Exhibit B, (I)(17) "Access, Instrumentation and Data Collection" of Fishermen's Energy lease stipulated that BOEM and/or its contractors would be provided access to the meteorological tower to collect data and/or deploy instruments for data collection. BOEM had planned to use one or more of the four leases issued under its Interim Policy offshore New Jersey and Delaware to install various data collection devices but has yet to determine which facility(s) would be utilized. While the information collected would prove useful for environmental analysis, Fishermen's Energy has indicated that it would collect any necessary environmental information required for permitting.

Finally, BOEM staff has conveyed to Fishermen's Energy that without the installation of a fixed structure such as a meteorological tower, the developer may be unable to collect data that will be necessary to inform environmental reviews of their future commercial project. For example, Fishermen's Energy may not be able to collect certain bird and bat data that may be requested by other resources agencies, such as the Fish and Wildlife Service, to conduct future environmental analysis. BOEM strongly encouraged Fishermen's Energy to contact the U.S. Fish and Wildlife Service to discuss the future information needs for that agency.

BOEM looks forward to working with offshore wind industry representatives as they develop new and innovative ideas while ensuring that we meet our responsibilities as stewards over energy resources and the environment. We look forward to working closely with Fishermen's Energy on this endeavor.

Please feel free to contact Will Waske at 703-787-1287 if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Maureen Bornholdt', written in a cursive style.

Maureen A. Bornholdt, Program Manager  
Bureau of Ocean Energy Management,  
Regulation, and Enforcement

Enclosure

Similar letters sent to:  
Gary Buchanan, NJDEP  
Michael Winka, NJBPU  
Dan Cohen, FERN





Mr. William Waskes  
Oceanographer  
Offshore Alternative Energy Programs  
U.S. Department of the Interior  
Bureau of Ocean Energy Management, Regulation & Enforcement  
381 Elden Street  
Herndon, VA 20170

July 18, 2010

Mr. Waskes,

This letter is to advise the US Department of the Interior, Bureau of Ocean Energy Management, Regulation and Enforcement ("BOEMRE") that Fishermen's Energy has submitted to the NJ Board of Public Utilities (NJ BPU) a request to "re-purpose" the meteorological tower rebate awarded to Fishermen's as part of New Jersey's initiative to advance offshore wind power generation. The "re-purpose" request and supporting materials have also been provided to the NJ Department of Environmental Protection ("NJ DEP"). Fishermen's seeks to gain NJ BPU and NJ DEP concurrence and continuing support for initiating our wind resource and environmental assessments within MMS lease block 6931 using technologies which will not require the installation of a fixed offshore tower structure.

We herein request that the BOEMRE consider this alternative site assessment program and provide concurrence that this is an acceptable approach to environmental data collection within lease block 6931, which is consistent with the intent and requirements of the interim lease agreement.

We believe the alternative methods of collecting meteorological, environmental, and living resources data, which we have outlined in the attached document, will prove to be robust, accurate, and more economical than building a fixed met tower. We specifically, though, reserve the option to install a fixed meteorological tower in Block 6931 in the future, if the data from our outlined program does not prove to be sufficient for our wind farm planning and operational needs. In the event Fishermen's in the future elects to build a meteorological tower Fishermen's will submit to BOEMRE a revised project plan and will seek approval of BOEMRE for its revised plans.

As detailed in the attached documents, the proposed methods for site data collection will achieve the required results while providing a test and evaluation stage to advance emerging technologies in offshore wind and environmental studies. By integrating an array of moored, bottom placed and land based measurement systems, a thorough assessment of meteorological, atmospheric and oceanographic conditions will be performed. Data on the presence and abundance of avian, bat and marine mammal species will be obtained for the purpose of developing risk assessments. Furthermore, the floating buoys and shore based towers identified for this program have been designed to

provide excess physical space and renewable electric power to accommodate other sensors and devices which may be desired by other groups or agencies.

As presently designed, the proposed program will provide data sets of the following parameters:

- Vertical profiles of wind speed and direction
- Air temperature and barometric pressure
- Atmospheric visibility
- Ocean current velocity and direction profiles
- Ocean wave height, period and direction
- Sea water temperature
- Marine mammal presence
- Avian presence
- Bat presence

Permit authorizations for the installation of these monitoring systems will be applied for and obtained through the US Army Corps of Engineers (Nationwide permits 5 & 6) and the US Coast Guard (Private Aids to Navigation). Public Notices to Mariners advising of new buoy installations will be disseminated by the USCG.

We request that the BOEMRE evaluate the attached program description and reply with concurrence that this approach is in accordance with the requirements of the interim lease.

We are available to discuss any aspects of this program and are willing to consider any enhancements which the agency deems necessary to meet the interim lease program requirements. Should you have any questions, please contact Mike Madia (T: 732.274.1887 or M: 917.545.7693) or myself.

Sincerely,

Stephen P. O'Malley  
Project Engineering Manager  
Fishermen's Energy, LLC  
M: +1.302.222.6832



# United States Department of the Interior

## BUREAU OF OCEAN ENERGY MANAGEMENT, REGULATION, AND ENFORCEMENT

Washington, DC 20240

Mr. Michael Winka  
Director, Office of Clean Energy  
New Jersey Board of Public Utilities  
44 South Clinton Avenue  
Trenton, New Jersey 08625-0350

**AUG 02 2010**

Dear Mr. Winka:

On November 1, 2009, the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEM), formerly known as the Minerals Management Service, issued lease OCS-A-0472 to Deepwater Wind, LLC under the Bureau's Interim Policy. This lease allows Deepwater Wind to conduct data collection activities in Protraction Wilmington NJ-1802 Block 7033. At the time that BOEM issued this lease, it was the Bureau's understanding that Deepwater Wind intended to install a meteorological tower on this site in order to collect wind speed and other data pertinent to the eventual development of commercial operations on this site. However, Deepwater Wind recently requested that BOEM consider an alternative site assessment program for data collection within this lease block, and concur that the proposed program would still fall within the activities authorized by Deepwater Wind, LLC Interim Policy lease. This request can be found in the enclosure to this letter.

Specifically, on July 19, 2010, Deepwater Wind delivered a presentation to BOEM staff that proposed utilizing a buoy system and other land-based equipment rather than installing a fixed meteorological tower on the OCS at this time. Deepwater Wind indicated that a fixed platform would be installed at a later date through a project plan modification. This appears to be an innovative approach to gathering offshore wind data. At this time, it would be premature for BOEM to determine that this proposed program would fall within the activities authorized by the developer's Interim Policy lease. Although Deepwater Wind has submitted some preliminary project information to the BOEM staff, Deepwater Wind will need to submit a Project Plan to BOEM, as required under Section 8 of their lease, which will serve as the official description of their proposed activities. However, should the forthcoming Project Plan mirror the activities described in the enclosed letter, it appears as though those activities would be authorized by their lease.

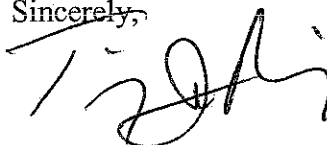
Also at this meeting, BOEM staff noted that Exhibit B, (I) (17) "Access, Instrumentation and Data Collection" of Deepwater Wind lease stipulated that BOEM and/or its contractors would be provided access to the meteorological tower to collect data and/or deploy instruments for data collection. The BOEM had planned to use one or more of the four leases issued under its Interim Policy offshore New Jersey and Delaware to install various data collection devices but has to determine which facility(s) would be utilized. It appears that the fixed platform that Deepwater Wind stated would be installed at a later date will provide the opportunity for BOEM instrumentation.

Finally, BOEM staff has conveyed to Deepwater Wind that without the installation of a fixed structure such as a meteorological tower, the developer may be unable to collect data that will be necessary to inform environmental reviews of their future commercial project. For example, Deepwater Wind may not be able to collect certain bird and bat data that may be requested by other resources agencies, such as the U.S. Fish and Wildlife Service (FWS), to conduct future environmental analysis. The BOEM strongly encouraged Deepwater Wind to contact the FWS to discuss the future information needs for that agency.

The BOEM looks forward to working with offshore wind industry representatives as they develop new and innovative ideas while ensuring that we meet our responsibilities as stewards over energy resources and the environment. We look forward to working closely with Deepwater Wind on this endeavor.

Please feel free to contact Will Waske at (703) 787-1287 or Jennifer Kilanski at (703) 787-1311 if you have any questions or need additional information.

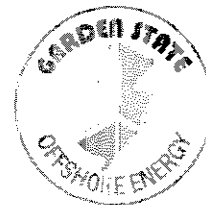
Sincerely,



Timothy Redding  
Acting Program Manger, Office of  
Offshore Alternative Energy Programs

Enclosure

cc: Scott Hunter, NJBPU  
Gary Buchanan, NJDEP  
Chris Wissemann, Deepwater Wind, LLC  
Robert Gibbs, PSEG



July 23, 2010

Will Waskes  
Bureau of Ocean Energy Management, Regulation, and Enforcement  
Mailstop 4090  
381 Elden Street  
Herndon, Virginia 20170-4817

Re: Description of SeaZephIR™ Project Plan

Dear Will:

On behalf of Garden State Offshore Energy, LLC ("GSOE"), I wanted to thank you and your colleagues for the meeting Monday, July 19, 2010, to discuss GSOE's proposal to install a SeaZephIR™ ("SZ") on our Interim Lease site, Block 7033. The meeting was very helpful in understanding the permitting requirements and discussing the issues generally.

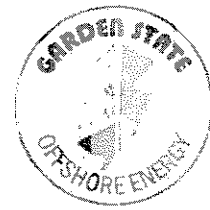
In addition, and per your guidance, this letter will also serve to provide the Bureau of Ocean Energy Management, Regulation, and Enforcement ("BOEMRE") with a detailed preview of GSOE's SZ Project Plan ("Project Plan") which GSOE intends to submit sometime in September 2010. Assuming the contents of this letter are acceptable to BOEMRE, GSOE requests that you provide notice to the New Jersey Board of Public Utilities as soon as possible that GSOE's SZ proposal is amenable to BOEMRE so that we may proceed with our rebate funding application.

#### **Description of Proposed Activities**

GSOE intends to deploy the SZ at its Interim Lease site for the purpose of wind resource and select biological profile data collection. Specifically, GSOE intends to utilize state-of-the-art Light Detection and Ranging ("LIDAR") technology to collect various wind resource data points, including wind speed, direction, shear, etc. This data will help GSOE determine the ultimate viability of constructing an offshore wind energy facility at the project site.

In addition, GSOE will also use (a) several passive acoustical monitors to assess the presence of avian, bat, and marine mammal activity within the Interim Lease site and beyond and (b) monitors to capture ocean meteorological data such as water temperature, wave heights, salinity, etc.

Other site assessment activities may be included in subsequent investigatory campaigns by GSOE and will be outlined in any formal Site Assessment Plan ("SAP") submitted in conjunction with the commercial lease process.



### **Surface Location/Water Depth of SZ**

The SZ will be deployed within GSOE's Interim Lease site in Block 7033 at or about coordinates 39° 04' 25" N and 74° 18' 20" W. The water depth at which the mooring system for the SZ will be deployed is approximately 77 feet.

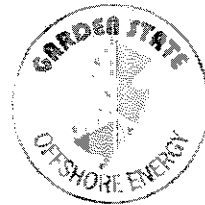
### **General Structural and Installation Information**

The SZ is a floating spar buoy platform approximately 100 feet in total length and approximately 9 feet in diameter. The superstructure of the SZ is designed for deployment in harsh marine conditions while offering maximum stability through the use of an on-board ballasting mechanism that will reach approximately 60 feet below the ocean surface. The buoy is moored to the ocean floor via a single Clump Weight anchor that consists of a reinforced concrete pad approximately 6m x 6m x 1m in size and weighing approximately 90 tons. A main mooring line, safety line and yaw stabilizer line will be connected from the clump weight anchor to the base of the buoy.

Approximately 30-40 feet of the SZ will be above the ocean surface. This portion of the SZ will house the LIDAR equipment, power sources (battery and wind micro-turbines), passive acoustic monitoring systems, and other systems as described above.

Other features of the SZ spar buoy platform include:

- Onboard renewable power generation and storage through approximately 2-4 micro-wind turbines delivering up to 3kW of power. These micro-wind turbines supplement and charge an onboard battery bank of 2,640Ah. This battery bank, at full charge, can provide an estimated 9 days of autonomous power.
- A motion sensor integrated within the SZ to provide basic information on roll and pitch with sensor accuracy within 1°.
- An integrated wave detection sensor measuring the relative wave height to the SZ superstructure..
- An integrated onboard electronic compass to measure the buoy's heading.
- Integrated wireless communication systems to provide data download and system remote operation.
- Navigation and safety lighting in accordance with applicable federal/state standards.



Installation of the SZ will be implemented as follows:

- The concrete Clump Weight mooring will be fabricated at a local NJ marine yard
- Once completed the mooring will be "Pre-Set" at the measurement site within block 7033. This installation of the mooring will be conducted via a 4-point moored crane barge supported by an anchor handling tug.
- The Spar Buoy will be mobilized to a local NJ marine yard where it will be fully tested and prepared for launching. Once tested the buoy will be towed in the horizontal plane to the site of the pre-set mooring.
- Once at site the buoy will be ballasted to the vertical plane and connected to the mooring.
- The LIDAR and other instrumentation will then be activated and data gathering shall commence.

#### **Safety/Prevention/Environmental Protection Measures and Decommissioning**

Although the SZ is specifically designed for autonomous operations by utilizing wireless remote access and data retrieval, periodic and as-needed maintenance may be necessary. This maintenance would involve the use of small watercraft to transport maintenance personnel to and from the SZ. All personnel of GSOE or its contractors having access to the SZ will be required to be trained and qualified to United States Coast Guard standards. Maintenance protocols will further require that a minimum of two (2) personnel will be present at all times during maintenance activities to ensure the safety of each maintenance crew member.

With respect to environmental protection measures, the SZ is specifically designed to minimize to the greatest extent possible any impact to the surrounding marine environment. Contrasted with the installation of a jacket foundation, which requires the hammering of pin piles into the ocean floor to stabilize the foundation, the SZ utilizes a concrete pad and chain mooring system to keep it in place. As noted above, this clump weight mooring system is comprised of a 90 ton concrete slab resting on the ocean floor. The SZ will be under tension while moored to the concrete slab but have sufficient give to prevent unnecessary stress on the mooring system as a whole.

At the conclusion of the wind resource validation and biological profile campaign, GSOE will remove the concrete pad by using an appropriate vessel and crane to lift the concrete pad from the ocean floor.



## Conclusion

The SZ provides GSOE the most technologically advanced solution for beginning its wind resource and biological profile assessment campaign in 2010. Its superior data collection capabilities and robust flexibility make it the ideal tool to begin these site assessment activities and its advantage in terms of cost effectiveness is unmatched.

The installation, operation, and decommissioning of the SZ will pose negligible impacts to the environment, if any, and is designed to avoid more disruptive installation and operations that a fixed-platform foundation would entail. These positive attributes of the SZ demonstrate the advantages when compared to other methodologies that have a more forceful impact on the marine environment.

GSOE is aware there are some minor Interim Lease interpretation issues (i.e. – installation of visibility monitor, etc.) that will need to be addressed and GSOE will provide more detail on those issues in our full Project Plan in September 2010 and after we have had a chance to meet with the relevant federal agencies to clarify requirements for a floating spar buoy platform as opposed to a fixed foundation platform.

As noted at the beginning of this correspondence, it would be appreciated if BOEMRE could provide written assent to the New Jersey Board of Public Utilities no later than August 4, 2010 that GSOE's SZ proposal is amenable to BOEMRE so that we may proceed with our rebate funding application.

Thank you for your time and consideration with regard to the above. If there are any questions, please do not hesitate to contact me directly at 973-430-7985 (office) or 609-273-1874 (cell).

Very truly yours,

A handwritten signature in black ink, appearing to read "Robert L. Gibbs", is written over the typed name and title.

Robert L. Gibbs  
Vice President

RLG/\*

Cc: Scott Jennings (PSEG)  
David Hang (D.E. Shaw)  
Peter Maguire (PSEG)  
Ken Strait (PSEG)  
Bill Wall (Deepwater Wind)  
Clint Plummer (Deepwater Wind)