FOR DISCUSSION ONLY

DRAFT Straw Proposal: New Jersey's Offshore Wind Renewable Energy Certificate (OREC)

Prepared by
New Jersey Board of Public Utilities
Office of Clean Energy

January 28, 2009

Executive Summary

On October 23, 2008, Governor Corzine released the Energy Master Plan which establishes the goals and strategies to place New Jersey at the forefront of a growing clean energy economy with aggressive energy efficiency and renewable energy goals and action items. Under regulations already in place, New Jersey's Renewable Portfolio Standards (RPS) requires that renewable energy sources generate 22.5% of the State's electricity consumption by 2020 and to achieve this goal it requires electric power suppliers and basic generation service providers (referred to as "supplier/providers," defined in N.J.A.C. 14:8-1.2) to include minimum percentages of qualified renewable energy in the electricity they sell; those minimum percentages increase over time. However, the Energy Master Plan recognizes that continuing improvement in renewable energy technologies make it possible to exceed this goal, and calls for a 30% goal by 2020.

The EMP also specifically calls for a minimum of 1000 Megawatts of Off-Shore Wind capacity to be developed by 2012 and a minimum of 3000 MW of offshore wind by 2020. It is staff's proposal to meet this target by amending the Renewable Portfolio Standards for Class I resources by incorporating an Off-Shore Wind carve out that calls for 1000 MW by 2012 and 3000 MW by 2020.

OCE Staff offers the following DRAFT Straw Proposal for structuring an offshore wind set-aside, or "carve-out", within New Jersey's Renewable Portfolio Standard (RPS). This DRAFT Straw Proposal is based on the BPU Staff's recommendations which consider the unique challenges in developing offshore wind farms as well as the input of industry stakeholders and other interested parties who have participated in the Offshore Wind Working Group.

Guiding Principles

The following principles have been established to guide the development of an effective Offshore Wind set aside program. Properly structured, a New Jersey Offshore Wind carve out can be an effective stimulus for the entire offshore wind supply chain – helping to provide green manufacturing and service jobs and long-term certainty about energy prices to electricity ratepayers in New Jersey while directly supporting the goals outlined in the new Energy Master Plan:

- Support for Governor's EMP and other policy goals
- Spur economic development in New Jersey including the creation of local jobs
- Consistency with New Jersey's Renewable Portfolio Standards (RPS)
- Provide adequate incentive for the development of Offshore wind
- Minimize ratepayer impacts
- Foster sustained, orderly development of a competitive marketplace
- Reduce transaction costs for market participants

Challenges

- Planning for and accommodating the uncertainty in the Offshore Wind development process originating from such sources as new permitting processes, construction vagaries, or weather related impediments which may impact the timing and amount of new capacity commencement
- Structuring the incentive delivery mechanics to be consistent with scale of logical project capacity and market development
- The need to signal or communicate accurate, transparent, and timely cost and OREC price information to market participants
- Does the RPS regulatory mandate provide enough security to the potential OREC revenue stream to enable developers to secure financing

Deleted: debt

General Approach

- *How should the Off-Shore Wind Renewable Energy Certificate (OREC) be structured to provide adequate incentive for development of OSW to meet the Governor's EMP goals while minimizing cost to ratepayers?*

On October 23, 2008 the Board approved a public stakeholder process, followed by a public hearing, on the proposed RPS amendment for offshore wind to provide staff and the Board with valuable input from stakeholders and interested members of the public. A set of questions on how best to structure an OSW carve-out were circulated to interested stakeholders and discussed at stakeholder meetings held December 11, 2008 and January 13, 2009.

Staff developed the following proposal for an OREC incentive consistent with New Jersey's Renewable Portfolio Standard based in part on the valuable input received from stakeholders.

This proposed incentive structure will be subject to further discussion and subsequent adoption through rulemaking by the Board:

- A target amount of Offshore Wind capacity and a schedule for meeting those targets consistent with the EMP will be established within the NJ RPS regulations,
- All load-serving entities that supply BGS service to EDCs and third party suppliers of retail electricity (together "Suppliers") will be required to obtain a certain number of Offshore Renewable Energy Certificates (ORECs) from offshore wind based on their percentage of retail sales in NJ. This RPS will be set in MWhs and each Supplier will be required to buy a percentage of ORECs derived from its percentage of retail sales in NJ;
- The number of ORECs required to be obtained by Suppliers will increase over time as new offshore wind facilities are installed and placed into service;
- Suppliers must demonstrate compliance with this requirement by purchasing and retiring ORECs for load served from June 1st through May 31st of each reporting year;
- Periodically, but no more than at two year intervals, a Request for Pricing Proposals (RPP) process will be established to formally solicit OREC needs from developers to allow the Board to set a fixed OREC price for the established time period. The OREC price would be for the entire cost of the project;
- Developers of proposed projects will then have the opportunity to agree to accept that OREC price and be approved by the Board to receive ORECs from the production of electricity at the "vintage year" OREC prices established in the RPP process;
- The OREC Supplier Obligation will be administered by the BPU. At least 30 days prior to a BGS auction that includes a load serving period covering an OREC obligation period, the BPU will establish: (1) the quantity of ORECs to be purchased, (2) the of ORECs, and (3) the load serving period for the OREC obligation.

Through this competitive process the Board will establish a fixed, long-term (20 year) OREC price to help ensure a predictable revenue stream that will enable the construction of enough offshore wind generation to meet the State's Energy Master Plan goals. Offshore wind farms require a large upfront investment and involve considerable commercial and regulatory risk. Consequently, financing this type of project is challenging. Considering the uncertainty in revenues from Class 1 RECs, the volatility in energy markets and the recent difficulties in the credit markets, staff believes that offshore wind development will not occur if the projects cannot demonstrate a predictable source of revenue beyond the expected sale of electricity. The BPU will help minimize these inherent risks and enable project financing by establishing an OREC requirement and long-term, fixed price based on an approved methodology and thereby creating a timely and predictable revenue stream.

Staff believes it is in the best interest of New Jersey Ratepayers to incentivize offshore wind farms in a competitive manner to help ensure the lowest possible cost of development to the ratepayer. By using a competitive Request for Pricing Proposal, staff believes the State can establish OREC prices in a market-driven manner that minimizes risks to ratepayers. OREC Pricing will be set through this competitive process and only those facilities that meet all requirements and agree to the OREC price may generate ORECs in a given year for sale to Suppliers. *(See Request for Pricing Proposals below)*

Deleted: percentage

Deleted: from offshore wind

Deleted: e

Deleted: the

Deleted: s

Deleted: based on their market share

Deleted: percentage of retail sales

Deleted: from offshore wind

Deleted: in two year increments

Deleted: will

Deleted: Offshore Renewable Energy Certificates (

Deleted:)

Deleted: An annual

Deleted: and would be modified based on the actual cost of electricity that the wind facilities receive (LMPs)

Deleted: P

Deleted: ould

Deleted: s

Deleted: ;

Deleted: created for OSW developers and allocated, and retired for LSEs, through the PJM Generator Attributes Tracking System ("GATS"). ORECs are not anticipated to be a tradeable certificate for compliance market use similar to SRECs or Class I RECs.

Deleted: 15

OREC Requirement & Schedule

- *What type of schedule and requirement will be set to stimulate offshore wind project development and investment?*

The Board will establish an OSW schedule and RPS requirements for the total MWs of offshore wind it wants to bring online and the annual volumetric MWhs and ORECs the State expects to be generated from those projects for energy years[1] 2013 to 2020. OREC volumetric compliance levels will be set upfront equal to the projected MWhs of energy produced by Designated Facilities

The OSW target will be established as a production requirement expressed in MWhs versus a percentage of total load served, recognizing that such load is likely to decline per the State's energy efficiency goals. The OSW Schedule will be set in tranches so that the OSW target for 2012/2013 is set at 1000 MW and increase by at least the levels identified in Table 1 below not to exceed 3,000 MW by 2021. The increments are designed to provide a strong mandate to stimulate project development while allowing flexibility in the development process consistent with the scale and pace of Offshore wind project development. Also a flexible goal that can accommodate shifts in project development is more likely to reduce risks and thereby result in a more competitive outcome in terms of project development costs.

Table 1 - Proposed OREC Schedule & Requirements

Energy Year[1]	2013	2017	2021
OSW Carve-Out by Capacity MW	Total 1,000 MW	At least 2,000 MW	Total 3,000 MW
OSW Carve-Out by Production @ 34% Capacity (MWh)	2,978,400	5,956,800	8,935,200

[1] An energy year runs from June 1 through May 31st as defined by the RPS rules roughly consistent with the BGS Auction (the RPS classifies an EY by the year in which it ends, the BGS auction calls an EY by the year it begins. The OSW Carve-Out by Production has been established using a 34% capacity factor and is only used above for example purposes. The BPU will determine, using subject experts, the appropriate capacity factor to be used for determination of the carve-out.

[3] Table 1 will be further delineated to identify each Designated Facility's portion of the OSW Carve-Out once such Designated Facility is indentified.

Deleted: in two year increments
Deleted: -
Deleted: biannually
Deleted: which
Deleted: 2yr
Deleted: s by 500 MW every two years or a total of 1500 MW by 2014/2015; 2000 MW by 2016/2017; 2500 MW by 2018/2019 and 3000 MW by 2020/2021.
Deleted: two year increments method
Deleted: is
Deleted: [2]
Deleted: Energy Year[1]
Deleted: 2012
Deleted: 2013
Deleted: 2014
Deleted: 2015
Deleted: 2016
Deleted: 2017
Deleted: 2018
Deleted: 2019
Deleted: 2020
Deleted: ¶ 2021¶
Deleted: ¶ OSW Carve-Out by Capacity MW¶
Deleted: Total 1000 MW
Deleted: Total 1500 MW
Deleted: Total 2000 MW
Deleted: Total 2500 MW
Deleted: ¶ Total 3000 MW¶
Deleted: ¶ OSW Carve-Out by Production @ 34% Capacity (MWh)¶
Deleted: 2,978,400
Deleted: 4,467,600
Deleted: 5,956,800
Deleted: 7,446,000
Deleted: 8,935,200
Formatted Table
Formatted: Font: 4 pt
Deleted:

OREC Obligated Entities & Payments

- *Who should be obligated to meet the Offshore Wind RPS obligation through the purchase of ORECs?*

All load-serving entities that supply BGS service to EDCs and third parties suppliers of retail load (together "Suppliers") will be required to meet the OSW RPS by obtaining, from the BPU, the required number of ORECs of a specified vintage year. Each supplier's OREC obligation will be determined based on the total MWh of OSW required in that year, adjusted to their share or percentage of the total load served. In other words, each Supplier's OREC compliance obligation will be weighted by their share of NJ load from that energy year. BGS auction winners will determine the percentage of state load served based on the tranches won for that year, and multiply it by the total MWhs of OSW requirement for that energy year. Third party suppliers can similarly determine their percentage of total load served and multiply it by the total OSW requirement.

Deleted: -

Vintage year designation will be established in the annual RPP process and Designated Facilities will be authorized to produce ORECs for a set vintage year. Unique vintage year OREC prices for these designated facilities will be established in the annual RPP process. Suppliers will be matched so that all ORECs indentified in Table 1 are assigned. Suppliers will pay the BPU for all ORECs assigned to them at a price determined by the BPU. OSW Designated Facilities will receive recovery of the ORECs actually provided equivalent to one OREC per Mwh of energy produced and delivered set at the OREC price for their vintage year facility but not to exceed the OREC levels associated with the carve-out production identified in Table 1[3]. Designated Facilities that produce and deliver energy in excess of its projected OSW Carve-Out Production will (1) not receive compensation on the excess through the OREC pricing structure and (2) maintain ownership of all Renewable Energy Credits (RECs) associated with the excess production. The excess RECs will be classified as Class I RECs. All of a Designated Facility's revenue received from PJM associated with energy produced and delivered (OSW Revenues) will be the property of the BPU. OSW Designated Facilities are required to submit the OSW Revenues to the BPU within 30 days of receipt of these funds from PJM. The BPU will establish a process to refund the balance of any excess OREC funds and the OSW Energy Revenues back to all retail customers based on their percentage of State energy usage.

Deleted: f

Deleted: at a set OREC price

Deleted: If there are not enough ORECs in any given compliance year, the Supplier will be required to buy Class I RECs.

The BGS Auction scheduled to occur in February 2010 is the first year Suppliers would be obligated to purchase ORECs for EY 2013. Bidders will know the MWh requirement and OREC pricing methodology by September 2009. The OREC price for EY 2013 will be set by the Board as soon as possible with the intent to have the price set no later then 30 days prior to the February 2010 BGS auction. In the event that OREC pricing is not established in advance of the 2010 BGS Auction, Suppliers will be able to pass through or recover any additional costs for ORECs similar to the manner in which suppliers recovered their costs of increased SACP payments.

Quarterly estimated payments will be required to ensure revenue stream and cash flow.

Deleted: /

Proposed OREC Quarterly Payment Schedule & Annual True-up	
EY Quarter	***Payment***
June 1 –August 31	**1st OREC Payment**
September 1 – November 30	**2nd OREC Payment**
December 1 – February 28	**3rd OREC Payment**
March 1 – May 31	**4th OREC Payment**
October 1	**Annual True-up**

Request for Pricing Proposals

- *What type of competitive solicitation or request for qualifications will be used to qualify projects to receive ORECs and determine the appropriate OREC Price?*

Periodically, between 2012 and 2020, the State will set targets for the total MWhs of offshore wind it wants to bring online and the annual MWhs and ORECs the State expects to be generated from those projects[5]. The State will then solicit pricing proposals from developers to meet those OREC production targets through a competitive Request for Pricing Proposals. Developer proposals will specify the capacity of the project, the expected ORECs to be produced, and the price per OREC necessary to make the project commercially viable without considering the wholesale price of electricity.

Deleted: Every two years[4]

Based on the Request for Pricing Proposals the BPU will set a single fixed 20-year price for the ORECs from all projects for that "Vintage Year." OSW generators would then submit to be registered to generate ORECs at that fixed price. All developers will have to decide if they want to proceed based on the OREC price. If a developer decides not to proceed, those MWs or capacity can be awarded to another developer or carried forward into a subsequent year. If a developer decides to proceed, they will register the project as a Designated Facility with a set MW capacity. The RPS rules will require that Suppliers purchase ORECs of a specified vintage year at the fixed price from the BPU.

Deleted: 15

Deleted: Designated Facilities

[5] An energy year runs from June 1 through May 31st as defined by the RPS and roughly consistent with the BGS Auction. .

NJ Offshore Wind
OREC PRICING PROPOSAL PROCESS

1. BPU ESTABLISHES OSW QUALIFICATIONS / CRITERIA
for offshore wind developers to participate in Request for Pricing Proposal

2. REQUEST for OREC PRICING PROPOSAL
to include total system cost, projected wholesale electricity pricing and OREC pricing requirement

3. BPU ESTABLISHES INITIAL OREC PRICE
Based on review of pricing proposals.

4. QUALIFIED OSW PROJECTS SUBMIT REGISTERATION TO BPU
To build project eligible for ORECs at set price.

5. BPU APPROVES PROJECT REGISTRATION

Designated Facilities

- *How will facilities or projects be designated to be eligible to generate ORECs?*

The State will designate wind facilities to be eligible for OREC (Designated Facilities) based on Project Registration process. Designated Facilities will be those facilities that submitted a response to the RPP and agree to accept the OREC long term fixed price set by the Board and complete Project Registration. Designated Facilities will be required to be wind-generating facilities located off the coast of NJ and/or neighboring states, at a minimum not to exceed 1,000 MW for 2012 and 3,000 for 2020. Designated Facilities must supply NJ Suppliers with ORECs. OREC volumetric compliance levels will be set annually equal to the MWhs of energy projected to be produced by the Designated Facilities.

The BPU will notify the federal Minerals Management Service of all Designated Facilities in order to expedite project permitting.

OREC Pricing Methodology

- *What methodology and formula will be used to determine the price of an OREC?*

Consistent with the establishment of a competitive market, the OREC Price should be transparent and as competitively determined as possible. The Board will establish the long-term OREC pricing upfront based on the responses to the Request for Pricing Proposal process.

A methodology will be approved by the Board that will set the final OREC Price based on the initial price established via the RPP.

The Board will establish an RPS requirement and OREC Price for EY 2013 and set the price for 20yrs. The approved methodology will be established by the Board by September 2009 so that developers know how the price will be set and what the contract will entail vis a vis the offtakers of the ORECs and so that BGS auction bidders can anticipate requirements for the BGS Auction.

The BPU will rely on an Independent Consultant to set the capacity factor of the Designated Facilities to establish the projected OSW Carve-Out by Production which will be equal to the OREC volume obligation. The BPU may rely on an Independant Consultant to provide input as to reasonableness of pricing per the information provided in the solicitation process and per benchmarks to similar projects such as the Blue Water Wind project in Delaware. Also note that the price of ORECs may vary between Vintage Years based upon the results of different competitive Requests for Proposals, which would reflect changing market dynamics from year to year. In order to ensure bonafide proposals and project completion, an appropriate level of competitiveness in bid response and OREC delivery obligation will need to be established, similar to the approach used in BGS. New Jersey's stated goal is to have 1,000 MW of offshore wind in operation for energy year 2013. In the absence of a final OREC price for Vintage Year 2013 projects, the BPU will need to administratively establish a placeholder OREC value that Suppliers can use for their BGS auction requirements, anticipated for February 2010 which will serve EY11, 12 and 13, until the actual, first vintage year OREC price is determined.

Deleted: minus annual electricity received by the facility, based on LMP and subject to an annual true-up. ¶
¶
Annual OREC Price = the Initial OREC Price minus annualized LMP at the closest node to point of interconnection

Deleted: 15

Deleted: when the Met Tower Data becomes available (around December 2010). However

Deleted: t

Deleted: However, it is unlikely that the RPP process which sets the OREC price will take place before the first BGS auction for energy year 2013. This is because offshore wind developers will not have enough meteorological data to make an informed bid until early 2011.

Other Pre-Qualification Requirements to Participate in the RPP Process

- **Delivery into New Jersey's Distribution System –**Participation in the OREC set-aside program will thus be limited to those offshore wind projects that deliver energy into New Jersey's transmission and distribution system.
- Capacity to Deliver an Operational Project
- Satisfactory progress toward securing all relevant permits and leases; ie non-competitive interest designation by USDOI MMS
- Met station leasing application finalized at MMS and construction started

All requirements will be specified as part of the competitive Request for Pricing solicitation and Project Registration process.

Proposed Timeline & Milestones

Schedule for the OSW rulemaking and public stakeholder process:

January 26, 2009	Outline of Straw Proposal to be reviewed by Staff to be completed by
February 9, 2009	DRAFT Straw Proposal to be circulated to OSW Working Group by
February 19, 2009	Third OSW Working Group stakeholder meeting
March 6, 2009	Revised Straw Proposal recirculated to OSW Working Group
March 2009	Public hearing presided by President Fox to solicit comments on Straw Proposal from interested parties.
April 2009	Rule Proposal considered by the Board
May 2009	Rule Proposal published in the NJSR
June 1, 2009	Up to three informal stakeholder meetings, to be completed by June 1, 2009. (Meetings scheduled: Dec 11, Jan 13, Feb 19)
July 2009	Public hearing on rule adoption and close of comment period.
September 2009	Rule adoption by the Board
September 2009	OREC pricing methodology established by the Board no later than September 2009
December 2009	MET Tower Data to be available to establish 2013 OREC Pricing
February 2010	BGS Auction for EY 2010-2013 to include OSW requirements for June 1, 2012 to May 31, 2013

Formatted: Left

Additional issues that are recommended to be addressed by the BPU:

Capacity:

It is unclear if an offshore wind facility would have the obligation to be a capacity provider to PJM. Strong provisions, including potentially the requirement to participate in the

capacity market and to perform responsibly according to the PJM operating rules and prudently with the PJM markets, need to be considered for incorporation into the requirements for participation.

If a Designated Facility chooses to become a capacity provider, the revenues generated by this service will benefit only the Designated Facility and could provide a profit windfall to such provider. Under a highly competitive Request for Pricing process it is possible that bidders would reflect this revenue stream in their bids by reducing the OREC bid price to recognize the fact that capacity revenues would be received from PJM. Due to the limited number of likely bidders, it is less likely that the true economic benefit associated with the Designated Facilities receiving capacity revenues will be reflected in the bid pricing. Therefore, there is a high risk of NJ customers paying more for offshore wind than that required to fund offshore wind projects. One solution that could be pursued is requiring the wind providers to refund, to the BPU, all capacity revenues received. However, in doing so, there would be no incentive for wind providers to become a capacity resource and/or maximize the efficiency of the wind resource for capacity reliance if the facility did choose to become such a resource. This issue needs to be addressed before final OREC rules are established.

Third Party Suppliers' existing Contracts:

Third party suppliers operating in NJ that have existing contracts that span OREC obligation periods will be financially harmed if they can not pass through their OREC obligation. This issue needs to be addressed before final OREC rules are established.

Customer Cost Impacts

The impact to the customers from future BGS auctions and third party supply arrangements could be significant especially due to the fact that the OREC price will be based on a gross recovery of the costs to develop offshore wind (excludes the netting of any revenues received by the Designated Facilities from PJM). Offshore wind is currently an above market energy resource and this alone will likely impact customers. In addition, while the PJM revenues received by the Designated Facilities will be refunded to customers, the timing of such refunds will impact customers. The cost impact on customers needs to be addressed before final OREC rules are established.

Garden State Offshore Energy Comments on BPU Staff Straw Proposal for Offshore Wind Carve-Out

February 27, 2009

Garden State Offshore Energy (GSOE) has reviewed BPU staff's straw proposal for creating an offshore wind carve-out, and has received additional clarification about the proposal during the February 19th stakeholder meeting.

GSOE believes the straw proposal provides an outline of a mechanism that would provide the necessary financial support to meet the Governor's short and long term offshore wind goals. GSOE's comments on the proposal mainly relate to the mechanics of how the carve-out would be implemented. These mechanics are critical to ensure that offshore wind projects receive sufficient financial support and that there are adequate ratepayer protections.

Given that context, GSOE respectfully submits the following comments on the BPU staff straw proposal:

1. **As part of the request for pricing proposal (RPP) process, the BPU should require developers to submit: a) the expected installed capacity of the project, b) the annual megawatt hours expected to be produced by that project, given a capacity factor specified by the BPU, and c) the project's "revenue requirement," which is the combined revenue per megawatt hour the project would need from energy and ORECs.**

   GSOE believes this is the information the BPU will need to establish an OREC price. It is important for the BPU to specify a common capacity factor for all developers to assume so that the bids can be uniformly compared with each other. And while each developer may have different assumptions about the revenue they may receive from energy, the important point of comparison is the total revenue requirements of each bid (or "initial OREC price" as it is referred to in the staff straw).

2. **It is important that the BPU establish a fixed number of annual ORECs ("annual OREC target") that each designated facility is guaranteed that it can sell if it produces them. The annual OREC target for each designated facility must not change as long as the project is eligible to generate ORECs.**

   In order to partially finance an offshore wind project on the strength of revenues from ORECs, developers need assurance that if they produce a certain amount of energy in a given year that they will be able to sell the associated ORECs. On page 7 of the BPU staff straw, it states that "OREC volumetric compliance levels will be set annually equal to the MWHs of energy produced by the Designated Facilities." If the number of ORECs a project can sell fluctuates each year, then the OREC mechanism will not provide the predictable revenue stream developers need to secure financing.

The annual OREC target should be fixed for each designated facility at the time it agrees to accept the Board-approved OREC price and is thereby found to be a designated facility. The target should be established using the capacity factor assumed by the State during the RPP process in which the project was approved as a designated facility. The annual OREC target should not change for the entire time the project is eligible to generate ORECs.

3. **The OREC price for each vintage year should be fixed for 20 years.**

A 20-year OREC term would reduce the upfront costs to ratepayers by spreading OREC payments over a longer period of time. From a financing perspective, a 20-year OREC revenue stream would give developers more flexibility to amortize their debt over a longer period of time and the ability to potentially negotiate better loan terms than if developers are restricted to 15 years. In addition, in the event that a project's output is curtailed due to unforced maintenance issues, a 20-year term gives the project developer more time to potentially recover lost OREC revenue.

4. **Soon after the RPP process is completed, the BPU should establish a fixed OREC price that energy suppliers will be expected to pay, and it should not alter the OREC price based on changes in energy prices.**

In the staff straw proposal, the ultimate subsidy developers receive from ORECs is a function of the cost of energy. GSOE supports this construct; however, it creates timing challenges for the OREC process. Third party suppliers (TPSs) will need to procure ORECs before the price of energy for any given energy year is known, and BGS bidders will begin building their OREC costs into BGS bids as many as three years before the relevant energy year. BGS suppliers will handle this uncertainty by building OREC price risk premiums into their BGS bids. These risk premiums will increase costs to ratepayers.

In order to address these timing issues, the BPU should fix a firm OREC price for each vintage year before the actual price of energy is known (and ideally before the first BGS auction in which that vintage year will be included). For example, if the revenue requirement for a given vintage year is $140, the BPU could set the OREC price at $100 before it knew the actual cost of energy. All TPSs and BGS bidders ("suppliers") would know what ORECs will cost, and there would be no risk premiums passed on to customers.

The BPU would then need to establish a true-up mechanism through which it reconciled the difference between the actual cost of energy and the cost of energy implicit in the OREC price fixed by the BPU. Continuing the example from above, the BPU's $100 OREC price implies revenues of $40 per MWh from energy. If that revenue turned out to be $70 then a mechanism would be needed to refund $30 per MWh from developers to ratepayers. Conversely, if energy revenues were only $30

per MWh, a mechanism would be needed to refund $10 per MWh to the wind developer. True-up mechanisms are further discussed in comment #8.

In the early years of the carve out, the OREC price would need to be set high enough so that the Board would have reasonable certainty that the OREC price plus energy revenue would be sufficient to cover revenue requirements for designated facilities. If the Board placed the OREC price too low, it could have a structural deficit in the fund it is using to true-up discrepancies between what suppliers have paid and what developers are entitled for their ORECs.

5. **The BPU should not initiate its first RPP process until developers have sufficient opportunity to gather at least one year's worth of wind data from potential offshore sites. For any BGS auctions that proceed the opportunity to complete the RPP process, the BPU should use a placeholder value for ORECs until the RPP process is completed.**

   Establishing an appropriate OREC price will be a significant challenge for the BPU. If the OREC value is set too high, ratepayers will over-subsidize offshore wind projects. If the OREC value is set too low, offshore wind farms will not be developed, the State will not meet its offshore wind goals, and New Jersey will miss out on the many economic and environmental benefits of developing offshore wind.

   The RPP process is meant to provide the BPU with the most accurate data with which to set an appropriate OREC value. Given the importance of this task, GSOE believes the BPU should wait until developers have at least one year of wind data before initiating the RPP process. This will provide developers with hard data about their potential investment, and will allow them to make the most informed bids in the RPP process.

   If the BPU initiates the RPP process at the end of 2009, as was suggested at the stakeholder meeting, developers will be forced to make OREC price bids with considerably more uncertainty about the wind resources and overall economics of their projects. As such, these bids will contain risk premiums to reflect this uncertainty, a cost that will ultimately be borne by ratepayers.

   Waiting to initiate the RPP process until at least the third quarter of 2010 will increase the likelihood that offshore wind farms are built and eliminate the need for ratepayers to pay unnecessary risk premiums.

   Moreover, waiting to initiate the RPP process need not delay the implementation of the offshore wind carve out as the BPU can simply use a placeholder value for ORECs for any BGS auctions that are held before the RPP process is complete. For example, one-third of the Energy Year 2013 load will be auctioned in February 2010. If the RPP process for Vintage Year 2013 projects has not been completed by February 2010, then the BPU can establish an OREC price for that auction based on the best information available to the Board at the time. That placeholder OREC price

is what winning BGS bidders would pay for ORECs in the relevant BGS year. Because the placeholder value will likely be different than the actual OREC value for that vintage year (determined after the RPP process), the State can use its true-up mechanism to address any discrepancies between what the winning BGS bidders from the February 2010 auction are paying for ORECs and what offshore wind developers with vintage year 2013 projects are owed for ORECs (see comment #8 for more on true-up mechanisms).

6. **When considering RPP bids and deciding which projects to name as designated facilities, the State should not only consider price but also the viability of the project and the expected economic development and job creation benefits from the project.**

   While OREC price will be a central consideration in evaluating developer bids, BPU staff should also consider the potential that a developer can actually complete the project, as well the range of economic benefits presented by each project.

7. **GSOE would prefer monthly rather than quarterly OREC payments. Both monthly and quarterly OREC payments would have to account for variations in OREC production.**

   The straw proposal states that suppliers will make quarterly payments to offshore wind developers. Regular payments to developers are critical to ensure that they do not have to wait until the end of each energy year to receive OREC revenues. GSOE would prefer to receive OREC revenue on a monthly basis because the project will be making monthly debt payments. Monthly OREC payments would reduce the overall cost of the project.

   Monthly or quarterly OREC payment obligations are complicated by the fact that OREC output will vary significantly between months or quarters, based largely on seasonal wind patterns. If the State were to require that suppliers make quarterly payments to wind developers for ORECs, it would need to establish four different seasonal OREC purchase requirements to attempt to match quarterly OREC demand with OREC output. Similarly, monthly payments would require 12 different monthly OREC purchase requirements.

   Alternatively, if the State played an intermediary role between suppliers and developers (i.e. taking OREC payments from suppliers and using those funds to purchase ORECs from developers) then the State could require uniform monthly or quarterly OREC payments from suppliers. The State would then manage any month-to-month or quarter-to-quarter discrepancies between OREC supply and demand through its central fund (this model is described in more detail in comment #8).

8. **A State-managed true-up mechanism will be necessary to deal with year-to-year fluctuations in OREC production and other imbalances in the OREC market**

OREC production will vary annually based on several variables, including weather. Given these fluctuations, demand for ORECs in any given year will not necessarily match year-to-year OREC production. For example, if a designated facility is scheduled to sell one million ORECs annually, and it generates 1.2 million one year and 800,000 the next year, a true-up mechanism should be available to ensure that that developer can sell 2 million ORECs for that two-year period.

Other potential imbalances in the OREC market include quarter-to-quarter or month-to-month discrepancies described in comment #7 and differences between the actual and projected cost of energy described in comment #4.

The staff straw proposal includes a provision to bank ORECs; however, there may not be adequate demand for banked ORECs given that suppliers will be obligated only to buy a certain number of ORECs annually. In other words, if suppliers are required to buy 1 million ORECs in a given year, there will be no demand for any ORECs beyond 1 million, and a developer trying to sell banked ORECs from a previous year may not have any buyers.

During the February 19th stakeholder meeting, there was extensive discussion about a model in which the State would act essentially as a broker between suppliers and wind developers for all OREC transactions. Suppliers would make their OREC payments to a State fund, and the State would use those funds to buy whatever ORECs developers produced on a monthly or quarterly basis. Having the State play this central role would be the easiest way to facilitate any true ups necessary in the OREC market. Under this model, the State could simply net out all of the various true-ups in its regular monthly or quarterly payments to offshore wind developers.

9. **The BPU should establish an alternative compliance payment equal to the price of the OREC for each vintage year.**

   The straw proposal does not include an offshore wind alternative compliance payment (OACP), and instead notes that "if there are not enough ORECs in any given compliance year, the Supplier will be required to buy Class 1 RECs."

   However, suppliers will charge customers the full cost of ORECs through the BGS auction. If suppliers are then only obligated to buy less-expensive Class 1 RECs, then ratepayers would essentially pay OREC prices for Class 1 RECs. An OACP, which could be refunded back to ratepayers, is necessary to prevent ratepayers from bearing these unnecessarily high costs.

10. **In the Board order establishing the OREC carve out, the BPU should state as strongly as possible that future Boards should not change the OREC price or OREC process for any projects that are already being developed under the OREC model.**

In order to make the OREC construct financeable, lenders will need certainty that the State will not alter the OREC price or process once the OREC has been established for a given vintage year. Without such assurance, the regulatory risk associated with OREC revenue streams will make it impossible to borrow against these revenues.

11. If a designated facility encounters permitting or construction delays and does not come online during the anticipated energy year, that project should still be guaranteed its vintage year OREC price for the full 15- or 20-year timeframe.

Because an offshore wind farm has never been permitted or constructed off the coast of the U.S., there are a number of unforeseen permitting and construction delays that a project could encounter. If those delays put any of the OREC revenue at risk, it could undermine the ability of a project to secure financing on the strength of future OREC revenues. The BPU should set reasonable milestones to ensure that designated facilities are making every effort to bring the project online as fast as possible; however, putting significant portions of the OREC revenue at risk would undermine the purpose of the carve-out.

Energia4 Corporation
367 Herrontown Rd.
Princeton, New Jersey 08540

Peter Giller
President

609 924 0136
petergiller@energia4.com

February 24, 2009

Mr. Lance Miller
New Jersey Board of Public Utilities
Office of Clean Energy

Re: Draft Straw Proposal,
New Jersey's Offshore Wind Renewable Energy Certificate (OREC)

Dear Mr. Miller,

Thank you for your draft Straw Proposal: New Jersey's Offshore Wind Renewable Energy Certificate (OREC) dated January 28, 2009. Please allow us to submit the following comments:

1) When it comes to providing the revenue predictability required for these capital intensive projects, your OREC proposal is a solid step in the right direction.

2) The mechanism for cash collection from the LSE's and its distribution to the offshore wind generators is not clear from the proposal but we are certain that that can and will be resolved by the financial and legal professionals.

3) Critical is the question of the "Regulatory Out", i.e. a future BPU or the state legislature can overturn the OREC Regulation approved by the present BPU to the detriment of the offshore generator and its lenders. Legal professionals familiar with that issue need to address this and find an acceptable mitigation of that risk. It has been done before in connection the so-called PURPA avoided cost contracts and therefore it should be possible to do it with the OREC's.

4) Considering the tight equipment supply situation, the uncertainty about the permitting process, the unavailability of suitable construction vessel, and last but not least the tight situation in the project finance market we would propose a revaluation of the 2012/2013 target of 1000 MW.

5) However, we would propose the increase the bi-annual increments from 500MW to 1000MW.

6) Referring to item 4 above, one way to accelerate the first 1000 MW would be for the BPU setting an OREC price based on a cost study. BPU would then invite developers to accept that price for these initial 1000 MW. If there are not enough takers, the BPU could still go through a bidding process.

7) The high capital and Operation and Maintenance cost will lead to relatively high OREC prices. In order to reduce those prices we would propose extending the payment for that payment from 15 to 20 years. Please keep in mind that the technical life of the equipment will be in excess of 20 years.

8) Alternatively to the extension to 20 years you could consider a step down after 15 years to let's say 50% of the OREC price prevailing at the end of the 15 year period. That way the consumer gets a more attractive price in later years, albeit at the disadvantage of a higher initial OREC price.

9) Although today it is difficult to predict the level of Operation and Maintenance costs (including a significant insurance component), it is realistic to assume that these costs will require about 20% of the revenue stream. Therefore, it would be helpful to provide inflation relieve on those costs either by tying 20% of the revenue to an inflation index or subjecting it to a fixed annual escalator. That would reduce the initial OREC price since no inflation allowance would have to be build into the price.

10) Prior to issuing the annual Request for pricing proposals, a pre-qualification of bidders should take place to obtain bids which, if selected, have a high chance of realization. This could include reasonable assurances on issues such as permitting status, availability of equity capital, availability of wind turbines, steel foundations, and a grid connection, a viable offshore construction concept and finally a solid operations and maintenance concept. However, we would not recommend including the construction of a met-tower at each site as a prerequisite for pre-qualification since it will not be necessary to have such a tower at each and every location.

Thank you for letting us participate in this process.

Best Regards

Peter Giller
President

Energia4 Corporation

FISHERMEN'S ENERGY OF NEW JERSEY, LLC

P, O. Box 555
Cape May, New Jersey 08204

February 27, 2009 Fishermen's Energy additional comments on NJ BPU Draft OREC Straw Proposal and Stakeholder meeting of February 19

Thank you for the February 19th opportunity to discuss the BPU Straw proposal related to the establishment of an OREC program. These comments have been prepared in response to our understanding of the discussions of that day. We look forward to reviewing an updated written BPU Straw proposal.

1. Economics: As discussed, a 20-year OREC would result in a lower OREC price. Since banks generally require a "stub-period" at the end of the debt term, a 20-year OREC could support an 18+ year debt term whereas a 15 year OREC might only support a 12-year debt term. Having a debt term that is 50% longer would reduce annual debt service costs, thereby reducing the OREC price and the annual impact to ratepayers.

2. Economics: OREC costs would also be lower by minimizing the float between the generation of kWh and the collection of OREC funds. For PPA transactions a one month lag is typical. Long lags between generation and revenue collection would result in higher working capital requirements for the offshore wind projects which would directly result in higher OREC pricing. The NJ BPU should in its implementation minimize to the extent possible the lag time to lower the OREC prices. If necessary, BPU could accelerate the timing of 'estimated' payments and provide for 'true ups' at a later date.

3. Economics: As we stated at the last Stakeholder Meeting, "fixed" does not necessarily mean "flat". While the initial capital costs will be fixed and finalized by the time the windfarm is placed in service, the annual maintenance ("O&M") costs of an offshore wind farm will escalate with general inflation over time. We suggest that 20% of the OREC amount escalate with inflation and 80% be flat. During the most recent meeting representatives of Atlantic City Electric expressed support for this idea, but for their purposes, felt that an unknown 'escalate with inflation' would not be ideal. A fixed escalation (such as 3.0%) could be established for that portion of the OREC price that escalates. A 3% escalation on 20% of the OREC would result in an annual OREC increase of just 0.6%

4. Competition: Multiple OREC suppliers will foster a competitive environment both during the bid process and during the tenor of the OREC. No single OREC supplier should receive more than 1/3 of an OREC Vintage allotment. This could be implemented by giving at least three participants in each auction a "right of first refusal" to register for 350 MW out of each 1,000 MW Vintage -- i.e., after the OREC price is set by BPU, the bidders would have the opportunity to say "OK, we accept the price, and will work to build 350 MW on that basis".

5. Competition: It is our understanding that the bid would be based on a total revenue requirement, say the Offshore Wind Revenue Requirement ("ORR"). Bidders would submit an ORR. The ORR bid would be the sum of the requested OREC and a BPU stipulated energy price. The basis for the bid would be a stipulated 34% capacity factor for the offshore wind farm.

6. Economics: Since the OREC is intended to be a price support, it should be clearly stated that for those periods when the market electricity price exceeds the ORR, the market electricity price would prevail (i.e. the OREC would be zero) and there should be no clawback of prior OREC payments (i.e. the OREC can never be less than zero).

7. Calculation: The actual OREC would be calculated during operating years as the ORR less a single LMP energy price.

8. Qualification: The prequalification for the first 1000 MW and for the subsequent next 2000 MW might need to be different. Clearly for the first 1000 MW having a Met Tower, to produce wind data of a caliber to support bank financing, should be a precondition. For subsequent 'tranches' of development, having a clear right to a site could be a precondition.

9. Competition and the possibility of having an OREC commitment 'revoked: During the 'development phase' (defined as pre closing on construction financing) we believe an OREC commitment should be patient, provided that continued development progress is made along a reasonable timetable. Inclusion of reasonable development milestones could help assure that the wind project is proceeding. Typical milestones would include:
    a. Submittal of MMS Lease (or Interim Lease) application
    b. Submittal of NJ Tideland Lease application for transmission cable through State Waters
    c. Submittal of PJM electrical interconnection study application
    d. Engineering contract for the windfarm

10. Competition and the possibility of having an OREC commitment 'revoked': Subsequent to commitment to construction financing an OREC commitment should not be able to be revoked.

11. On February 18th we provided initial written comments, which are hereby reaffirmed and we would appreciate your consideration of the contents of both written comments.

Thank you for the opportunity to comment on the development of this program. Clearly the success of achieving the goals of 1000 MW of offshore wind by 2012 are dependant upon a successful program of revenue certainty for the financial structures needed to finance and build capital projects of this scale. We appreciate the leadership of the NJ BPU in this effort.

Thank you,

FISHERMEN'S ENERGY OF NEW JERSEY, LLC.